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FINAL FEASIBILITY STUDY FOR OPERABLE UNIT 2 (OU 2) DU 5-1 SITE 13 TANK FARM 5

NS NEWPORT RI

12/1/2013

TETRA TECH

Feasibility Study

For

DU 5-1 at Site 13 - Tank Farm 5

Naval Station Newport
Middletown, Rhode Island

Naval Facilities Engineering Command
Mid-Atlantic

Contract Number N62470-08-D-1001
Contract Task Order WE58

December 2013

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FEASIBILITY STUDY

FOR

DU 5-1 AT SITE 13 – TANK FARM 5

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

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ACRONYMS

µg/kg	Microgram per kilogram
µg/L	Microgram per liter
ARAR	Applicable or Relevant and Appropriate Requirement
BERA	Baseline Ecological Risk Assessment
bgs	Below ground surface
BSW	Bottom sediment and water
CDC	Center for Disease Control and Prevention
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
Cm	Centimeter
COC	Contaminant of concern
COPC	Contaminant of potential concern
CSM	Conceptual site model
CTE	Central Tendency Exposure
CTO	Contract task order
cy	Cubic yard
DEC	Direct exposure criteria
DERP	Defense Environmental Restoration Program
DGA	Data Gaps Assessment
DO	dissolved oxgen
DoD	Department of Defense
DU	Decision Unit
ELUR	Environmental land use restriction
ERA	Ecological Risk Assessment
EU	Exposure unit
FFA	Federal Facilities Agreement
FS	Feasibility Study
ft	Foot or feet
ft/day	Foot per day
gpm	Gallons per minute
GRA	General response action
HHRA	Human health risk assessment
HI	Hazard index/indices
HQ	Hazard quotient

IAS	Initial Assessment Study
ILCR	Incremental Lifetime Cancer Risk
IRP	Installation Restoration Program
LC	leachability criteria
LUC	Land use control
MCL	Maximum contaminant level
MCLG	Maximum contaminant level goal
mg/day	Milligram per day
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
MNA	Monitored natural attenuation
mw	Monitoring Well
NA	Not applicable
NACIP	Naval Assessment and Control of Installation Pollutants
NAS	National Academy of Sciences
NAVFAC	Naval Facilities Engineering Command
NAVSTA	Naval Station
Navy	United States Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
Ne	Newport Soil Type
NETC	Naval Education and Training Center
NPL	National Priorities List
NRCS	Natural Resources Conservation Service
NUWC	Naval Underwater Warfare Center
O&M	Operation and Maintenance
ORP	Oxidation reduction potential
OSHA	Occupational Safety and Health Administration
OU	operable unit
OWS	Oil-water separator
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
Pm	Pittstown Soil Type
PPE	Personal protective equipment
PRG	Preliminary Remediation Goal
RAB	Restoration Advisory Board
RAGS	Risk Assessment Guidance for Superfund
RAO	Remedial action objective

RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RfD	Reference dose
RG	Remediation goal
RI	Remedial Investigation
RIDEM	Rhode Island Department of Environmental Management
RME	Reasonable Maximum Exposure
ROD	Record of Decision
RPO	Representative Process Option
RSL	Regional screening level
SAP	Sampling and Analysis Plan
SARA	Superfund Amendment and Reauthorization Act
SVOC	Semivolatile organic compound
TBC	To be considered
TEF	toxicity equivalency factors
TOC	Total organic compound
TPH	Total petroleum hydrocarbon
TRC	TRC Environmental Corporation
TRV	Threshold Reference Value
TSDF	Treatment Storage and Disposal Facility
TtFW	Tetra Tech FW, Inc.
TtEC	Tetra Tech EC
UCL	Upper confidence limit
UD	Udorthents-Urban land complex
UFP	Uniform Federal Policy
UPL	Upper Prediction Limit
USEPA	United States Environmental Protection Agency
UST	Underground storage tank
VOC	Volatile organic compound
WHO	World Health Organization

EXECUTIVE SUMMARY

This Feasibility Study (FS) develops and evaluates remedial alternatives to mitigate risks associated with contaminants of concern (COCs) in soil and groundwater at Decision Unit (DU) 5-1 at Site 13 – Tank Farm 5, also known as operable unit (OU) 2 of the Naval Station (NAVSTA) Newport (formerly the Naval Education and Training Center [NETC]) in Middletown, Rhode Island. DU 5-1 (the Site) occupies approximately six acres at the northwest corner of the 85-acre Tank Farm 5, which contains 11 former 2.5-million-gallon-capacity underground storage tanks (USTs) originally used to store No. 6 fuel oil. All these USTs were located upgradient of the DU 5-1 parcel, and have previously been cleaned and demolished in place under state regulatory oversight. All remaining petroleum in the soil/groundwater on-site continues to be regulated under State authority.

DU 5-1 is the downgradient portion of Tank Farm 5, and while no USTs were located within the DU boundaries, one former oil-water separator (OWS), as well as associated former discharge pipes and discharge areas, previously existed at the Site. This OWS was originally constructed to be a burning chamber where tank bottom sludge was deposited and burned. The burning chamber was later converted to an OWS, fed by the bottom-sediment and water (BSW) piping through a gravity drain system from the upgradient UST network. During operation, excess fluids were drained from the burn pit/OWS to the wetland formed by Gomes Brook to the north.

Contamination resulting from previous operations, (including the burn pit / OWS structure and a limited amount of soil and sediment affected by waste discharge) was excavated as a part of an investigatory removal action completed between 2004 and 2006 (Tetra Tech EC, 2007). This removal action was directed through identification of petroleum contamination only, measured as Total Petroleum Hydrocarbons (TPH), with a screening target level of 100 milligrams per kilogram (mg/kg). As a result, post-excavation confirmation sampling necessary for risk assessment purposes under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) contaminants was not conducted. A Data Gaps Assessment (DGA) designed to quantify human and ecological risks in this area following removal action was conducted by the Navy between March and June 2010. Recent data and the risk assessments based on current conditions (post-excavation) are presented in the DGA Report (Tetra Tech, 2011a). The data used for this FS are provided in Appendix A4.

Contaminants identified in the DGA were screened against conservative risk-based criteria to determine if a quantitative risk assessment was warranted, and to identify which contaminants should be included. For this purpose, residential regional screening levels (RSLs) were used because the United States Environmental Protection Agency (USEPA) requires that, although the planned future use is industrial, the lowest (most conservative) screening values are used. Since these RSLs are so low, some values were exceeded, and the quantitative risk assessment was carried out. Subsequently, the DGA calculated risk for iron, manganese, arsenic and cobalt in groundwater, and for manganese in soil in the 0-10 foot depth interval.

Analytical results of samples from the DGA at DU 5-1 identified chemicals, primarily polynuclear aromatic hydrocarbons (PAHs) and metals in soil, groundwater, sediment and surface water at levels exceeding RSLs. The screening ecological risk assessment (ERA) (Tetra Tech, 2011a) did not identify the potential for ecological risks to the terrestrial and aquatic receptors exposed to chemicals associated with DU 5-1. The human health risk assessment (HHRA) for DU 5-1 (Tetra Tech, 2011a) indicated that there are potential risks to some receptors from unrestricted exposure to soil and groundwater, but no risks to any receptors from exposure to surface water or sediment.

As noted above, the HHRA predicted risk above the USEPA threshold for human health, and identified the following constituents as COCs:

- Non-cancer risk from manganese in soil (exposure to construction workers)
- Non-cancer risk from cobalt, manganese, arsenic and iron in groundwater (exposure to potential future residents)
- Cancer risk from arsenic in groundwater (exposure to potential future residents)

Additionally, because CERCLA risk is identified at the site, detected concentrations of Site contaminants were compared against the Rhode Island Department of Environmental Management (RIDEM) direct exposure criteria (DECs). Since there is CERCLA risk identified from exposure to soil and groundwater, constituents that exceed RIDEM DECs or leachability criteria (LC) are also identified as COCs, as long as the concentrations measured at the Site are above site specific background concentrations developed in accordance with EPA guidance. As a result of this comparison to state criteria, arsenic was also identified as a COC for soil and manganese (already a risk-driver) was noted to exceed the residential DEC in some soils.

Elevated lead levels in soils near the Tank Farm 5 fence (not within DU 5-1) were also identified, and associated with the fence. These soils will be addressed through a fence maintenance action managed by the Naval Station and not as a part of CERCLA. If any soils are found containing lead concentrations above RIDEM residential Direct Exposure Criteria of 150 mg/kg they will be addressed separately. Therefore, no further remedial measures to address lead-contaminated soil associated with the fence will be required as part of the OU 2 remedy.

Preliminary remediation goals (PRGs) were developed using risks calculated for human receptors and the RIDEM criteria described above. For arsenic in soil, the PRG was selected as the site specific background concentration developed in accordance with EPA guidance, since that value is above the RIDEM DEC. For arsenic in groundwater, the PRG was selected as the maximum contaminant level (MCL) enforced by USEPA. Analytical results from current soil and groundwater samples were compared with these PRGs. The following observations are based on these comparisons:

- Arsenic and manganese exceed PRGs in soil. Arsenic is present above the RIDEM DEC (and site specific background) in most samples (residential and industrial criteria for arsenic are equivalent). Manganese is present above the risk-based PRG in only five of the 32 soil samples collected.

- Groundwater PRGs were calculated assuming residential use of groundwater, although this is not a planned future use for DU 5-1. At least one groundwater PRG was exceeded in 3 of the 4 groundwater samples collected. PRGs for cobalt, iron and manganese were exceeded. The PRG for arsenic (the MCL) was not exceeded.

Remedial alternatives were developed from applicable technologies to address contaminants exceeding PRGs in soil and groundwater. Treatment, removal, and containment options for these contaminants were all evaluated as part of this FS. Due to the low concentrations of COCs present, only three remedial alternatives were developed for soil and three remedial alternatives were developed for groundwater.

The soil alternatives and estimated total 30-year present worth costs are:

SO1 – No Action - no cost
SO2 – Limited Action – Land Use Controls (LUCs), long-term groundwater monitoring, fencing and signs - $568,000
SO3 – Permeable soil cover, LUCs, long-term groundwater monitoring, and signs – $988,000

The groundwater alternatives and estimated total 30-year present worth costs are:

GW1 - No Action – no cost
GW2 - Monitored natural attenuation, and LUCs to prevent residential use of groundwater until groundwater cleanup standards are achieved – $873,000
GW3 - In-situ treatment, long-term groundwater monitoring and LUCs to prevent residential use of groundwater until cleanup standards are achieved - $2,160,000

This FS provides an evaluation of viable remedial alternatives in accordance with provisions of CERCLA, but does not recommend or select a preferred alternative. RIDEM and USEPA input on the evaluated alternatives is gathered through the review process for this document. Following the finalization of this FS report, a Proposed Plan will be drafted to present the Navy's preferred alternative. A public meeting, public hearing, and public comment period will be held to solicit comments from the public. Once input from the RIDEM, the USEPA, and the public is gathered, the Navy will submit a draft Record of Decision (ROD) and Responsiveness Summary to USEPA and RIDEM. Following consensus on the draft ROD, the final ROD will be prepared to document the remedial action for DU 5-1.

1.0 INTRODUCTION

This Feasibility Study (FS) report presents the development and evaluation of remedial alternatives designed to mitigate residual contamination at the Decision Unit (DU) 5-1, Site 13 - Tank Farm 5, located within the Naval Station (NAVSTA) Newport, Rhode Island (formerly the Naval Education and Training Center [NETC]). DU 5-1 (the Site) is defined as the portion of Tank Farm 5 where Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) contaminants were likely released, based on historical records indicating the uncontrolled burning of tank bottom sludge and disposal of this material. Tank Farm 5 is identified by the U.S. Environmental Protection Agency (USEPA) as Operable Unit 02 at NAVSTA Newport, the NETC Superfund Site.

This report was prepared under the U.S. Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC) Mid-Atlantic Division, Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract N62470-08-D-1001, Contract Task Order (CTO) WE58, for submittal to NAVFAC Mid-Atlantic, NAVSTA Newport, USEPA Region 1, and the Rhode Island Department of Environmental Management (RIDEM). The Navy, the lead agency for Site activities, and the USEPA in consultation with RIDEM, work jointly to address the Navy's Installation Restoration Program (IRP) sites at NAVSTA Newport under the terms of a Federal Facility Agreement (FFA) entered into by the three parties.

This FS was developed in accordance with CERCLA requirements, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA)[1] and implemented by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP)[2], USEPA's FS guidance, and other relevant USEPA guidance (USEPA, 1988a). Consistent with the CERCLA process, this FS will support the selection of a preferred site remedy. The preferred remedy will be presented in a Proposed Plan for public review, followed by a Record of Decision (ROD) to document the selected remedy.

A comprehensive summary of historical activities and investigations at the Site, along with risk assessments compliant with CERCLA are provided in the Data Gaps Assessment (DGA) Report (Tetra Tech, 2011a).

1.1 OBJECTIVES AND APPROACH

Based on the results of the DGA and conceptual site model (CSM), this FS develops remedial action objectives (RAOs), preliminary remediation goals (PRGs) and remedial alternatives that will be protective

[1] CERCLA: 42 U.S.C. §§ 9601 *et seq*
[2] The NCP is detailed in Title 40 of the Code of Federal Regulations (40 CFR), Part 300 (40 CFR 300).

of human health and the environment and also comply with federal and state Applicable or Relevant and Appropriate Requirements (ARARs). The list of contaminants of concern (COCs) compiled for the media of concern was prepared based on the results of the baseline human health risk assessment (HHRA), the screening ecological risk assessment (ERA), and exceedances of chemical-specific ARARs and site specific background levels of contaminants within the Site (Tetra Tech, 2011a). The FS develops remedial alternatives for the DU 5-1 COCs selected for remediation, which include arsenic in Site surface soil, arsenic and manganese in Site subsurface soil[3], and cobalt, iron and manganese in Site groundwater.

Pursuant to the USEPA's FS guidance, the remedial alternatives are evaluated according to their ability to meet the following NCP evaluation criteria (USEPA, 1988a):

1. Overall protection of human health and the environment
2. Compliance with ARARs
3. Long-term effectiveness and permanence
4. Reduction of toxicity, mobility, or volume through treatment
5. Short-term effectiveness
6. Implementability
7. Cost
8. State acceptance
9. Community acceptance

The last two criteria, state acceptance and community acceptance, are evaluated after regulatory agency and public comments on the FS and Proposed Plan are received. Sustainability elements (e.g., green remediation) were also considered during evaluation of the remedial alternatives, as part of the implementability criteria.[4]

The information presented herein will be used to select remedial alternative(s) that comply with the requirements of the NCP. This FS report gives a conceptual overview of potential remedial alternatives and an assessment of their feasibility for the Site-specific conditions at the DU 5-1 portion of Tank Farm 5.

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[3] Elevated lead levels in soil were also identified and associated with the fence (not part of DU 5-1), soils with lead concentrations above 150 mg/kg will be addressed through fence maintenance action managed by the Naval Station, and not as part of CERCLA. Therefore, no further remedial measures to address lead-contaminated soil associated with the fence will be required as part of the OU 2 remedy.

[4] Green remediation is the practice of considering all environmental effects of remedy implementation and incorporating options to maximize net environmental benefit of cleanup actions (*Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites,* Office of Solid Waste and Emergency Response. USEPA 542-R-08-002. USEPA, April 2008).

1.2 REPORT ORGANIZATION

- **Section 1.0** provides background information on DU 5-1.

- **Section 2.0** describes the development of RAOs and PRGs for the media of concern and COCs. This section also identifies and evaluates federal and state ARARs.

- **Section 3.0** describes the general response actions (GRAs) and presents the identification and preliminary screening of potential remedial technologies, and the detailed evaluation of candidate technologies and process options. Section 3.0 also presents the remedial alternatives and the evaluation criteria used in the FS.

- **Sections 4.0 and 5.0** present descriptions and proposed remedial alternatives for soil and groundwater, respectively. These sections provide detailed and comparative analyses of remedial alternatives with respect to the NCP evaluation criteria.

1.3 NAVAL STATION NEWPORT BACKGROUND INFORMATION

NAVSTA Newport is located approximately 60 miles southwest of Boston, Massachusetts and 25 miles south of Providence, Rhode Island on Aquidneck Island as illustrated on Figure 1-1. NAVSTA Newport occupies approximately 1,000 acres, with portions of the facility located in the City of Newport and the Towns of Middletown, Portsmouth, and Jamestown, Rhode Island. The facility layout follows the western shoreline of Aquidneck Island for nearly six miles, facing the east passage of Narragansett Bay.

The NAVSTA Newport facility has been in use by the Navy since the Civil War era. During World Wars I and II, military activities at the facility increased significantly and housing was provided for many servicemen. In subsequent peacetime years, use of onsite facilities was slowly phased out until Newport became the headquarters of the Commander Cruiser-Destroyer Force Atlantic in 1962. In April 1973, the Shore Establishment Realignment Program resulted in the reorganization of naval forces, and activity again declined. This reorganization resulted in the Navy excessing 1,629 acres of property.

From 1974 to the present, research and development and training have been the primary activities at NAVSTA Newport. The facility was renamed from NETC to NAVSTA Newport in 1998. The major commands currently located at NAVSTA Newport include the NETC, the Surface Warfare Officers School Command, the Naval Undersea Warfare Center (NUWC), the Naval War College, amongst others.

NAVSTA Newport was listed on the National Priorities List (NPL) in November 1989 (the NPL listing is still under the previous name of NETC). A FFA for NAVSTA Newport was signed by the Navy, the State of Rhode Island, and USEPA Region I on March 23, 1992. The FFA outlines response action requirements under the CERCLA regulatory framework at NAVSTA Newport. The FFA was developed, in part, to ensure that environmental impacts associated with past and present activities at NAVSTA Newport are thoroughly investigated and remediated as necessary.

1.4 TANK FARM 5 BACKGROUND INFORMATION

Tank Farm 5 occupies approximately 85 acres and contains eleven former 2.5-million-gallon-capacity underground storage tanks (USTs) originally used to store #6 fuel oil, two of which (Tanks 53 and 56) were also used historically to store waste oil. The USTs were cleaned and demolished in place in the late 1990s. Tank Farm 5 has also been used for the temporary storage of soil and construction materials generated by construction projects at NAVSTA Newport for several years. DU 5-1 occupies approximately six acres at the northwest corner of Tank Farm 5, and is bounded to the north by Greene Lane, to the east by other portions of Tank Farm 5, to the south by the Navy Fire Fighting School (previously part of Tank Farm 5), and to the west by Defense Highway, beyond which lies Narragansett Bay as shown in Figures 1-2 and 1-3. Historical photos and drawings of the Tank Farm and DU 5-1 are provided for reference in Appendix A1.

Tank Farm 5 is partially fenced with signs posted at entrances restricting access to authorized personnel. Activities within Tank Farm 5 are restricted to general industrial uses, and to bow hunting by permit authorized by the commanding officer. There are no functional buildings at Tank Farm 5 and no above ground structures are currently present at DU 5-1, with one exception; a corrugated sheet metal shed measuring approximately 10x10 feet that exists on the northern portion of the Site. This shed has been investigated as a separate DU (DU 5-3); soil and groundwater results from that investigation indicated the presence of similar constituents (PAHs and metals) at levels within the range or below the levels detected in soil samples collected from DU 5-1. This area has been investigated in accordance with RIDEM's Remediation Regulations and concentrations measured in samples collected indicate no impacts or releases. Any further action at this location will be addressed under separate state authority and are not part of the CERCLA OU 2 remedial action. Appendix A8 presents the results of the investigation conducted at DU 5-3.

DU 5-1 includes a former oil-water separator (OWS) area and associated discharge pipe and discharge area, as depicted in Figure 1-4. The OWS was originally constructed to be a burning chamber where tank bottom sludge was burned but was subsequently converted to an OWS fed by the bottom sediment and water (BSW) piping from each of the USTs. Excess fluids were drained from the burn pit/OWS to the wetland formed by Gomes Brook situated to the north/northwest.

Contamination from previous activities, including the burn pit / OWS structure, and soil and sediment affected by waste discharged via piping, was excavated as a part of an investigatory removal action in 2004 and 2005 as described in the DGA Report (Tetra Tech, 2011a; Tetra Tech EC, 2007). The results of total petroleum hydrocarbon (TPH) analysis were the primary guide for the excavation, and only limited confirmation sampling for CERCLA contaminants was conducted during this removal action; the available analytical data was insufficient for performing a risk assessment. The DGA was conducted to provide current, post-excavation data for use in the performance of risk assessments. This FS has been prepared based on this new (post-excavation) data and the associated calculated risk.

1.4.1 History of Response Actions Pertaining to Site 13

This section presents a chronological summary of environmental response actions previously conducted at Site 13 as a part of the IRP for CERCLA sites at NAVSTA Newport, and particularly those pertinent to the DU 5-1 area. This summary is based on information provided in historic records and prior reports reviewed by Tetra Tech. Appendix A1 provides historical photos and drawings of the area and of Tank Farm 5.

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

March 1983 – The Initial Assessment Study (IAS) of NAVSTA Newport was completed in 1983 (Envirodyne Engineers, Inc., 1983). The IAS Report identified areas at the NETC (presently known as NAVSTA Newport) where potential contamination from past waste disposal or handling practices may pose human health or environmental risks. For Tank Farms 4 and 5, the IAS concluded that the sites should be retained due to the practice of disposal of burning tank bottom sludge. Design records for the fuel storage systems suggested disposal by placing sludge on the ground in pits and burning off the residual fuel. Investigations later concluded that this practice was not undertaken at Tank Farms 4 and 5, sludge was disposed of through central burning chambers (one at each Tank Farm) which were later converted to OWSs discharging to onsite wetlands.

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

1988 – A Technical Review Committee was convened to facilitate communication of information with regard to actions to be undertaken at NAVSTA Newport. Technical Review Committee members include representatives from the Navy, USEPA Region I, RIDEM, the City of Newport, the Towns of Portsmouth and Middletown, and local citizens' groups.

November 21, 1989 – NAVSTA Newport was listed on the NPL as the "NETC".

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

1992 - As part of a Remedial Investigation (RI) Report for NETC Newport, forty-six soil samples, eight groundwater samples, limited surface water and sediment samples, and soil gas samples were collected across Tank Farm 5 (TRC Environmental Corporation [TRC], 1992). Additional studies were recommended by TRC to further define the extent of TPH in surface soils, and to determine the significance of elevated metals concentrations in the soil and groundwater (TRC, 1992). Tank Farm 5 borings and wells were installed across the Site in order to identify the presence of sludge pits which were speculated to be present from disposal of tank bottom sludges on the ground surface.

1995 – The Navy established the Restoration Advisory Board (RAB) to provide ongoing information to the citizens in Newport, Middletown and Portsmouth, Rhode Island on Navy IRP sites.

2004 – 2007 - In October 2004, the Navy began field work on a Site Investigation and removal action for Tank Farm 5. The purpose of the Site Investigation and removal action were to resolve conflicting information about the reported practice of burying sludge on site, to investigate and remediate process piping and adjacent soil that had not been previously evaluated, and to investigate and remediate Review Areas (Tetra Tech EC [TtEC], 2007). Per the final closeout report for this work, the removal action was conducted to satisfy the requirements of the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (amended November 2011), RIDEM UST Regulations (October 2002) and CERCLA Regulations (TtEC, 2007). The work included investigating for possible former sludge disposal pits, assessing piping not previously assessed, demolishing and removing piping from a former OWS / burn pit, and sampling other Review Areas, including fence lines and transformer vaults. No evidence of former sludge pits was found. The results of the Site Investigation are summarized in the Final Closeout Report for Sludge Disposal Trenches and Review Areas at Tank Farms 4 and 5 (TtEC, 2007). Summary discussion and excerpt data from this report that pertain to current conditions at DU 5-1 are provided below:

- The former OWS at Tank Farm 5 was approximately 35 feet x 35 feet x 8.5 feet and was believed to have contained material in its western chamber when abandoned. The material was transported off-site for disposal without sampling. This structure was demolished, although the report does not specify a date.

- Confirmatory samples were collected from the excavation (16 excavation sidewall samples and 9 base of excavation samples) for petroflag field screening of TPH. Three sidewall samples exceeded 100 milligram per kilogram (mg/kg) TPH (maximum concentration 613 mg/kg), and seven base samples exceeded 100 mg/kg TPH (maximum concentration 295 mg/kg). In accordance with planning documents, all samples with petroflag results above 100 mg/kg underwent laboratory analysis for TPH and those above 100 mg/kg by laboratory analysis underwent further analysis for volatile organic compound (VOCs), semivolatile organic compound (SVOCs), metals, and polychlorinated biphenyl (PCBs). Two samples were also analyzed for dioxins/furans. Of these five analyses, only two metals exceeded screening criteria: arsenic (in four samples) and manganese (in one sample):

SAMPLE ID	VOCs (mg/kg)	SVOCs (mg/kg)	METALS (mg/kg)	PCBs (mg/kg)	DIOXINS/ FURANS (ng/kg)
L-TF5-OW-SW5	No exceedances	No exceedances	arsenic (37.1) manganese (433)	No exceedances	Not analyzed
L-TF5-OW-SW9	No exceedances	No exceedances	arsenic (8.5)	No exceedances	Not analyzed
L-TF5-OW-B1	No exceedances	No exceedances	arsenic (22.2)	No exceedances	No exceedances
L-TF5-OW-B4	No exceedances	No exceedances	arsenic (18.3)	No exceedances	No exceedances

- The Navy and regulatory oversight parties agreed to conduct a risk assessment to identify if any significant risk existed at the Site (see 2006 and 2010 entries, below).

- Discharge lines from the OWS were inspected with a camera to assess the integrity of the piping and to determine if sludge had accumulated in the piping. The discharge pipe was subsequently removed and fifteen samples were collected along the pipeline after removal. Seven samples were selected for petroflag field screening based on field observations, and three of the seven results exceeded 100 mg/kg, and were therefore reanalyzed for TPH in a fixed laboratory. Results from laboratory analysis indicated TPH concentrations above 100 mg/kg; therefore these samples underwent further analysis for VOCs, SVOCs, metals, PCBs, and dioxins/furans. Of these five analyses, five SVOCs (PAHs) and three metals (arsenic, beryllium and manganese) exceeded state criteria:

SAMPLE ID	VOCs (mg/kg)	SVOCs (mg/kg)	METALS (mg/kg)	PCBs (mg/kg)	DIOXINS/ FURANS (ng/kg)
TF5-OW-Discharge1	No Exceedances	benzo(a)pyrene (0.461) chrysene (0.547)	arsenic (51.5) beryllium (0.41) manganese (652)	No exceedances	2,3,7,8-TCDD (16.3)
TF5-OW-Discharge14	No Exceedances	anthracene (176) benzo(a)anthracene (0.936) benzo(a)pyrene (1.04) benzo(b)fluoranthene (0.911) chrysene (1.02)	arsenic (19.4)	No exceedances	2,3,7,8-TCDD (6.0)
TF5-OW-Discharge15	No Exceedances	benzo(a)pyrene (0.43) chrysene (0.447)	arsenic (17.7) beryllium (0.45)	No exceedances	2,3,7,8-TCDD (12.1)

- Based on the limited constituents present, it was not agreed that all the contaminants had been removed, and the Navy and regulatory oversight parties agreed to conduct a risk assessment to identify if any significant risk existed at the Site (see 2006 and 2010 entries in the text that follows).

- Other investigation and removal action work was conducted at Tank Farm 5 outside the DU 5-1 area, which included the electrical substations, the transformer vault, sheds, fences, pipelines valve chambers, and various buildings.

- In addition, test excavations were conducted around tank locations in order to attempt to locate other sludge burning areas. No other evidence of sludge burning or disposal was found (TtEC, 2007).

2006 – The Basewide Background Soil Investigation was conducted to provide a background data set for comparisons to soil and sediment data collected from all sites at NAVSTA Newport. The objective of the investigation was to identify inorganic compounds expected to be present, had the various Navy activities not occurred. Both naturally occurring and anthropogenic metals were included. Surface and subsurface soil samples were collected at off-site locations, and included representative soil types mapped by the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) for the IRP Sites at NAVSTA Newport. The background data set was evaluated and published as a Basewide Background Soil Investigation (Tetra Tech, 2008a).

2010 – A DGA was conducted to provide up-to-date, site-representative data and to use these data to aid in determining residual risks to potential human and ecological receptors, following the completed removal actions conducted at the Site, so that the best path forward for each area of the Site could be determined. The DGA included the establishment of Category 1 and 2 DUs, collection of soil, groundwater, surface water and sediment samples, a baseline HHRA and a Screening ERA. The risk assessment concluded that there was CERCLA risk to the residential receptor from ingestion of groundwater as a potable source, and to the construction worker from exposure to dust in excavations. Other risk exceeding RIDEM ceilings were posed to industrial workers and residents exposed to soil and groundwater. Further details regarding sample results and risk assessment results can be found in the DGA Report Category 1 Areas (Tetra Tech, 2011a) which is summarized in Section 1.10 of this FS. A separate report contains the results of the Category 2 investigation, which focuses on the former USTs upgradient of DU 5-1 (Tetra Tech, June 2011b).

1.4.2 Removal Actions Associated with DU 5-1

TtEC conducted a series of investigations and removal actions between 2004 and 2006 under CERCLA authority, at Tank Farms 4 and 5, to address numerous areas, including USTs (to further investigate the possible presence of sludge disposal pits), process piping and pipe chambers, and "review areas" identified by RIDEM. This effort included the investigation, evaluation and demolition of the former OWS at Tank Farm 5. Discharge piping from the OWS was additionally investigated and remediated, and affected soil and sediment from the discharge areas were excavated and removed from the Site. Finally, the investigation activities addressed BSW piping, the storage sheds, transformers and electrical buildings, and other areas of interest identified by the RIDEM. The Navy investigated these areas and conducted soil removal actions, as needed, to assure rapid reduction of contamination present.

The RIDEM Residential direct exposure criteria (DECs) were used as remediation goals (RGs) for this work: in the UST areas, for TPH; and in the process piping and "review areas", for TPH, SVOCs and VOCs. Not all soil with COCs at levels exceeding the RGs was removed during this work. As indicated by a comparison between the exploratory analytical data and the post-excavation (confirmatory) analytical data, the rapid reduction of contamination was achieved. Data from samples collected during this investigation are provided in Appendix A2, taken from the Tables portion of the Closeout Report, which documents the findings, including all the confirmatory sampling results (TtEC, 2007). This information was also summarized in the Technical Memorandum for Data Summary and Plan for Risk Assessment, Tank Farms 4 and 5, and was the basis for the DGA work (Tetra Tech, 2008b). CERCLA requires that risk-based decisions are to be verified, and the DGA was designed to determine the risk (if any) from the remaining soil at DU 5-1.

1.5 GEOLOGY AND HYDROGEOLOGY

This section presents a summary of regional and Site geologic and hydrogeologic features. The information presented below is based on lithologic information collected during the 2010 DGA, literature review and other site reports, as presented in the DGA Report (Tetra Tech, 2011a). Figure 1-5 shows the location of a geologic cross-section prepared for DU 5-1, cross-section A-A[1], presented as Figure 1-6.

1.5.1 Regional Geology and Hydrogeology

NAVSTA Newport is located at the southeastern end of the Narragansett Basin. The rock types of the Narragansett Basin are non-marine sedimentary and meta-sedimentary rocks of Pennsylvanian age. The bedrock underlying the facility is comprised almost entirely of the Rhode Island Formation. The Rhode Island Formation in this area has been metamorphosed and consists of metaconglomerate, metasandstone, schist, carbonaceous schist, phyllite and graphite. Pre-Pennsylvanian igneous and metamorphic basement rocks are below the Pennsylvanian-age bedrock of the Narragansett Basin.

The overlying surficial deposits are Pleistocene-age glacial sediments, ranging in thickness from 1 to 150 feet, and consisting of glacial till and glacial outwash drift deposits. The glacial till is the more extensive of the glacial deposits in Rhode Island and is generally unstratified and heterogeneous.

Many areas on Aquidneck Island obtain potable groundwater from wells completed in unconsolidated glacial till and outwash deposits, and in the underlying bedrock. The average depth to the unconfined aquifer at the facility is 14 feet. In the NAVSTA Newport area, glacial till deposits are typically less than 20 feet thick. Well yields range from 1 to 120 gallons per minute (gpm), although the upper limit of this well yield is likely from an outwash deposit that is well sorted and stratified. Wells completed in till typically yield a few hundred gallons of water per day (at a rate of less than one gpm). In bedrock wells, yields range from less than 1 to as much as 55 gpm and are highly dependent on the presence of joints and fractures in the rock. Most groundwater in the area is soft or moderately hard, and in scattered locations of NAVSTA Newport, pumping of groundwater has led to salt water intrusion.

1.5.2 Site Geology and Hydrogeology

Information presented on Site geology and hydrogeology is derived from the DGA Report, which assimilates historic information developed for this portion of Site 13 with the 2010 data generated during the DGA field investigations.

Overburden thickness at Tank Farm 5 ranges from approximately 1 to 40 feet, and tends to increase in flat-lying areas and become thinner on slopes. Some of the thickest overburden is present in the areas immediately surrounding the former USTs because the bedrock was blasted to make room for tank installations, after which the excavations were filled in.

Overburden materials at the Site, classified as either glacial till or fill, are generally mixtures of silt, sand and gravel, as well as boulders and gravel-sized pieces of bedrock. In soil borings, the fill can be difficult to distinguish from the native material because it typically appears to be surficial materials that originated from another part of the Site or that resulted from the blasting of the bedrock during UST installation efforts. The blasted bedrock is difficult to distinguish from the weathered bedrock, and the weathered bedrock/overburden interface is difficult to determine, due to the soft and extremely weathered nature of much of the bedrock. Density of the overburden generally varies from loose to medium dense, but is not a reliable indicator as to the nature of the overburden materials (native vs. fill).

The overburden is dominated by sandy silts and silty sands, although some locations also include gravel mixed in with these silts and sands. The gravelly materials are usually present deeper in the subsurface and/or directly above the bedrock surface, while the silts and sands occur more continuously and are more likely to be found near the ground surface.

Bedrock underlying Tank Farm 5 has been identified as a black/gray shale, slate and/or phyllite, depending on the degree of metamorphism, and is encountered between approximately 1 and 40 feet below ground surface (bgs). Due to the highly weathered bedrock surface in some areas, it can be difficult to determine the exact depth of the bedrock/overburden contact, as noted above. Most of the bedrock encountered in borings can be easily broken along planes of bedding and/or foliation and is also highly fractured.

Bedrock within the locale of DU 5-1, as encountered during the DGA, was characterized as fine-grained, foliated, metamorphic rock consisting of shale and phyllite. The upper surface of the bedrock is weathered, and the bedrock is typically soft, as evidenced by bedrock boreholes advanced using roller-bit drilling methods. The depth to weathered bedrock observed during drilling within DU 5-1 was between 1 and 9 feet. More competent bedrock was encountered within 1 and 8 feet below the top of weathered bedrock.

The depth to groundwater at Tank Farm 5 and DU 5-1 ranges from approximately 2 to 15 feet bgs and the groundwater flow direction is in a northwesterly direction, generally following surface topography, and ultimately discharging into Narragansett Bay (Figure 1-7). DU 5-1 is located in the most downgradient section of Tank Farm 5, so that groundwater entering DU 5-1 flows from the other parts of the Tank Farm located to the east/southeast. As part of a separate effort, horizontal hydraulic gradients were calculated for the Tank Farm 5 Site bedrock (between monitoring well [MW] MW-918 and MW-979, and between MW-911 and MW-978) and overburden (between MW-108 and MW-917), using May 2010 groundwater elevation measurements. Horizontal gradients ranged from approximately 0.03 to 0.04, respectively.

Groundwater flow conditions in the area of the former OWS have been observed at monitoring wells MW-917, MW-924, MW-923 and further downgradient wells MW-916 and MW-915. The former OWS is located approximately 300 feet upgradient of Gomes Brook and the associated wetland, and groundwater flow from the former OWS is generally northward towards the wetland, but is influenced by the regional northwest trend.

1.6 TERRESTRIAL AND AQUATIC HABITATS

Tank Farm 5 is currently unoccupied and utilized by local wildlife for feeding, foraging and home habitat. Gomes Brook transects the northern portion of Tank Farm 5, within DU 5-1. The brook flows westerly to Narragansett Bay and provides surface drainage for the northern portion of the Tank Farm and for the agricultural, residential and commercial areas to the east. Vegetation consisting of grass, dense brush, trees and woodlands is found between the former tanks and on the property perimeter. Vegetation in the vicinity of the tanks has been periodically cleared for construction, but new growth is rapid if not maintained.

DU 5-1 occupies approximately six acres at the northwest corner of Tank Farm 5, as shown in Figure 1-3. The Site includes the downstream portion of Gomes Brook and jurisdictional wetlands associated with this part of the brook; portions of DU 5-1 lie within the 100-year coastal floodplain and within FEMAs AE flood zone. Gomes Brook appears to have been partially impounded by the headwall constructed for a culvert under Defense Highway at the westernmost portion of the Site, which may have created part of the associated wetland area. Gomes Brook discharges through the culvert and then into Narragansett Bay.

Habitats throughout and adjacent to the Site are characteristic of overgrown landscapes of lightly industrialized or commercial areas. Historically, the Site was agricultural pasture until the tank farm was installed, after which the ground surface features were made to mimic agricultural land so as to hide the presence of the fuel tanks from air surveillance. Since the tank farm was taken out of use, the Site has become overgrown, with the exception of short-term construction and investigation efforts, during which vegetation has been disturbed in localized areas.

Gomes Brook has not been inspected to determine presence of fish species; however, based on the low flow and small size of the brook, it is not expected to provide significant fish habitat. Wetland vegetation and significant suitable habitat for amphibians, reptiles and birds are present at the Site and to the east, where groundwater breakouts from the hills discharge into the brook. The upland areas of the Site are mainly open grassland with some dense ground cover of herbaceous plants. The surrounding area consists of woody shrubs, saplings, and trees.

Although there has been disturbance of the natural community, the Site as a part of the larger tank farm and supported by other undeveloped parcels in the area to the north provides important habitat for terrestrial, wetland, and avian species both local and transient. The dense vegetation in the area provides excellent cover, foraging, and breeding/nesting areas for birds, mammals, reptiles, and amphibians. The Newport natural resources coordinator, Ms. Shannon Kam, was contacted in May 2012 and reported that there are no records of rare or endangered species present at Tank Farm 5.

1.7 CONCEPTUAL SITE MODEL

A CSM depicts the relationships among the following elements, which are necessary for defining complete exposure pathways:

- Site sources of contamination
- Contaminant release mechanisms and transport/migration pathways
- Exposure routes
- Potential receptors

The elements of the CSM listed above establish the manner in which a potential receptor may be exposed to chemicals present at the Site. The degree of risk incurred by a potential receptor varies according to the means and duration of exposure, and the specific chemical to which the receptor is exposed. An exposure, however long in duration, does not necessarily result in an “unacceptable” health or environmental risk, although risks generally increase with increased frequency and/or duration of exposure.

Sections 1.4 to 1.6 of this report present detailed information on the Tank Farm 5 Site location, description, and history. The summary CSM is presented in Appendix A3 of this report and provides a graphic description of the Site releases, as well as a summary of the transport mechanisms available to the contaminants still present. The receptors are described with the associated risks, as evaluated in the DGA Report, and are summarized later in this section.

The Site problem, based on this CSM, is best summarized as follows: Past operations in the area of DU 5-1 are presumed to have resulted in the release of contaminants to surface and subsurface soil, groundwater, and surface water/sediment. The presumed source, which has since been eliminated, was burned and unburned fuel sludge and associated contaminants:

- Contaminants associated with the burning of sludge and from discharge of burned sludge to the wetland areas were likely released to the ground at and downgradient of the former burn chambers.

- Contaminants passing through the OWSs would most likely have been released to the brooks and entrained within the wetland soils.

- These contaminants were mitigated significantly through the removal of the burn chamber / OWS. Contaminants were further mitigated through the removal of the pipelines and the soil and sediment around the discharge areas at the wetland.

The CSM suggests possible organic and inorganic contaminants in surface and subsurface soil, groundwater, sediment and surface water. In particular, metals, polycyclic aromatic hydrocarbon (PAHs), and dioxin/furans, measured as toxicity equivalency factors (TEFs), were analyzed and evaluated during the DGA. TEFs that relate the toxicity of various dioxin/furan congeners to the toxicity of 2,3,7,8 TCDD (as accepted by USEPA, 1989) were published by the World Health Organization (WHO) in 2005 and updated in 2006, and were used in the baseline human health risk assessment[5]. The potential presence of these contaminants was considered, based on the possibility of historical spills or as a result of atmospheric deposition. Reducing conditions that are created by biological degradation of released petroleum in soil (most of which has since been removed) may also affect hydrogeological conditions. The risk assessments, described in the following subsections, addressed the levels of contaminants found in samples and reported in the analytical results.

1.8 NATURE AND EXTENT OF CONTAMINATION

Analytical results from surface and subsurface soil samples collected from DU 5-1 during the DGA indicated few contaminants at concentrations above the screening levels (chemical data from the DGA is presented in Appendix A4 of this report). There were a few samples with elevated levels of SVOCs, mainly PAHs such as benzo(a)pyrene. Arsenic and chromium were found across the entire Site in both

[5] The hazard indices for dioxins/furans presented in the HHRA were calculated using oral reference dose of 1E-9 mg/kg/day, which was obtained from the Agency for Toxic Substances and Disease Registry (ASTDR). In February 2012 USEPA published a new value oral reference dose in the Integrated Risk Information System (IRIS). The new oral reference doses of 7E-10 mg/kg/day is slightly more toxic than the value used in the HHRA. The hazard indices based on the new reference dose are orders of magnitude less than the acceptable level of 1.

surface and subsurface soil at concentrations above regional screening levels (RSLs), which are risk-based screening values published by the USEPA. For arsenic in surface soils, the associated upper prediction limit (UPL) background concentration (17 mg/kg) was exceeded at three sample locations (data are presented in Appendix A-4, Table A-4.1). For arsenic in subsurface soils, the associated UPL background concentration (23.6 mg/kg) was exceeded at 13 sample locations/intervals (Appendix A-4, Table A-4.2)

Concentrations of chromium are below or comparable to background levels and are not considered to be site-related (Tetra Tech, 2011a - Appendix F). The maximum Site chromium concentrations detected in each of the two soil types associated with the Site are compared to the maximum concentrations detected in background samples from each soil type, for both surface and subsurface soil.

Chromium Concentrations in Soil (in mg/kg)

Soil Type		Maximum Background Concentration	Maximum Site Concentration
Pm	Surface	16.0	12.7
	Subsurface	21.3	21.7
Ne	Surface	17.1	12.8
	Subsurface	14.9	11.7

Although present at naturally occurring levels, chromium was carried through the HHRA as described in the DGA, in accordance with USEPA guidance (Tetra Tech, 2011a).

Sediment samples collected from within DU 5-1 during the DGA did show elevated levels of PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene) above RSLs. These PAHs were detected at these levels in most sediment samples that were collected. Benzo(a)pyrene was detected in eight of 12 sediment samples at concentrations above the RSL for industrial soil. Arsenic and chromium were detected above RSLs in all samples collected.

Some aqueous samples collected during the DGA exhibited elevated levels of the same SVOCs that were detected in the soil and sediment samples. Surface water samples contained PAHs [benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, and naphthalene] and chloroform above the RSL for tap water in some locations. Arsenic was detected above RSLs in surface water samples.

Arsenic, cobalt and manganese were also detected in groundwater samples above RSLs. In addition, benzene was detected above the RSL for tap water, but below the maximum contaminant level (MCL), in one groundwater sample downgradient of the OWS. No compounds were detected above MCLs in Tank Farm 5 groundwater.

The data comparison for chromium in surface soil indicates that chromium in both the Newport soil type (Ne) and the Pittstown soil type (Pm) are less than background levels, indicating that chromium found at DU 5-1 is attributable to background conditions.

Concentrations of metals in soil appear to be mostly attributable to background conditions, although the DGA report notes the exception of arsenic, cobalt, iron and manganese in subsurface soil, and arsenic in Ne surface soils. Figure 1-4 presents the two soil types mapped for the site prior to development of the Tank Farm. The Site has undergone extensive earthwork since development of the tank farms in the 1940s, the source of these metals that exceed their respective background soil concentrations could also be a result of the redistribution of soils within the Site. Direct application of background values is uncertain, and influence of one background soil type versus another is difficult to segregate. Reworking of overburden, till, and the shallow, highly fractured and fissile bedrock that occurred during the tank and utilities construction could have influenced metals concentrations in soil reworked on Site. Overall, the presence of these metals above background conditions is not expected to be a direct result of releases from the burning of sludge.

1.9 FATE AND TRANSPORT

The fate and transport of the contaminant of potential concern (COPCs) in environmental media are determined by the physical and chemical properties of the contaminants and of the environmental media (e.g., soil, groundwater, surface water or sediment) into which they are released.

The fate and transport processes of concern for DU 5-1 are those that govern the migration and fate of contaminants in surface and subsurface soil, groundwater, surface water and sediment. The following is a summary of the processes for each medium at DU 5-1. Additional information on these processes is provided in the DGA Report (Tetra Tech, 2011a).

Soil – In general, contaminants can be released to soils directly through spills or discharges at or below the ground surface. Once the contaminants are in the soil, a variety of processes can immobilize, degrade, or mobilize the contaminants to other environmental media. These processes include sorption, volatilization, leaching, and runoff/erosion.

Groundwater – In general, contaminants can be directly released to groundwater from subsurface tanks or drainage structures or may be transported into groundwater from other media. Once the contaminants are in the groundwater, they exist in either the dissolved phase or the suspended solid phase and a variety of processes can occur that affect the transport and transformation of the contaminants within these phases. These processes include advection, mechanical dispersion, molecular diffusion, sorption, biological degradation, and abiotic degradation.

Surface Water and Sediment – In general, contaminants can be released to surface water and sediment in the same fashion as contaminants are released to soil and groundwater. Once the contaminants are in the surface water and sediments, a variety of processes can immobilize, degrade, or mobilize these contaminants. These processes include advection, mechanical dispersion, molecular diffusion, biological and abiotic degradation, and sorption.

Fate and Transport Characteristics of Site Contaminants

Arsenic and chromium were the only metals detected in surface soils at concentrations exceeding Residential and Industrial RSLs, while arsenic, chromium, cobalt, iron, and manganese were all detected above Residential RSLs in subsurface soil samples.

When subjected to precipitation infiltration, soluble metals can be leached from the soils and conveyed into the underlying groundwater. Soluble metals may also be leached from the soils into groundwater through the seasonal rise and fall of the water table. This is a natural process by which minerals are provided to the groundwater. In addition, metals that are naturally present in the soil may be mobilized by reducing conditions created by biological degradation of petroleum released to the soil. These metals, although present at concentrations within federal drinking water standards, appear to be slightly elevated in groundwater samples collected at the Site. Arsenic, cobalt, and manganese were detected in groundwater at concentrations exceeding the USEPA tap water RSLs, and manganese was detected at concentrations above the public health advisory, which is USEPA guidance for developing risk-based standards for drinking water contaminants that do not have promulgated federal or state drinking water standards. None of the contaminants identified in Site groundwater exceed USEPA MCLs, nonzero Maximum Contaminant Level Goals (MCLGs), or more stringent state groundwater standards.

As groundwater migrates, some of the metals will undergo transformation processes that result in their return to an insoluble state. Reduction-oxidation, precipitation, and adsorption reactions can cause the dissolved phase ions to leave the aqueous phase. However, some of these metals will continue to migrate with groundwater. As dissolved metals are discharged to the surface in either a wetland or marine environment, some of the metals will likely be adsorbed and removed from the aqueous phase because of interactions with organic materials, sulfides, or oxyhydroxides. This is part of a natural filtration process that is commonly seen in wetland sediments. Sediments at the Site were observed to contain these metals, suggesting such transport and / or natural filtration processes could have occurred at the Site.

Once in surface water, dissolved metals will migrate with water flow. Some of the metals will undergo transformation processes that result in their return to an insoluble state. Reduction-oxidation, precipitation, and adsorption reactions can cause the dissolved phase ions to leave the aqueous phase. Undissolved metals are likely be adsorbed and removed through physical interactions with organic materials, sulfides, or oxyhydroxides, bind with the sediment, and settle out of the water column.

For this site, the transport flow path would be that metals would leach from soil to groundwater and then to sediment in the wetland, and to surface water in the brook. While it is acknowledged that metals are present in these media, the metals concentrations measured in soil, groundwater, sediment and surface water are all relatively low. Regardless, because they exceed risk screening criteria, risks were quantified for each of these media, as described in Sections 1.10 and 1.11 below.

Further evaluation of the sequestering and leaching processes naturally available to metals in groundwater is provided in Appendix A5 of this report.

1.10 HUMAN HEALTH RISK ASSESSMENT

This section summarizes conclusions of the baseline HHRA which was presented in the DGA Report (Tetra Tech, 2011a). The objective of the HHRA is to determine whether detected concentrations of chemicals at the Site pose a significant threat to potential human receptors under current and/or future land use. The potential risks to human receptors are estimated based on the assumption that no actions are taken to control contaminant releases.

Work was conducted in accordance with guidance and reports published by the Navy, the USEPA, and the State of Rhode Island.

The HHRA is structured and reported according to the guidelines of the Risk Assessment Guidance for Superfund (RAGS), Human Health Evaluation Manual, Part D: Standardized Planning, Reporting, and Review of Superfund Risk Assessments (RAGS Part D) (USEPA, 2001). The assessment follows the methodology presented in the approved Technical Memorandum for Data Summary and Plan for Risk Assessment and the approved Sampling and Analysis Plan (SAP) (Tetra Tech, 2008b and 2010).

Three major aspects of chemical contamination and environmental fate and transport must be considered to evaluate potential risks: (1) contaminants with toxic characteristics must be found in environmental media and must be released by either natural processes or by human action; (2) potential exposure points must exist; and (3) human receptors must be present at the point of exposure. Risk is a function of both toxicity and exposure. If any one of these factors is absent for a site, the exposure pathway is incomplete, and no potential risks are considered to exist for human receptors.

Potential receptors evaluated for this assessment included likely human receptors under current and potential future land use. Potential receptors under current land use are industrial workers, adolescent trespassers, and recreational users under local restrictions. The current restricted recreational use is limited to bow hunting for deer during the legal Rhode Island deer season. This activity is allowed only through permit to local Navy employees. The Site is within the boundaries of an active and access-restricted Federal facility; it is further restricted to casual recreational users by locked gates, partial fencing, and signage designed to dissuade trespassers from accessing the Site. The LUC to prevent unrestricted recreational use would have to be retained by the new owner, should the property be sold or otherwise transferred by the Navy in the future.

Potential receptors evaluated in the HHRA for future land use are construction workers and hypothetical child and adult residents. At this time, future land use is anticipated to be the same as current land use; however, the planned use of land can change. Therefore, potential future residential receptors were evaluated in the baseline HHRA, primarily for decision-making and planning purposes.

At the Site, PAHs, Aroclor-1254, dioxins/furans, and metals were identified as COPCs in soil. Benzene and metals were identified as COPCs in groundwater. Chloroform, PAHs, and metals were identified as COPCs in surface water and PAHs, dioxins/furans, and metals were identified as COPCs in sediment.

Exposures evaluated in the HHRA were based upon the reasonable maximum exposure (RME), which is defined as “the maximum exposure that is reasonably expected to occur at a site” (USEPA, 1989b). In addition, the central tendency exposure (CTE), which addresses an average case, was also evaluated in the HHRA for the Site (USEPA, 1992).

Quantitative estimates of non-carcinogenic and carcinogenic risks (hazard index [HIs] and incremental lifetime cancer risks [ILCRs], respectively) were developed for potential human receptors. All receptors were evaluated for exposures to surface soil (0 to 1 foot bgs) and all soil (0 to 10 feet bgs). Construction workers and hypothetical residents were also evaluated for exposures to groundwater. Adolescent trespassers and unrestricted recreational users were also evaluated for exposures to surface water and sediment. The groundwater, surface water, and sediment at the Site were evaluated as single exposure units (EUs).

In evaluating the results of the quantitative estimates of HIs and ILCRs, the following were used:

1) The USEPA defines the range of 1 x 10^{-4} to 1 x 10^{-6} as the ILCR target range for hazardous waste facilities addressed under CERCLA. Individual or cumulative ILCRs greater than 1 x 10^{-4} are generally considered “unacceptable” by USEPA. Risk management decisions are necessary when the ILCR is between 1 x 10^{-4} and 1 x 10^{-6}. USEPA typically does not require remediation when the cumulative ILCR is less than 1 x 10^{-6}. The RIDEM acceptable risk threshold, under State regulations, is 1 x 10^{-6} for individual contaminants and 1 x 10^{-5} for cumulative exposure.

2) An HI exceeding unity (1.0) indicates that there may be non-carcinogenic health risks associated with exposure. If an HI exceeds unity, target organ effects associated with exposure are considered. Only those hazard quotients (HQs) for chemicals that affect the same target organ or exhibit similar critical effect(s) are regarded as additive. Therefore, it may be possible for the cumulative HI to exceed unity, but no adverse health effects are anticipated if the COPCs don’t affect the same target organ or exhibit the same effect.

The results of the HHRA are summarized below.

Soil Risks

HIs for all receptors exposed to site-related COPCs in surface and subsurface soil under the RME scenario were less than or equal to unity (1.0), with the exception of construction workers exposed to a combination of surface and subsurface soil. Manganese in soil samples collected at location TF5-SB970 was the single major contributor to the HI for construction workers. This HI contributed to a target organ–specific non-cancer risk of >1.0, which moved soil at the Site forward to the FS steps.

ILCRs were within USEPA’s target risk range of 10^{-4} to 10^{-6}, but ILCRs for some receptors exceeded the RIDEM target risk level of 10^{-5}, as shown below. The single major contributor to the ILCR for the industrial and residential receptors is arsenic (RME only). Comparisons of site concentrations to background concentrations indicate that these levels of arsenic are at least partially attributable to a background condition (Tetra Tech, 2011a). ILCRs for CTE risk are below the RIDEM threshold value of 10^{-5}.

ILCRs for the following receptors exceed RIDEM's target cumulative risk level of 10^{-5}:

Area	Medium	ILCR Exceeds RIDEM's Target Cumulative Risk Level of 10^{-5}
DU 5-1	Surface Soil	Industrial Workers Hypothetical Child Residents Hypothetical Adult Residents Hypothetical Lifelong Residents
	All Soil	Industrial Workers Hypothetical Child Residents Hypothetical Adult Residents Hypothetical Lifelong Residents

Arsenic drives most of the cancer risk in soil at DU 5-1, although the total cancer risk for soil is below the EPA threshold of 10^{-4} for all receptor groups. As an example, under an RME scenario, the total ILCR risk is 8×10^{-5} for the lifetime resident, and of this risk, arsenic contributes an ILCR of 7×10^{-5}.

In accordance with Navy policy, background concentrations of metals in soil are also accounted for in the risk management process as well as in the uncertainty portion of the risk assessment. Background concentrations of metals were measured for this Site as part of the Basewide Background Soil Investigation (Tetra Tech, 2008). Soil types mapped for the area prior to the development of the Site as a Tank Farm are provided as Appendix A6 of this report. There are two soil types represented at DU 5-1, and the DGA Report compared concentrations of arsenic in soils at DU 5-1 to background data for both of these soil types. It was found that the arsenic concentrations measured at DU 5-1 are within the background concentrations for one of the dominant soil types represented, and above the background concentrations for the other. It was later determined that the site arsenic concentration at DU 5-1 is above the combined background arsenic concentrations of the two dominating soils present (See Section 2.2.4 of this report). Because the site cancer risk for soil was below the EPA threshold, the DGA Report did not define arsenic as a soil COC for this Site. However, arsenic is later added as a COC again as a DEC during development of PRGs in Section 2 of this FS report.

Manganese is a risk-based COC for soil at DU 5-1, based on non-cancer risk to construction workers exposed to soil dust during excavations, and utilizing the RME exposure and subsurface soil data reported. However using the same background data set described above for the most dominant soils present at DU 5-1 prior to development of Tank Farm 5, it was determined that the site concentrations for manganese in soil are below the background concentration for soil using a combined background soil data set (two soil types). It was also found that the manganese concentrations measured at DU 5-1 are within the background concentrations for one of the dominant soil types represented, and above the background concentrations for the other. Because the manganese poses risk to the construction worker, and because it is above background for one of the soil types, it was retained as a COC.

Risk management is further discussed in Section 2.0 of this report.

Groundwater Risks

HIs exceeded unity (1.0) for child residents and adult residents using the groundwater at Tank Farm 5 for residential use. Cobalt and manganese in groundwater contributed to the target organ HI>1 and therefore, this medium was moved forward to the FS stage. Arsenic and iron also were major contributors to the HI for groundwater.

The ILCRs for child residents, adult residents, and lifelong residents hypothetically using the groundwater at Tank Farm 5 for residential purposes exceed the USEPA target risk range of 1×10^{-4}, and therefore, this medium was moved forward to the FS stage. Arsenic was the major contributor to the ILCR. However, there is significant uncertainty as to the basis of this risk, since measured concentrations of arsenic in groundwater were below the MCL.

Arsenic, cobalt, iron and manganese were identified as risk-based COCs for groundwater at DU 5-1, although arsenic was later removed from the list of groundwater COCs, because site concentrations are below the MCL for this constituent.

Surface Water Risks

HIs for adolescent trespassers and recreational users exposed to surface water at the Site were less than unity (1.0). At the Site, ILCRs for adolescent trespassers and recreational users exposed to surface water were less than or equal to the lower bound of USEPA's target risk range. Therefore, there were no COCs identified for surface water at the Site.

Sediment Risks

HIs for adolescent trespassers and recreational users exposed to sediments were less than unity (1.0). ILCRs for adolescent trespassers and recreational users exposed to sediment at Tank Farm 5 were within USEPA's target risk range. Therefore, there were no COCs identified for sediment at the Site.

1.11 ECOLOGICAL RISK ASSESSMENT

This section summarizes conclusions of the DU 5-1 ERA presented in the DGA Report (Tetra Tech, 2011a). The ERA was performed to assess ecological risks to the terrestrial and aquatic receptors exposed to contaminants at the Site. Only surface soil, sediment, and surface water data that reflect the current condition were evaluated as a part of this assessment.

The goal of the ERA conducted at DU 5-1 was to evaluate the potential for adverse ecological impacts of site-related contamination and to determine the need for further investigation and/or remedial action at the Site. The ERA provided in the DGA Report contains information to enable scientists and managers to conclude either that ecological risks at the Site are most likely negligible or that further information is necessary to evaluate potential ecological risks at the Site.

The ERA methodology is in accordance with the Uniform Federal Policy (UFP) SAP for Tank Farms 4 and 5 and the following guidance documents (Tetra Tech, 2010):

- Navy Policy for Conducting Ecological Risk Assessment (Navy, 1999).
- Final Guidelines for Ecological Risk Assessment (USEPA, 1998).
- Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments (USEPA, 1997).

The ERA consists of Steps 1, 2, and 3a of the eight steps required by the above guidance documents. The first two steps consist of the screening-level ERA. Step 3a is the first step of the baseline ecological risk assessment (BERA) and consists of refining the conservative exposure assumptions to ultimately refine the list of COPCs that are initially selected during Step 2. Steps 3b through 7 consist of additional site-specific investigations/biological studies. Steps 3b through 7 are conducted only if additional evaluations or investigations, such as toxicity testing, are necessary. Aspects of Step 8, risk management, are addressed throughout the ERA process, in cooperation with USEPA Region 1 regulators.

Several chemicals were initially selected as candidate COPCs as a result of the initial screening of surface soil. These chemicals were further evaluated as a part of the Step 3a refinement, the first step of the ERA. After a review was conducted of alternate toxicity information for the initial candidate COPCs, COPC concentrations were compared to the alternate toxicity information. COPCs are further discussed in the text below.

Several metals were initially selected as candidate COPCs for surface soil because their concentrations exceed conservative plant screening levels. All of these metals were subsequently eliminated as COPCs for one or more of the following reasons: 1) based on the soil pH, the metals were unlikely to be bioavailable; 2) metals were detected at concentrations that exceeded background concentrations based on the USEPA-approved Basewide Background Study (Tetra Tech, 2008a). They do not appear to be related to Site activities based on their concentrations and distribution across the Site; and 3) the Site is heavily vegetated, so significant impacts to plants are not actually evident. Therefore, it was determined that potential risks the metals may pose to plants did not merit further evaluation. No chemicals were retained as candidate COPCs for aquatic organisms.

For risks to mammals and birds, the chemicals initially selected as candidate COPCs were also further evaluated in Step 3a using conservative and less conservative exposure assumptions. Note that even the “less conservative” assumptions are conservative, because it is still assumed that the organisms will obtain all of their food from the Site, and that the chemicals are in the same bioavailable forms as they were in the test used to develop Threshold Reference Values (TRVs).

Based on this assessment, no chemicals were retained as candidate COPCs for ecological risk at the Site.

2.0 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES

The purpose of this section is to present pertinent information that will be used in subsequent sections of this FS for the screening, development, and evaluation of remedial alternatives for DU 5-1. Specific goals of this section are as follows:

- Identify federal and state ARARs with which the remedial alternatives must comply (Section 2.1).
- Develop PRGs that will be used to select media of concern and to determine areas requiring remedial action (Section 2.2).
- Compare site sampling data to PRGs and define the area(s) of non-attainment to be addressed by the remedial alternatives (Section 2.2).
- Based on the ARAR and PRG comparisons develop RAOs that will guide the development of remedial alternatives (Section 2.3), and then identify areas and volumes of contaminated media that will require remediation to meet those objectives (Section 2.4).

2.1 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

In recognition of the unique characteristics and circumstances associated with the remediation of individual sites, SARA and the NCP provide specific standards for the determination of whether a particular remedy provides sufficient cleanup at a given site. The NCP (40 Code of Federal Regulations [CFR] Part 300) specifies procedures to be employed in identifying, removing, or remedying releases of hazardous substances. In particular, the NCP specifies procedures for deciding the appropriate type and extent of remedial action at the Site to effectively mitigate and minimize the threat to, and provide adequate protection of, human health, welfare, and the environment.

The goal of remedy selection is to protect human health and the environment, to maintain the protection over time, and to minimize untreated waste (40 CFR 300.430 of the NCP [55 FR 8846]). The remedial alternative must attain ARARs under federal environmental laws and more stringent state environmental and facility siting laws, or provide grounds for invoking one of the waivers permitted under the statute.

2.1.1 <u>Definition of Applicable or Relevant and Appropriate Requirements</u>

USEPA defines "applicable" and "relevant and appropriate" in the revised NCP, codified in 40 CFR 300.5 (1994), and has incorporated these definitions in its *CERCLA Compliance with Other Laws Manual*

(Interim Final–USEPA/540/G-89/006, Part II–USEPA/540/G-89/009) (USEPA, 1988b). Site remediation must comply with ARARs, except where a waiver is granted according to Section 121(d) of CERCLA.

A requirement under CERCLA/SARA, as amended, may be either "applicable" or "relevant and appropriate" to a site-specific remedial action, but not both.

- **Applicable Requirements** – Cleanup standards are standards of control, and other substantive federal environmental and state environmental and facility siting requirements, criteria, or limitations promulgated under federal or state law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site.

- **Relevant and Appropriate Requirements** – Cleanup standards are standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law. Although not directly "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a site, these requirements address problems or situations sufficiently similar to those encountered at a site that their use is well-suited to the particular site. In some circumstances, a requirement may be relevant, but not appropriate, for the site-specific situation.

2.1.2 Classifications of Applicable or Relevant and Appropriate Requirements

ARARs for remedial action alternatives can be classified into one of the following three functional groups:

1. **Chemical-Specific** – Health or risk-based numerical values or methodologies that establish cleanup levels for particular contaminants.

2. **Location-Specific** – Requirements that restrict remedial actions based on the characteristics of the site or its immediate environs.

3. **Action-Specific** – Requirements that set controls or restrictions on the design, implementation, and performance levels (including discharge limits) of activities related to the management of hazardous substances, pollutants, or contaminants.

2.1.3 To-Be-Considered Guidance

Federal and state guidance and policy documents, advisories, and other criteria that do not have the status of ARARs and are not enforceable are identified as To-Be-Considered (TBC) guidance. Such guidance documents may be considered when developing remedies that will be protective of human health and the environment.

2.1.4 Identification of Applicable or Relevant and Appropriate Requirements

The following sections summarize the specific federal and state ARARs for remedial actions that may be conducted at the Site, and for the types of technologies that will be developed into remedial alternatives. Each ARAR has been chosen for its potential applicability or relevance and appropriateness in accordance with the procedures identified in the *CERCLA Compliance with Other Laws Manual* (Office of Solid Waste and Emergency Response Directive 9234.1-01 and *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA* (Office of Solid Waste and Emergency Response Directive 9355.3-01) (USEPA, 1988a and 1988b).

2.1.4.1 Chemical-Specific Applicable or Relevant and Appropriate Requirements

Chemical-specific requirements are established using health or risk-based numerical values or methodologies that establish cleanup levels in environmental media for specific substances or pollutants. In general, chemical-specific requirements are set for a single chemical or a closely related group of chemicals (including setting risk-based cleanup levels). These requirements do not consider the mixture of chemicals. Chemical-specific ARARs are discussed below for soil and groundwater, which were the environmental media for which risks were identified in the DGA Report for DU 5-1 (Tetra Tech, 2011a). Chemical-specific ARARs identified for the Site are also summarized in Table 2-1.

Soil

Currently, there are no promulgated federal ARARs that are chemical-specific for the Site that would provide limits for the concentrations of the COCs detected in soil.

The State of Rhode Island has established chemical-specific criteria in the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, DEM-DSR-01-93, more commonly known by its short title, Remediation Regulations (RIDEM, 2011). The soil objectives are comprised of two components: DECs and Leachability Criteria. Separate DECs are established for residential and industrial/commercial land uses. Residential DECs apply to vadose zone soil in areas where residential and unrestricted recreational use is likely. Industrial DECs are limited to the top two feet of soil in areas where there are controls in place (such as Environmental Land Use Restrictions [ELURs] or Land Use Controls [LUCs]) preventing industrial exposures to deeper soils without proper controls to protect workers. Leachability criteria apply to soils that occur at depths above the seasonal high groundwater depth (vadose zone).

In addition to the use of these criteria, site-specific risk-based cleanup goals for soil were calculated based on slope factors and reference doses in accordance with USEPA risk guidance.

Groundwater

Federal MCLs, non-zero MCLGs, and more stringent State groundwater criteria (where applicable) have been identified as chemical-specific ARARs for groundwater. The federal drinking water standards require that the aquifer at the Site be restored to its beneficial use as a potential water supply.

2.1.4.2 Location-Specific Applicable or Relevant and Appropriate Requirements

Location-specific ARARs are restrictions placed on the concentrations of hazardous substances permitted, or on the conduct of certain activities, based on characteristics to do solely with the location itself. The general types of location-specific requirements that may be applied to the Site include wetland and floodplain regulations. Potential location-specific ARARs for the Site are presented in Table 2-2. The manners in which these ARARs actually apply to the alternatives presented later in this FS are presented in sections 4 and 5 of this report.

2.1.4.3 Action-Specific Applicable or Relevant and Appropriate Requirements

Action-specific ARARs are usually technology or activity-based requirements or limitations for actions taken, with respect to managing hazardous substances, pollutants, or contaminants. These requirements generally focus on actions taken to remediate, handle, treat, transport, or dispose of hazardous substances, pollutants, or contaminants. Action-specific requirements may determine how a selected remedial alternative must be implemented. However, action-specific ARARs can be unique to a particular remedial alternative being evaluated. In later sections of the FS, one or more of these ARARs may be included for selected applicable alternatives, but not for all alternatives under evaluation. Potential action-specific ARARs for the Site are listed in Table 2-3. The manners in which these ARARs actually apply to the alternatives presented later in this FS are presented in sections 4 and 5 of this report.

2.1.4.4 To-Be-Considered Guidance

TBC guidance documents or advisories from federal and state agencies do not have the status of ARARs and are not enforceable. However, TBC guidance can be used to support the development and evaluation of remedial actions for a CERCLA site. Potential ARAR and TBC guidance for the Site are presented in Tables 2-1 through 2-3. The manners in which these ARARs actually apply to the alternatives presented later in this FS are presented in sections 4 and 5 of this report.

2.2 DEVELOPMENT OF PRELIMINARY REMEDIATION GOALS (PRGs)

In this section, PRGs are identified and selected as applicable to this Site. PRGs are selected for COCs identified by the human health or ecological risk assessment using the following steps.

Human health risk-based PRGs are developed by calculation of an acceptable risk using a back calculation from the risk assessments published in the DGA Report (Tetra Tech, 2011a). Risk-based PRGs are developed for each medium and for each compound identified as a COC in that report.

Ecological risk-based PRGs are typically derived by determining concentrations of COCs predicted to provide a toxic effect, typically through toxicity testing as part of a BERA. At this Site, the screening level ERA (steps 1-3a of the 8 step ecological risk assessment guidelines) did not identify potential risks to a level that would merit conducting a BERA, and as such, no COCs are identified for protection of ecological receptors.

PRGs are also derived through identification of applicable and relevant and appropriate regulatory criteria for each medium (chemical-specific ARARs). For instance, MCLs are relevant and appropriate criteria for groundwater at this Site, and therefore can be selected as PRGs.

The RIDEM DECs and leachability criteria for soil are identified as ARARs, and PRGs are set using these values for COPCs that either do or do not pose risk as identified in the DGA Report (Tetra Tech, 2011a).

Finally, PRGs are adjusted so that they do not exceed applicable background conditions. This provides assurance that a remedial action goal is not established that is in excess of the natural condition, should the releases not have occurred on the Site. Other risk management evaluations are also considered as appropriate to assure a PRG is not selected that either cannot be achieved, or is not appropriate for the Site and its conditions.

PRGs are developed as described below for each medium of concern. The full development of risk-based PRG values selected is presented as Appendix B. The COCs that exceed PRGs are selected as described in the following subsections. These PRGs remain “preliminary” through the planning stages and risk management steps until the ROD is finalized, at which time they become RGs, or “cleanup levels”.

2.2.1 Identification of Media of Concern

The media of concern were identified based on the results of the HHRA and screening level ERA conducted during the DGA Report (Tetra Tech, 2011a). Soil and groundwater were identified as media of concern to be addressed by the remedial alternatives described later in this report, as summarized below.

- Soil, identified both as “surface soil” (0 to 1 foot in depth bgs) and as “all soil” (0 to 10 feet bgs), was identified as a medium of concern, based on the HHRA. The scenarios associated with risk estimates above target levels include residential exposures (cancer risk from arsenic above RIDEM DEC but not above USEPA target risk range) and construction worker exposure (non-cancer risk from exposure to manganese in soil-dust). The DGA originally eliminated arsenic as a COC due to background levels interpreted in that report. Arsenic was then later added as a COC again during PRG development because the background levels were revised at RIDEM and EPA request, and because the arsenic concentrations exceed the State DECs.

- Groundwater was identified as a medium of concern based on the HHRA. The scenarios associated with unacceptable risks include the future residential use of the Site groundwater for adult, child, and lifelong residents.

2.2.2 Derivation of Human Health Risk-Based Preliminary Remediation Goals

The DGA Report determined which of those chemicals that were detected onsite supported the unacceptable risks measured for human health (Tetra Tech, 2011a). These chemicals were identified as risk-based COCs for human receptors in Section 1.10 of this report. Human health risk-based PRGs were developed for those COCs and are discussed in the following sections.

These PRGs are proposed cleanup levels that are based on human health risks, and are intended to be protective of human health. PRGs were derived for the COCs identified in site soil and groundwater. The methodology used to derive PRGs for each medium of concern is described below.

PRGs are defined for all media of concern and all exposure scenarios with unacceptable risks, for both current and future land use scenarios. Although DU 5-1 is not currently residential and there are no plans for residential use of the property in the future, PRGs for residential exposures to soil and groundwater are calculated and presented. PRGs for construction workers exposure to soil are also calculated and presented. PRGs were not calculated specifically for unrestricted recreational use, because residential, industrial/commercial, and construction PRGs were calculated: restricted recreational use (permit-based hunting) is similar to industrial/commercial use, and unrestricted recreational use would be addressed by the residential use PRG.

Soil PRGs

Potential soil PRGs were calculated using several different threshold values for human cancer and non-cancer risks, to provide risk managers with a wider range of options for reducing human health risks at the Site: these risk threshold values were 1 x 10^{-6}, 1 x 10^{-5}, and 1 x 10^{-4} (cancer risk) and a maximum HQ of 1.0 (non-cancer risk). These PRGs were calculated for RME risk for soil COCs identified in Section 1.10, for construction workers. These calculations are provided in Appendix B.

As noted in Section 1.10, manganese is the only risk-based COC identified for soil at DU 5-1 (other ARAR-based COCs are identified later). The risk-based PRG for manganese in soil was calculated based on the non-cancer HQ of 1. As presented in the DGA Report, for construction worker exposure to site soil, the RME HI for manganese is greater than 1.0. PRGs applicable to manganese for industrial use of site soil were then calculated, using the assumptions developed in the DGA Report for industrial/commercial exposure to site soil under RME scenarios.

The risk-based PRG for soil was brought forward to Table 2-4 as a candidate PRG. Subsequently, in accordance with agreements between the Navy, USEPA and RIDEM, all the COPCs identified for soil in the DGA report and risk assessment (detected constituents that exceeded any risk- based screening criteria) were also added to Table 2-4 for comparison against ARAR-based criteria. RIDEM DECs (residential and industrial) and soil leachability criteria are considered ARARs for soil at DU 5-1. Therefore, Table 2-4 presents all the COPCs identified, compared with both the risk based PRGs selected as described above, and also the applicable ARAR-based criteria. They are then adjusted for background as discussed in Section 2.2.4 of this report. These candidate PRGs are presented according to two potential future site uses: residential and industrial.

Those constituents which are COPCs and did not contribute significantly to risk based on the quantitative risk assessment, but exceeded the associated ARAR value, are identified as candidate ARAR-based COCs and the ARAR criteria are identified as ARAR-based PRGs. COPCs that do not contribute significantly to risk and do not exceed the ARAR value are not carried forward.

PRGs in soil are established for arsenic and manganese only as shown in Table 2-4. PRGs for both constituents are adjusted for background, which is further examined in Section 2.2.4. Further discussion regarding the applicability of the PRGs is provided in Section 2.2.5.

Table 2-5 compares surface and subsurface soil sample results to the selected PRGs. Figures 2-1 through 2-8 present the locations where each of these PRGs for industrial and residential use is exceeded in surface and subsurface soils. Manganese concentrations in surface soil samples did not exceed the

PRG, and therefore a figure showing the surface soil comparison to the PRG for manganese is not presented.

Groundwater PRGs

Potential groundwater PRGs were calculated using several different threshold values for human cancer and non-cancer risks to provide risk managers with a wider range of options for reducing human health risks at the Site: these risk threshold values were 1 x 10^{-6}, 1 x 10^{-5}, and 1 x 10^{-4} (cancer risk) and an HQ of 1.0 (non-cancer risk). These PRGs were calculated for COCs identified for groundwater in Section 1.10 under a residential use of groundwater scenario. Groundwater at the Site is classified as potable under federal drinking water standards. State drinking water classification maps identify the groundwater within the Site as “GA(NA)”, although the State’s groundwater standards are not applicable to the CERCLA remedy within the base and are only considered if they happen to be more stringent than federal standards. Residential use of groundwater was evaluated and human health risk-based PRGs were developed for a residential scenario.

The risk assessment provided in the DGA Report indicates that cancer risks exceed USEPA’s target risk range of 1 x 10^{-4} to 1 x 10^{-6} and RIDEM’s benchmark of 1 x 10^{-5}, with RME risks greater than 1 x 10^{-6} for arsenic. The RME non-cancer hazard quotients exceeded an HI of 1 for arsenic, cobalt, iron, and manganese. Therefore, arsenic, cobalt, iron, and manganese were identified as risk-based COCs for groundwater, as identified in Section 1.10, and were carried forward into the PRG development process.

Under the exposure scenario using groundwater for residential purposes, human health risk-based PRGs were derived for groundwater COCs as described in Appendix B. These PRGs were selected based on the 1 x 10^{-6} cancer risk level and/or an HQ of 1. For COCs with both cancer-based and non-cancer-based PRGs, the lower of the two values was selected as the human health risk-based PRG. Similar to the development of PRGs for soil, COPCs identified for groundwater are also compared to ARAR-based values. If an MCL is provided for a constituent, that MCL is then selected as the PRG. At DU 5-1, candidate risk-based PRGs were calculated for arsenic at 0.039 microgram per liter (µg/L) (cancer risk) and 3.3 µg/L (non-cancer risk), but the MCL is enforced at 10 µg/L. The maximum concentration of arsenic measured in groundwater (8.8 µg/L) is below the MCL; therefore, this compound is discounted as a COC for remediation in groundwater. Table 2-6 presents the candidate risk-based PRGs for groundwater and the selected PRGs developed for the final COCs (cobalt, iron, and manganese) under the residential use scenario.

Monitoring well locations where a PRG was exceeded in groundwater are summarized on Figure 2-9. Groundwater exceedances of individual contaminants are shown on Figure 2-10 (dissolved cobalt), Figure 2-11 (total cobalt), Figure 2-12 (dissolved iron), Figure 2-13 (total iron), Figure 2-14 (dissolved manganese), and Figure 2-15 (total manganese). Groundwater contaminant concentrations are compared to PRGs in Table 2-7.

Summary of Human Health Risk-Based PRGs

Selected PRGs were based on a risk of 1×10^{-6} for carcinogens and an HQ of 1.0 for non-carcinogens. There are fewer than ten COCs for each exposure scenario.

This approach ensures that the aggregate cancer risk from all COCs combined will not exceed 1×10^{-5}, and that the HI affecting each same target organ will be less than 1.0. Therefore, the selected human health risk-based PRGs represent values protective of both cancer and non-cancer risks. Further discussion of the estimated protectiveness of the recommended PRGs is presented in Section 2.2.5.

2.2.3 Applicable or Relevant and Appropriate Requirements and To-Be-Considered Guidance for PRGs

This section describes the evaluation of ARARs to identify or support selection of PRGs. As discussed in Section 2.1, there are no federal promulgated ARARs that are chemical-specific for soil at the Site. For groundwater at the Site, federal MCLs, non-zero MCLGs, and more stringent state groundwater standards have been identified as chemical-specific ARARs.

The State of Rhode Island has chemical-specific soil criteria specified under the RIDEM Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, DEM-DSR-01-93, (Remediation Regulations [RIDEM, 2011]). The Remediation Regulations provide the methodology for determining remedial action objectives for soil, and provide soil criteria in two categories: DECs and Leachability Criteria. Currently, industrial use is expected to be the most likely future land use for this Site. Both residential and industrial DECs are considered as candidate PRGs for this site. RIDEM enforces DECs for both arsenic and manganese.

2.2.4 Background Concentrations

Background conditions are not ARARs but are used to adjust PRGs, if appropriate. Metals are naturally occurring in soil and water with variable concentrations that are largely determined by the material of origin, usually local bedrock, as previously discussed in Section 1. As a result, the existing condition includes soil metals present as a result of background conditions (not affected by past site activities or releases), and these metals may even be present at concentrations that are naturally higher than risk-based PRGs or RIDEM Remediation Standards. Background concentrations may be set as PRGs for inorganic compounds if approved background concentrations are established for the site, based on USEPA guidance.

The Navy conducted a study to establish background concentrations for metals in soils at NAVSTA Newport properties. Soil sampling was conducted in two separate phases due to access issues. In September 2006, both surface and subsurface soil samples were collected from unused property south (upgradient) of the NUSC Disposal Area, the vicinity of a transmission line in Portsmouth, Rhode Island, and the Anchorage and Coddington Cove Housing Areas in Middletown, Rhode Island. In March 2007, soil samples were collected from Prudence Island. Background soil samples were collected from six different soil types identified in the Soil Survey of Rhode Island (USDA, 1981): Mansfield mucky silt loam (Ma), Merrimack sandy loam (MmA), Newport silt loam (Ne), Pittstown silt loam (Pm), Stissing silt loam (Se), and beach soils (Ba). Soil samples were not collected from the seventh soil type found in the area, Udorthents-Urban land complex (UD), because it is difficult to identify UD areas that would be considered “background”, as UD soils have been disturbed, by definition.

The analysis and statistical testing performed for the resulting validated soil data were used to determine appropriate background metals values for comparison to site metals concentrations. The results of this study are presented in the *Basewide Background Study Report* (Tetra Tech, 2008a). The calculated background concentration values (95 percent UPL) for surface and subsurface soils that are believed to be present at Tank Farm 5 are included in Table 2-8.

Soil types within the southern portion of DU 5-1 are currently identified as UD, indicating soils have been reworked in place. Tetra Tech conducted an evaluation of area soil surveys available prior to the construction of the tank farm, and determined that soils at DU 5-1 consisted of two types: NeB and PmA (Appendix A-6). Comparable background data were used in the development of PRGs, as shown in Appendix B, for comparison in Table 2-4 as appropriate.

The calculated background values for arsenic in surface soil (17 mg/kg) and subsurface soil (24 mg/kg) at the Site exceed both the USEPA RSL and RIDEM DECs, and these background values are thus selected as PRGs. However, the 95% upper confidence limits (UCLs) of the site arsenic data (26.4 mg/kg surface soil, and 29.8 mg/kg subsurface soil) exceed these background values, and therefore exceed the PRGs.

Similarly, the calculated background value for manganese in combined subsurface soil (1214 mg/kg) exceeds the calculated risk-based PRG (585 mg/kg, non-cancer), and the 95% UCL of the site data (1053 mg/kg). However, based on the risk to the construction worker, the two separate background values were retained for the two soil types (448 mg/kg and 1086 mg/kg), and established as two different PRGs for the two areas where those soils were mapped to be present prior to construction of the Tank Farm.

There is no similar background study conducted for metals or mineral content in groundwater at the Site and no comparisons are made in this regard.

2.2.5 Risk Management and Proposed PRGs

The proposed risk-based PRGs, ARAR-based PRGs, and background concentrations, as well as the selected PRGs and the basis for their selection, are presented in Tables 2-4 and 2-6 for the associated exposure routes for soil and groundwater, respectively. Note that separate PRGs are provided for a presumed unrestricted (residential) future site use, and for a presumed restricted (industrial/commercial) site use.

Risk management is appropriate for all steps in the remedy selection process. The risk management step associated with PRG selection is conducted to assure that these selected cleanup concentrations calculated through standard formulas are appropriate for the Site conditions. Each of the selected PRGs is evaluated in the risk management step, presented below.

2.2.5.1 Risk Management for Soil

Manganese: It is noted that while RME risk calculated for construction workers is above the target risk levels, this risk is associated only with the inhalation of soil dust. There are five locations that exceed the manganese PRG, and all are in subsurface soil (>2 feet below ground surface).

Surface soil concentrations do not exceed the associated PRGs for manganese. The CTE risk for this exposure route and analyte is below the target risk level for both surface soil (HQ of 0.1) and all soil (HQ of 0.4), as presented in the DGA Report, Table 6-35, CTE (Tetra Tech, 2011). Therefore, if the CTE risk, rather than the RME risk is utilized to determine remedial response actions, manganese would not be a COC for the construction worker. Finally, the only ARAR for manganese in soil is the RIDEM DEC, and the PRG could be adjusted up to that value (10,000 mg/kg), which is not exceeded in soil at DU 5-1.

Arsenic: It is documented in the Basewide Background Soil Investigation Report that arsenic concentrations in soils on Aquidneck Island exceed the state DEC (Tetra, Tech, 2008). Some of the concentrations measured at the DU 5-1 Site are higher than the 95% UCLs of similar soils evaluated from background locations. However, these concentrations are also not expected to be a result of CERCLA releases associated with the sludge burning or disposal at this site, because the highest concentrations (SB970, SB972, and SB975 – Figure 2-6 and Table 2-5) are not associated with the soils at the former burn chamber or the outfall, and at these and other locations, the deepest samples have the highest concentrations of arsenic, indicating an association with fractured bedrock.

Overall, it is noted that using the CTE risk for soil, incremental cancer risk was less than 1 x 10^{-5}, and non-cancer risk did not exceed a hazard index of 1.0 for any target organ (Table 6-35 of the DGA Report, Tetra Tech, 2011).

2.2.5.2 Risk Management for Groundwater

Arsenic – The calculated risk-based PRG was developed based on the future child residential risk, through the use of groundwater as a residential water source. As such, the risk-based PRG (3.3 µg/L) is below the MCL of 10 µg/L. Arsenic levels in groundwater at the Site do not exceed the MCL, the non-zero MCLG, or more stringent State groundwater standards. Therefore, no remedial measures to address arsenic in groundwater are required under CERCLA.

Cobalt – CTE risk from cobalt to the child from residential use of groundwater is HQ=1.8. CTE risk to the adult resident, similar to what is used for establishing the RSL for groundwater is HQ=0.7. These estimated risks indicate that the future risk from residential use of groundwater is only to a child resident. Furthermore, cobalt is found in groundwater throughout Tank Farm 5, in DU 5-2 and DU 5-3 (Tetra Tech, June 2011b). The concentrations of cobalt in bedrock groundwater underlying DU 5-2 and DU 5-3 ranged from 0.959 J to 13.5 µg/L, and in bedrock groundwater underlying DU 5-1, cobalt ranged from 0.427J to 19 µg/L.

Iron – CTE risk from iron to the child from residential use of groundwater is HQ=0.7. Risk to the resident, as defined for establishing the RSL for groundwater is HQ=0.3. Iron in groundwater samples is likely due to the presence of soluble iron salts. These salts cause turbidity and there also may be some flocculation of iron and manganese salts in groundwater samples that oxidize when brought to the surface and come in contact with the atmosphere. Most potable water systems are designed to filter out excess iron, due to its impact on water color and/or odor.

The toxicity of iron from ingestion of groundwater is not well documented, as iron is also an essential nutrient. Deriving a toxicity factor for iron poses a challenge because it must address systemic effects associated with iron deficiency and those associated with excess iron (determining a threshold dose). In essence, iron's dose-response curve is "U-shaped." According to the Center for Disease Control and Prevention (CDC), iron deficiency is one of the most common known forms of nutritional deficiency causing developmental delays and behaviour disturbances in children (CDC, 2005).

Levels of iron in the body are regulated through changes in the amount of iron absorbed by the gastrointestinal mucosa. The absorption of dietary iron is influenced by body stores, by the amount and chemical nature of the iron in ingested food, and by a variety of dietary factors that increase or decrease the availability of iron for absorption. Although iron absorption is regulated, excessive accumulation of iron in the body resulting from chronic ingestion of high levels of iron cannot be prevented by intestinal regulation, and humans do not have a mechanism to increase excretion of absorbed iron in response to elevated body levels (National Academy of Science [NAS], 1989; NAS, 2001).

The NAS has established guidelines for iron intake that account for physiological differences during different life stages (NAS, 2001). For non-breast-fed infants (0 to 6 months), the daily adequate intake of iron is 0.27 milligrams per day (mg/day). The NAS Dietary Reference Intakes for children are:

- 7 – 12 months – 11 mg/day (1.2 mg/kg/day)
- 1 -3 years – 7 mg/day (0.54 mg/kg/day)
- 4 – 8 years – 10 mg/day (0.45 mg/kg/day)

Over the ages of 0 to 6 months, this results in an average Dietary Reference Intake of approximately 0.6 mg/kg/day, notably higher than the Dietary Reference Intakes for adults. The Dietary Reference Intake for adult men is 0.11 mg/kg/day and for adult non-pregnant females is 0.29 mg/kg/day.

The Institute of Medicine in the NAS recommends daily maximum intakes of iron for children, based on age (NAS, 2001). Children from 7 months through 13 years of age should take no more than 40 milligrams of iron per day. This is referred to as a Tolerable Upper Intake Level. For children greater than 14 years of age and adults, the Tolerable Upper Intake Level is 45 milligrams of iron per day. The adult Tolerable Upper Intake Level is based on the toxicological study that was used to derive the provisional reference dose of 0.7 mg/kg/day (USEPA, 2006).

This reference dose was derived using an average body weight of 70 kg. Recognizing that children between the ages of 0 and 6 have a greater need for iron than older children and adults, that their average body weight is 15 kg, and that their Tolerable Upper Intake Level is only slightly less than the adult value, it would seem that a theoretical reference dose for a child would be greater than that for an adult. Using the child Tolerable Upper Intake Level of 40 mg/day and an average body weight of 15 kg results in a theoretical child reference dose of 2.7 mg/kg/day (40 mg/day divided by 15 kg) (USEPA, 1989b). The HI calculated in the risk assessment for a child ingesting iron in groundwater is 3.0 for DU 5-1. Adjusting for the knowledge that children require a greater intake rate of iron for development, and that a theoretical child reference dose based on the Tolerable Upper Intake Level is approximately four times greater than the provisional reference dose, the child HI at DU 5-1 was estimated to be roughly 0.75. Therefore, iron would not pose a significant noncarcinogenic risk in groundwater for children at DU 5-1. While iron remains a COC for groundwater within DU 5-1, it should not be the sole consideration when directing action.

Manganese – CTE risk from manganese to the child from residential use of groundwater is HQ=2.3. Non-cancer risk to the resident, as defined for establishing the RSL for groundwater is HQ=0.9. The concentrations measured at DU 5-1 are below the USEPA RSLs for tap water. Elevated levels of manganese in groundwater are likely owing to reducing conditions that may have been caused by releases of petroleum at or upgradient of the Site that render manganese, found naturally in site soils, soluble.

2.3 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES

RAOs consist of medium-specific goals for protecting human health and the environment. The RAOs specify the media and COCs, exposure pathways and receptors, and acceptable contaminant levels or range of levels for each exposure pathway. By specifying both an exposure pathway and target contaminant level(s), the RAOs permit development of a range of alternatives that may achieve protectiveness by reducing exposure to contaminated media or reducing contaminant concentrations. The objectives should be as specific as possible, but not so specific that the range of alternatives that can be developed is unduly limited.

During the development of the investigations at the Site, the CSM was developed. Based on the different removal activities conducted at the Site, the CSM is modified to identify the affected areas, sources of contamination, and contaminants that were removed from the Site. The DGA conducted in 2010 and published in 2011 confirms the existing conditions of the Site. The current CSM is provided in Appendix A.

2.3.1 Remedial Action Objectives for Soil

The findings of the DGA Report were used in developing the RAOs for soil at the Site. As discussed previously in Section 2.2, the HI associated with future construction workers' inhalation of dust generated from subsurface soil exceeds 1.0, and there is cancer risk ($7x10^{-5}$) to residents from exposure to arsenic in soil (considered actionable by the EPA for this site). Therefore, long-term response actions for soil are necessary to protect human health.

Future use of the Site is considered in the formulation of RAOs. The Navy has indicated that the Site should be available for industrial use and restricted recreational use after the remedial action has been implemented. Use of LUCs may be utilized to formalize such restrictions if they are necessary for the remedy. LUCs would be enforced in accordance with the FFA, ROD, and the LUC Remedial Design (RD). Recreational use is restricted to bow hunting for deer by permit during the Rhode Island legal deer season. Restricted recreational use does not include the use of the Site as a "recreational facility for public use" as defined in the RIDEM Remediation Regulations Section 3.62. Restricted recreational use is, however, similar to an industrial/commercial use as defined in Section 3.39 of the RIDEM Remediation Regulations, as it restricts the personnel that can conduct the activity, and restricts the time of use and the activity allowed.

Residential use is not a current or planned future use; however, as directed by CERCLA, the FS evaluates remedial action alternatives for the protection of all possible receptors. Restricting land use is one possible remedial action that may be evaluated in the sections that follow. Unless an environmental land use restriction is memorialized by documentation as such in a selected alternative in a ROD for this Site, it cannot be assumed that the Navy's land use restriction will remain in perpetuity.

The soil RAOs for the protection of human health are:

- Prevent the ingestion of and direct contact with vadose zone soil containing Site contaminants that pose unacceptable risk for residential and other unrestricted uses.
- Prevent exposure of construction workers to soils with Site contaminants exceeding PRGs.
- Prevent exposure of industrial and restricted recreational users to soils containing COCs that exceed RIDEM DECs for Industrial use.
- Identify any potential future migration of soil contaminants either to groundwater or adjacent wetlands/waterways.

2.3.2 <u>Remedial Action Objectives for Groundwater</u>

The findings of the DGA Report as well as criteria including MCLs, non-zero MCLGs, federal risk-based standards and the public health advisory for manganese, and the RIDEM Remediation Regulations, were considered in developing the RAOs for groundwater. Risks to persons using the groundwater for residential purposes exceed the target risk levels, and PRGs have been developed for these receptors, even though this is not a planned future use of the property.

The groundwater RAOs for protection of human health are:

- Prevent use of Site groundwater until the groundwater RGs are achieved.
- Restore groundwater quality to its beneficial use.

2.4 ESTIMATION OF AREAS AND VOLUMES

The areas and volumes of impacted media to be considered for remedial actions were estimated based on current data and the PRG exceedances identified in Section 2.3.

2.4.1 Soil

The areas of soils exceeding PRGs and the estimated associated quantities are summarized below.

Soil Exceeding Industrial PRGs

Soils from three borings exceed industrial PRGs in the surface soil (Figure 2-4). Numerous locations were found to exceed industrial PRGs in subsurface soil (Figures 2-6, and 2-8), and these exceedances are assumed to extend to the site boundaries for the purposes of this FS. Surface soil exceedances appear to be positioned along the former location of the drainage pipeline that led from the former OWS to the outfall at Gomes Brook. Based on this distribution pattern, a generalized horizontal extent of surface soils associated with these PRG exceedances is approximated, using the estimated extent of the area formerly excavated during installation of this pipeline and OWS, and available data. Figure C-3.1 presented in Appendix C-3 illustrates the interpreted extent of these PRG exceedances.

It is recognized that the interpreted extent of surface and subsurface soils exceeding PRGs is approximate, but without further data, this is believed to be a reasonable estimate (although biased high) for the purpose of approximating worst-case conditions. The actual horizontal limit of surface soils with site-related COCs exceeding PRGs is likely less extensive than indicated. Associated soil quantities are estimated below.

Soil Exceeding Residential PRGs

Multiple areas of soils that exceed residential PRGs based on RIDEM residential DECs are noted in Figures 2-3, 2-5 and 2-7. These areas of surface and subsurface soils will need to be addressed through remedial actions. Quantities are estimated below.

Soil Quantities

A total of approximately 3,366 cubic yards of surface soils (i.e., from a depth interval of 0 to 2 feet bgs) with arsenic in excess of the industrial and residential PRGs is currently estimated (Appendix C-3). Using a generalized depth to bedrock of 8.6 feet, approximately 45,400 cubic yards of soil with COCs at concentrations exceeding industrial and residential PRGs (arsenic and manganese) is estimated to be present at the Site (Appendix C-3).

2.4.2 Groundwater

The locations of monitoring wells where groundwater samples had COCs exceeding residential use PRGs are presented in Figure 2-9 (based on 2010 sampling data). Groundwater at this Site is evaluated as a single unit, and any remedial action should consider the groundwater as one contiguous aquifer. The quantity of groundwater with COCs exceeding PRGs is estimated to range between 7 and 9 million gallons. An estimated groundwater volume of 7,125,876 gallons was calculated based on the average saturated thickness across the Site. An estimated groundwater volume of 9,383,869 gallons was calculated based on the maximum saturated thickness across the Site.

3.0 IDENTIFICATION AND SCREENING OF TECHNOLOGIES

This section identifies, discusses, and screens potential remedial technologies and process options, and then conducts further detailed evaluations of those options not eliminated during the screening process. The resulting final retained technologies and process options are then used in the assembly of remedial alternatives for the DU 5-1 media of concern (soil and groundwater) at Site 13 - Tank Farm 5. The NCP alternative evaluation criteria are also presented in this section. The description of the remedial alternatives as assembled for each medium of concern, and a detailed evaluation of these remedial alternatives are provided in Sections 4.0 (soil) and 5.0 (groundwater).

Technology identification and screening are important preliminary steps in developing remedial alternatives for a site. In this phase of the FS, potentially applicable technology types and process options are identified. The technologies and process options are then screened by evaluating each with respect to technical implementability, thereby reducing the number of options for further consideration. The technologies and process options considered implementable are then evaluated in greater detail. Technologies and process options retained through this evaluation are subsequently developed into remedial alternatives.

The steps for completing the identification, screening, and evaluation of technology types and process options are summarized below:

- Develop GRAs for each medium of concern that will satisfy the RAOs.
- Identify and screen representative remedial technologies and process options applicable to each GRA.
- Evaluate and select technologies and process options.
- Develop remedial alternatives from retained technologies and process options.

3.1 GENERAL RESPONSE ACTIONS AND TECHNOLOGY EVALUATION

GRAs describe categories of actions that could be implemented to satisfy the RAOs for each medium of concern at a site. GRAs may include treatment, containment, removal, extraction, disposal, limited action such as institutional controls, or a combination of these options. In developing remedial alternatives, combinations of GRAs may be identified to fully address all RAOs.

GRAs identified as applicable for remediating one or both of the two affected media (soil and groundwater), include the following:

- No Action
- Limited Action
- Containment
- Removal
- Disposal
- Treatment

A description of each GRA is provided below.

No Action – Under the no action option, the affected medium is left "as is," without implementing any remedial technologies. This option does not provide for monitoring or placing access restrictions on contaminated media, although it does include conducting statutorily required reviews of the protectiveness of the remedy at least every five years. Examination of this option is retained throughout the FS process, as required by the NCP. Although this option requires no remedial action, it provides a baseline against which other GRAs can be evaluated.

Limited Action – This GRA includes institutional controls such as LUCs/access restrictions that limit use or access to the media to reduce or eliminate risk of exposure of receptors to hazardous materials. Limited action measures may also include physical barriers such as fencing and/or signage to discourage access to the contaminated media. Typically, LUCs and physical barriers or signage require regular follow-up inspections to verify their continued maintenance until cleanup goals have been reached. A long-term monitoring program to assure compliance and to assess changes in environmental conditions or changes as a result of natural attenuation can be part of this GRA.

While institutional controls and physical barriers alone do not reduce the toxicity, mobility, or volume of contaminated media through direct means, naturally occurring processes may reduce contaminant concentrations over an extended period of time. Data generated from long-term monitoring activities would provide information to assist in determining the rate of contaminant concentration reductions through these naturally occurring processes, as well as the potential migration of COCs. Monitoring would also provide information on which to base a decision regarding the need to implement additional remedial actions, should contaminant migration be observed.

Containment – Containment technologies reduce potential exposure risks through the application of physical means. Physical barriers help to prevent direct contact with contaminated media and control potential erosion or migration. Barriers may consist of permeable covers or low permeability caps and may be comprised of natural or synthetic materials. Containment also can be used to reduce the movement of the contaminated media by preventing erosion of materials and restricting surface water movement through the contaminated media that may cause contaminant transport and leaching. Containment of soil in place would likely require establishment of a waste management area under RIDEM regulations, as well as associated monitoring and other remedial components. For groundwater, containment can be used to reduce the movement of the groundwater and thereby reduce the potential for contaminant transport. Containment of groundwater in place would likely require the establishment of a physical or hydraulic barrier to groundwater flow as well as associated monitoring and other remedial components. The management of the extracted water would be required, either through re-injection or disposal.

Removal – Removal technologies are used to collect contaminated media from their present locations and move them for subsequent treatment and/or disposal. For soil, removal is typically performed by excavation equipment, such as excavators and backhoes. For groundwater, removal would involve pumping to prevent passage of contaminated groundwater to downstream receptors. Removal reduces the volume of contaminated media remaining onsite and allows site conditions to attenuate more rapidly than they would, had the contaminated media removal not occurred.

Disposal – Disposal technologies are combined with removal and/or treatment technologies to develop alternatives to clean up contaminated media at the Site. Depending on the nature of the contaminated media, disposal may include the following options: disposal at an offsite Resource Conservation and Recovery Act (RCRA) Subtitle C/RCRA Subtitle D landfill or treatment, storage, and disposal facility (TSDF); or disposal on land at a designated onsite/on-station location. Disposal in a properly secured and maintained manner reduces the movement of the contaminated media.

Treatment – Treatment technologies reduce contaminant volume, mobility, and/or toxicity. Treatment options include technology types and process options using thermal, physical, chemical, and/or biological means. Treatment technologies can be implemented in-situ or ex-situ. In-situ treatment technologies treat the contaminated media in place by reducing the contaminants' toxicity, mobility, or volume. In-situ treatment technologies are not always combined with other GRAs. Ex-situ treatment technologies treat the contaminated media after that media has been removed from its current location. Ex-situ treatment technologies are combined with removal and often, disposal options. Ex-situ processes may further include both on-site and offsite options.

3.2 SCREENING OF TECHNOLOGIES AND REPRESENTATIVE PROCESS OPTIONS

Brief descriptions of preliminary screening, RPOs, and the evaluation of technologies and process options that remain after the preliminary screening are presented below.

3.2.1 Preliminary Screening

For the remediation of COCs in the DU 5-1 media of concern, a variety of technologies and process options are available for each of the GRAs described in Section 3.1. A range of these technology types and process options was identified and screened to focus on relevancy. Summaries of the identification and preliminary screening of remedial technologies and process options appropriate for soil and groundwater are provided in Tables 3-1 and 3-2, respectively. Numerous options were eliminated based on technology screening.

3.2.2 Representative Process Options

USEPA guidance for conducting FSs recommends that one RPO be selected for each GRA to simplify the subsequent development and evaluation of alternatives without limiting flexibility during remedial design (USEPA, 1988a). RPOs are selected from the technologies remaining after preliminary screening based on effectiveness, implementability, and cost. The selected RPOs provide a basis for developing performance specifications during preliminary design. Although specific process options are selected for alternative development and evaluation, these process options are intended to represent the broader range of process options within a general technology type. The specific process for implementation of the remedial action may not be selected until the remedial design phase.

The soil and groundwater RPOs chosen for further evaluation are summarized in Sections 3.3.6 and 3.4.6, respectively.

3.2.3 Evaluation of Technologies and Representative Process Options

Following the preliminary screening of RPOs, the remaining technologies and process options are evaluated in greater detail to determine if they are to be retained for use in developing remedial alternatives. One RPO is selected, if possible, from each technology category to simplify subsequent development and evaluation of alternatives without limiting flexibility during remedy selection or remedial design. The evaluation criteria include effectiveness, implementability, and cost, with a focus on effectiveness. Brief descriptions of the criteria are as follows:

Effectiveness - focuses on the potential ability of a process option to handle the estimated areas or volumes of media; to meet the remedial goals identified in the RAOs; to reduce the potential impacts to human health and the environment during construction and implementation; and to be technically reliable (effectiveness of innovative versus well-proven technologies) with respect to the contaminants and conditions at a site.

<u>Implementability</u> - encompasses both the technical and institutional feasibility of implementing a process. The preliminary screening of technology types and process options was based on an evaluation of technical implementability issues in order to eliminate options that are clearly ineffective or unworkable at a site. The subsequent, more detailed, evaluation places greater emphasis on the institutional aspects of implementability coordination with various regulatory agencies and contractors; the availability of treatment, storage, and disposal services; and the availability of necessary equipment and skilled workers to provide long-term operation and maintenance (O&M) services, etc.

<u>Cost</u> - plays a limited role in the screening of process options. Options are evaluated based on relative capital and O&M costs (whether the costs are high, medium, or low relative to the other options in the same technology type). At this point in the evaluation, the cost analysis is based on engineering judgment and not on detailed estimates.

3.3 EVALUATION OF TECHNOLOGIES AND REPRESENTATIVE PROCESS OPTIONS FOR SOIL

For the remediation of contaminants in soil, a variety of technologies and process options are available for each of the GRAs described in Section 3.1. A range of these technology types and process options was identified and screened to focus on only the relevant technologies and process options to address the COCs in soil (arsenic and manganese) for this Site. A summary of the preliminary screening of identified technologies and process options appropriate for soil is provided in Table 3-1. The evaluation of the remaining technologies and RPOs for soil remediation that were not eliminated in the preliminary screening process is provided in the following subsections.

Only those technologies not eliminated in the initial screening (Table 3-1) or in the detailed evaluation presented in this section are retained for inclusion in remedial alternatives for soil.

3.3.1 <u>No Action</u>

The "no action" alternative, as required under the NCP, provides a baseline to which remedial technologies and alternatives can be compared. Under this option, no removal or treatment of the contaminated soil would occur.

- <u>Effectiveness</u>: The no action alternative would not achieve RAOs because contaminants and associated risks would remain. Human health risks associated with exposure to carcinogenic and non-carcinogenic contaminants in the soil are presumed to remain the same. Long-term protection of groundwater would not be provided; and re-use of the property would be impeded.

- Implementability: No implementability considerations are associated with the no action option.

- Cost: A nominal cost would be required to address the Site in the facility five-year review.

Conclusion – The no action option is retained as a baseline, as required by the NCP.

3.3.2 Limited Action

The components of limited action for soil that are evaluated in this screening include LUCs and inspections, the use of temporary physical barriers such as fencing, the posting of signs, inspections and monitoring.

Land Use Controls/Deed Restrictions/Inspections

LUCs are institutional controls that place restrictions on the use of property based on the presence of a risk to human health or the environment. Typically, LUCs may also include the performance of regular follow-up inspections to verify their continued maintenance until cleanup goals have been reached. On non-federal property, the institutional controls that place restrictions are commonly recorded against property deeds. On federal property, such as NAVSTA Newport, the restrictions may be placed on the NAVSTA Newport's property management instruction.

These restrictions are used to limit future activities or uses of a site to prevent human contact with contaminated media. LUCs commonly used to reduce exposure to contaminated media include prohibitions on installing water supply wells, restrictions on types of development allowed (e.g., no residential use), disturbing components of the remedy (digging into cover systems), and limitations on certain types of construction (e.g., excavation, construction of buildings with basements).

Any LUCs would be implemented in accordance with the *Principles and Procedures for Specifying, Monitoring, and Enforcement of Land Use Controls and Other Post-ROD Actions*, (DoD, 2003). The manner in which LUCs are developed is currently through a document referred to as a LUC RD. This document would define the limitations of the control and the applicability, etc. LUC RDs will be developed in accordance with applicable current guidance and agreements between the USEPA and the Navy. The LUC RD drafted by the Navy is approved by USEPA and the State and is enforceable under the FFA.

Any time that the Navy retains the property, the "activity" (in this case the "activity" is the NAVSTA Newport Public Works Department) enforces any LUC necessary. Under the FFA, the Navy must allow access to the regulatory agencies to monitor and enforce LUCs; however, the manner in which the LUCs are to be enforced will be addressed in the ROD and the FFA. The Navy's policies for implementing

LUCs and demonstrating that such controls remain protective at NAVSTA Newport were addressed in a letter from the Navy to RIDEM (NAVFAC MidLant, 2007). The letter affirms the FFA requirement for the Navy to allow access to the State and USEPA for inspection and enforcement activities.

The LUC RD is tracked by the Navy through a centralized system to assure each LUC is maintained appropriately. In the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements. The restrictions presented in the LUC RD may limit allowable activities such as development of the Site for residential or uncontrolled recreational use. Restrictions would also prevent the disturbance to any component of the remedy. In accordance with the ROD, LUCs would be monitored and enforced as long as contaminants are present that pose a risk above CERCLA risk levels, as determined through the five-year review process.

If the land is sold and released from Navy jurisdiction, the land use restriction that was incorporated into the base instruction is written into the deed for the new property and recorded against the property title. The format of the land use restriction would meet local or Rhode Island recording standards. The regulatory standards for institutional controls in the State of Rhode Island are termed ELURs. Currently there is no plan for excess of Navy property at or in the vicinity of DU 5-1.

In cases where LUCs, including base instructions or ELURs, are placed to address contamination at a site, the Navy must submit an annual report to the regulatory agencies documenting that all of the restrictions are being met. The Navy is also required to take immediate action to correct any violations identified. This report must be submitted every year and the obligations to enforce the restrictions remain as long as levels of contamination exceeding CERCLA risk levels remain on the property.

There is currently a restriction on use of the Site, enforced by the Navy. The NAVSTA Newport Instruction 5090.25B – Bow Hunting Procedures, allows for Navy staff and personnel to conduct bow hunting by permit only within the confines of Tank Farm 5, in accordance with the seasonal limitations of the State of Rhode Island. This is considered a restricted recreational use of the Site (Section 1.10 of this report). Specifically, the Naval Station manages the personnel who enter this site for this locally permitted recreational use. To acquire access, the user must check in at the NAVSTA Security Office no earlier than one and a half hours prior to sunrise to go into the Site, and again, no later than one and a half hours after sunset. The security office signs that person in and out, accordingly. Such management of users is augmented by existing fencing and signage that restricts access to anyone else, other than workers utilizing the Site under an industrial scenario (use as a materials lay-down area, storage area, etc).

- <u>Effectiveness</u>: LUCs could be applied to continue to limit access and will be added to limit construction activities and limit future use of the property. LUCs alone may not be effective in the long term to reduce risk. LUCs are only effective if they are enforced properly. No additional risks to human health and the environment would directly result from the imposition of LUCs.

- Implementability: LUCs for soil on an active base, in the form of base instructions, can be easily implemented by the Navy. Before any property transfer occurs from Navy control, the Navy would establish and record land use restrictions (in the form of an ELUR) against any deed created for the transferred property. This can be readily implemented. Inspections and enforcement of land use restrictions would also be readily implemented by the Navy.

- Cost: Only administrative actions would be taken, capital costs would be very low and few long-term costs would be incurred for inspections and enforcing LUCs.

Conclusion – LUCs and Inspections are retained for development into remedial action alternatives. LUCs can be effective based on the restrictions placed. For example, a restriction that does not allow any residential use of the land would prevent any development for residential use purposes and prevent residential exposure, therefore mitigating risk to that receptor.

Fencing

Fencing may be used as a barrier to restrict access to areas where contaminants are present at or near the surface, thereby limiting direct contact exposure for human receptors. Access to Tank Farm 5, of which DU 5-1 is a part, is currently partially restricted by gates and partial existing fencing. However, if it is necessary to further restrict access to affected portions of DU 5-1, some additional fencing would be required.

- Effectiveness: Fencing alone would not meet RAOs for soil because it is not effective in the long term to reduce risk. It would help to meet RAOs along with LUCs and would be useful to prevent human access to contaminated areas or operating remedies. No additional risks to human health would result from the installation of fencing.

- Implementability: Installation of new fencing is readily implementable. Contractors and equipment are readily available for fence installation and maintenance.

- Cost: The capital and long-term costs for fencing would be low.

Conclusion – Fencing is retained for development into remedial action alternatives.

Signs

The posting of signs may be used as a means of indicating areas where contaminants are present at or near the surface, thereby minimizing direct contact exposure for human receptors. Signs are usually posted around the perimeter of a site at a designated frequency (e.g., every 100 feet around the perimeter of a site). Signs can be mounted to fencing or on a post near an access point, or at a perimeter of a target area.

- Effectiveness: Sign posting alone would not meet RAOs for soil because it is not effective in the long term to reduce risk. It would help to meet RAOs along with fencing and LUCs. No additional risks to human health and the environment would result from the installation of signs.

- Implementability: Installation of new signs is readily implementable. Contractors and equipment are readily available for sign installation and maintenance.

- Cost: The capital and long-term costs for posting signs would be low.

Conclusion – While the use of signs alone is not effective in achieving RAOs, it is retained for development into remedial action alternatives in conjunction with other technologies, to limit exposure to soil contaminants.

Groundwater Monitoring

Groundwater monitoring can be used as a component of soil remedies as a means to determine whether contaminants left in place in the soil migrate to the groundwater (leaching). Groundwater monitoring is usually performed periodically at several locations, including upgradient of the contaminated area, within the contaminated area, and downgradient of the contaminated area. Locating groundwater monitoring wells in this manner allows for the determination of site contaminant migration and the identification of contaminant sources upgradient of the area of investigation. Typically, the cost for groundwater monitoring for FS purposes considers monitoring for a period of 30 years, and the development of a long-term groundwater monitoring plan. However, the ROD and the long-term groundwater monitoring plan would identify the sampling frequency, duration, and decision rules to be followed under such a program.

- Effectiveness: Groundwater monitoring is often used to determine the effectiveness of selected remedies, or to confirm that residual levels of COCs are not mobilized, although groundwater monitoring alone would not meet RAOs for soil, because it is not effective in the long term in reducing risk from direct exposure to soil. Through the use of appropriate and approved sampling techniques and the appropriate personal protective equipment (PPE), no additional risks to human health and the environment would result from the implementation of a long-term groundwater monitoring program.

- Implementability: Installation of a long-term groundwater monitoring program is readily implementable. Contractors and equipment are readily available for groundwater monitoring well installation, groundwater sample collection, and laboratory analysis and reporting.

- Cost: The capital and long-term costs for a long-term groundwater monitoring is low.

Conclusion – Because arsenic remains in Site soil at concentrations exceeding soil screening levels, and arsenic has been detected in groundwater at concentrations near (but below) the MCL, groundwater monitoring is retained for inclusion in soil remedial action alternatives, in conjunction with other technologies, to monitor site conditions.

3.3.3 Containment

Soil containment would involve the establishment of a waste management area under identified ARAR standards. The following containment technologies and process options for contaminated soil are evaluated in this section.

- Impermeable Cap
- Permeable Cover

Impermeable Cap

Impermeable capping involves installing an impermeable barrier over the contaminated soil to restrict access to the contaminated soil and to reduce infiltration of water (i.e., precipitation) into the subsurface or onto the surface where erosion is likely to take place. Such barriers are appropriate where soil contamination threatens groundwater or surface water, and is typically used for the purposes of reducing the leaching of contaminants from soil to groundwater. Regrading of soil prior to capping may be required. Cap materials can either be natural or synthetic. Frequently used materials include low-permeability clay, bentonite enhanced soils, and geomembranes such as liner low density polyethylene, polyvinyl chloride, and Hypalon®. These materials are typically covered with clean fill and controlled vegetation (grass), or clean fill and asphalt to protect them against damage caused by puncturing and weathering.

- Effectiveness: Capping can prevent direct exposure to contaminated soil and reduce the migration of COCs from the Site. Because it would leave contaminants in place, it would be effective in achieving PRGs for industrial use, but not in achieving PRGs for residential use. LUCs would be required to ensure the cover is not interrupted. Capping is a reliable technology that would reduce risk by providing a barrier between contaminated soil and potential receptors. Capping can be effective in reducing the infiltration of water and consequently, any potential leaching of contaminants from unsaturated soil to groundwater (Note: however, the soil PRGs did not require protections for leachability of COCs to groundwater). Capping does not eliminate the natural flow of groundwater through the subsurface; any contaminated soil in the saturated zone would remain a possible continuing source of contamination to groundwater if the COCs were leaching. Capping only isolates existing soil contamination at the surface, offering no decrease in contaminant mass. Since contaminated soil remains in place, the long-term effectiveness of capping depends on adequate long-term cap maintenance.

- Implementability: Construction of an impermeable cap is implementable at DU 5-1 for areas exceeding soil PRGs. A variety of proven capping materials can be used, including bentonite enhanced soil, low permeability clay, geomembranes, and combinations of these materials. Site conditions at DU 5-1 are amenable to installation of caps and covers within specific areas. Remedial activities involving re-grading and capping are relatively common and can be conducted by many contractors. No permits or other administrative requirements would be necessary for construction activities, although because the waste is left in place, there would be requirements to manage it over time: a waste management area may have to be established and LUCs would be required in conjunction with capping to limit the future use of the capped areas or actions that may damage the cap. Long-term O&M of the cap system and groundwater monitoring would also need to be implemented in accordance with state waste management regulations.

  Installation of a cap over the portions of DU 5-1 that exceed residential or industrial PRGs (<1 acre) is implementable.

- Cost: The capital costs for impermeable cap construction are moderate to high, depending on the size of the areas to be capped. Long-term O&M costs of impermeable cap systems can be moderate, depending on the monitoring requirements imposed for the waste management area.

Conclusion – Isolating small areas of soils in place with an impermeable cap in conjunction with LUCs would prevent exposure to contaminated soil. Installation of a cap would be compliant with meeting industrial PRGs since RIDEM DECs for industrial use are only applicable to the top two feet of the soil column, as long as there is an LUC in place to ensure the cap integrity is not compromised. However, the management effort required for small areas over time is extensive, particularly as monitoring groundwater within and downgradient of these areas may be required under the rules applicable to waste management areas (even if leaching was not a concern). Leaching of soil COCs does not appear to be a concern, and the risk posed by the single COC in surface soil is marginal. Therefore, an impermeable cap is not retained for further consideration in the development of remedial action alternatives, in favor of a permeable cover (described below).

Permeable Cover

Permeable covers involve installing a soil barrier over the contaminated soil to assist in the restriction of access to the contaminated soil. Permeable barriers are appropriate where the existing soil contamination does not threaten groundwater or surface water resources, but where direct exposure to COCs in the soil is a potential during planned land use. Cover materials are typically natural materials but could include geosynthetic separation or marker layers. Clean common fill soils, topsoil, and geotextiles are materials frequently used for permeable covers.

- Effectiveness: Installation of a permeable cover would achieve the RAO for preventing direct exposure to contaminated soil. Because it would leave contaminants in place, it would be effective in achieving PRGs for industrial use, but not in achieving PRGs for residential use. LUCs would be required to ensure the cap is not interrupted. Contaminated soil remains in place when implementing a permeable cover; the effectiveness of a permeable cover in preventing direct exposure to contaminants depends on adequate cover thickness based on expected land use, and maintenance of the cover over time. Institutional controls such as LUCs would be required in conjunction with the permeable cover to limit the future use of, or intrusion into, the covered areas. In some areas beyond the limits of the cover, concentrations of soil COCs exceed PRGs at depths greater than two feet. Based on the measured concentrations in the surface soil it is assumed that the existing soil at these areas provides adequate cover over the soils where the COCs exceed PRGs in subsurface soil, though LUCs would be required to prevent digging, excavation, or other disturbances, in order to ensure that at least 2 feet of uncontaminated soils remain above these areas of subsurface contaminants. This would be required in order to prevent the possibility of direct contact with these soil contaminants that are currently at depth. Furthermore, since arsenic is the only COC with an exceedance in the surface soil, in accordance with Section 12.04 of RIDEM Remediation Regulations, a six- inch thick cover would be necessary on areas with arsenic concentrations above the PRG of 17 mg/kg and below the RIDEM ceiling level of 43 mg/kg, and a 2 foot cover would be required on soils where arsenic concentrations are above 43 mg/kg.

- Implementability: Construction of a permeable cover is readily implementable at DU 5-1. Specialized construction techniques are not required, and qualified contractors and necessary cover materials are readily available. Earthwork requirements would be similar to those described for an impermeable cap. Site conditions at DU 5-1 are amenable to installation of caps and covers. Remedial activities involving regrading and covering are relatively common and can be conducted by general earthwork contractors. No permits or other administrative requirements would be necessary for construction activities other than those required for work within 100 feet of freshwater wetlands. The one COC in surface soil (arsenic) and the two COCs in subsurface soil (arsenic and manganese) would be left in place. LUCs and long-term O&M would also need to be implemented to assure the integrity of the remedy over time.

Installation of a permeable cover over the portions of DU 5-1 that exceed residential and industrial PRGs in surface soil (0-2 feet) is implementable for the affected portions of the area (<1 acre).

- Cost: The capital costs for a permeable cover are low to moderate, depending on the extent of the long-term management requirements.

Conclusion – Isolating areas of surface soil in place with a permeable cover, in conjunction with LUCs, would prevent exposure to contaminated soil. Installation of a six inch cover over area with arsenic concentrations between the PRG of 17 mg/kg and the RIDEM ceiling level of 43 mg/kg, a two-foot cover over areas where arsenic concentrations are above 43 mg/kg, and maintaining the existing soil cover over other areas where PRGs are exceeded in subsurface soils would be compliant with meeting industrial PRGs since RIDEM DECs for industrial use are only applicable to the top two feet of the soil column, as long as there are LUCs in place to ensure the existing and proposed soil cover integrity is not compromised. Therefore, this technology is retained for development into remedial action alternatives.

3.3.4 Removal

The soil removal options that are evaluated in this section are bulk excavation and selected excavation of hot spot areas.

Bulk Excavation

Bulk excavation involves the large-scale removal of contaminated soil. Traditional excavation equipment such as hydraulic excavators, bulldozers, wheel loaders, and off-road dump trucks are typically used. The excavated material could be loaded onto trucks and hauled over the road to an approved treatment or disposal facility, or could be treated and/or relocated at the Site or another location at NAVSTA Newport. Open excavations would be backfilled using clean fill or treated soil. The Site conditions at DU 5-1 are amenable to bulk excavation with plenty of staging areas, level ground, and work space. Control of fugitive dust would be required during excavation. Standard engineering controls such as dust suppressants would adequately and safely control airborne contaminants. This technology, combined with subsequent treatment and/or disposal, would be a permanent solution and achieve the RAOs.

- Effectiveness: Bulk excavation would be somewhat effective for handling contaminated soil at DU 5-1. DU 5-1 areas where industrial PRGs are exceeded in surface soil are moderate in size, though easily accessed. Bulk excavation of soil exceeding residential PRGs would be less effective due to the size and breadth of the excavation required. Areas where residential PRGs are exceeded are the same as those exceeding industrial PRGs, except that industrial PRGs only apply to the surface soil when LUCs are established.

- Implementability: Excavation is implementable for reasonably-sized portions of vadose zone soil (soil above the groundwater table). Specialized construction techniques are not required, and qualified contractors and necessary equipment are readily available. Excavation would require protection of the Site surface water and implementation of erosion and sediment control measures. If excavated materials are disposed of offsite, transportation and TSDF requirements must be met. Excavation to meet residential PRGs for subsurface soil is likely to be too extensive to be implementable.

- Cost: The capital cost range is dependent on area affected. In order to achieve industrial PRGs through excavation (excavation of soil exceeding industrial PRGs to a depth of 2 feet), approximately 3,500 cubic yard (cy) of contaminated soil would need to be excavated: soil along the former pathway of the discharge piping between Normans Brook and the former OWS, but encompassing SB974 utilizing topography as a guideline. In order to achieve residential PRGs, a much larger portion of the site would require excavation. Assuming typical unit costs for excavation, backfill, and offsite disposal, the total cost of such a scenario would be considered moderate to high.

  Under a large scale excavation (excavation of subsurface soil exceeding residential PRGs), over 40,000 cy of contaminated soil would need to be excavated, and may impact several acres of woodland and wetland, as shown in Figure 2-5. Assuming typical unit costs for excavation, backfill, and offsite disposal, the total cost of such a scenario would be considered very high.

Conclusion – Removal of contaminated soil by bulk excavation is not retained for development of remedial action alternatives addressing soils. The exceeded PRGs are identified in Section 2 and are not practical (whole-site excavation is not implementable or cost-effective).

Hot Spot Excavation

Hot spot excavation involves the removal of contaminated soil from selected areas thus reducing overall concentrations. The type of excavation equipment used is the same as noted above under bulk excavation, including hydraulic excavators, bulldozers, wheel loaders, and off-road dump trucks. The excavated material could be loaded onto trucks and hauled over the road to an approved treatment or disposal facility, or could be treated and/or relocated at the Site or another location at NAVSTA Newport.

Open excavations would be backfilled using clean fill. The Site conditions at DU 5-1 are amenable to hot spot excavation, with plenty of staging areas, level ground, and work space. Control of fugitive dust would be required during excavation. Standard engineering controls such as dust suppressants would adequately and safely control airborne contaminants.

- Effectiveness: Bulk excavation could be somewhat effective for handling contaminated soil at DU 5-1, but it is unlikely that hotspot excavation would be effective due to the fact that “hot spots” do not appear to exist. DU 5-1 areas where industrial PRGs are exceeded are moderate in size though easily accessed. At DU 5-1, those areas of soil that exceeded residential PRGs also exceeded industrial PRGs. However, locations that exceed PRGs as demonstrated in Table 2-5 all exceed within a similar range – there are no significant locations that stand out dramatically as significant hot spots, and therefore target excavations on small areas would not likely reduce overall exposure.

- Implementability: Excavation is implementable for reasonably-sized portions of vadose zone soil (soil above the groundwater table). Specialized construction techniques are not required, and qualified contractors and necessary equipment are readily available. Excavation would require protection of the Site surface water and implementation of erosion and sediment control measures. If excavated materials are disposed of offsite, transportation and TSDF requirements must be met.

- Cost: The capital costs range is dependent on area affected. Assuming typical unit costs for excavation, backfill, and offsite disposal, the total cost of such a scenario would be considered moderate to high.

Conclusion – Removal of contaminated soil by hot spot excavation is not retained for development of remedial action alternatives addressing soils. The number of locations and the associated depths where COCs exceed PRGs renders this impracticable. The exceeded PRGs identified in Table 2-5 do not indicate actual presence of hot spots and as such this technology is not practical.

3.3.5 Disposal

Disposal technologies are not evaluated because no soil removal alternatives are retained for DU 5-1; therefore, soil disposal is not applicable.

3.3.6 Summary of Retained Soil Process Options

The following RPOs have been retained for the development of remedial action alternatives to address the risk caused by soil contamination at DU 5-1.

General Response Action	Representative Process Option
No Action	No Action
Limited Action	LUCs and Inspections
	Groundwater Monitoring*
	Fencing
	Signs
Containment	Permeable Cover

*Groundwater monitoring would be conducted in support of groundwater alternatives also.

3.4 EVALUATION OF TECHNOLOGIES AND REPRESENTATIVE PROCESS OPTIONS FOR GROUNDWATER

For the remediation of COCs in groundwater, a variety of technologies and process options are available for each of the GRAs described in Section 3.1. A range of these technology types and process options was identified and screened to focus on only the relevant technologies and process options to address COCs in groundwater (manganese, cobalt, and iron) at DU 5-1. An evaluation of the remaining technologies and process options for groundwater remediation is provided in the following subsections. Only those technologies not eliminated in the initial screening, as shown in Table 3-2 or in the detailed evaluation presented at the end of this section, are retained for inclusion in remedial alternatives for groundwater.

3.4.1 No Action

The no action option is considered to provide a baseline level to which other remedial technologies and alternatives can be compared. Under this option, no removal or treatment of the contaminated groundwater would occur.

- Effectiveness: This option would not be effective in achieving the RAOs for contaminated groundwater. This option would not allow the evaluation of either potential contaminant reduction through natural attenuation or potential contaminant migration offsite, because no monitoring would be performed.

- Implementability: No implementability considerations are associated with the no action option.

- Cost: A nominal cost would be required to address the Site in the facility five-year review.

Conclusion – The no action option is retained as a baseline, as required by the NCP.

3.4.2 Limited Action

Limited actions are non-intrusive or less intrusive actions that can be conducted to address COCs. The components of limited actions for groundwater that are included in this evaluation are LUCs and inspections, groundwater monitoring and monitored natural attenuation (MNA).

Land Use Controls and Inspections

Institutional controls would be established through development of a LUC RD to restrict activities within the current Navy base for the purpose of preventing use of groundwater until the PRGs are met. Follow-up inspections would be conducted to ensure that the LUCs are being upheld at the Site as long as groundwater contaminants are present that pose a risk above CERCLA risk levels.

The LUCs are tracked by the Navy through a centralized system to assure each LUC is maintained appropriately. In the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements. The restrictions presented in the LUC RD may limit future activities such as new well installations, or establish construction restrictions that would restrict access to the groundwater for any reason (for example, developing a residential water supply). Restrictions would also prevent the disturbance to any component of the remedy (monitoring wells). LUCs would be monitored and enforced as long as groundwater contaminants are present that pose a risk above CERCLA risk levels.

- Effectiveness: LUCs would not remove COCs from groundwater or restore aquifer quality; however, LUCs would effectively minimize potential human health risks associated with exposure to COCs in groundwater. No additional risks to human health and the environment would directly result from the imposition of LUCs.

- Implementability: LUCs would be implemented at the active base through base instructions created and enforced by the Navy. Before any property transfer were to occur, the Navy would establish and record land use restrictions as an LUC RD, and upon transfer, revise the controls to an ELUR against any deed created for the transferred property. This could be readily implemented. Monitoring and enforcement of LUCs would also be readily implemented by the Navy.
- Cost: Only administrative actions would be taken, capital costs would be very low and limited O&M costs would be incurred for monitoring/enforcing the LUCs.

Conclusion – Use of LUCs with inspections to meet RAOs for protection of human health from exposure to COCs in groundwater is retained for development into remedial action alternatives.

Groundwater Monitoring

Sampling and analysis of groundwater throughout the area where COCs exceed PRGs could be used to evaluate changes in concentrations of COCs and other groundwater chemical parameters. Monitoring could also be used to assess the progress of any natural attenuation that may be taking place.

- Effectiveness: Groundwater monitoring by itself would not reduce the toxicity, mobility, or volume of contaminants in the groundwater. However, periodic groundwater monitoring and evaluation of contaminant migration data would help to determine if LUCs need to remain in place if they are selected, and to anticipate and take action to prevent potential adverse impacts, such as contaminant transport offsite. Monitoring would also be helpful in measuring and evaluating the effectiveness of any other groundwater remediation efforts and source control measures.

- Implementability: A groundwater monitoring program could be readily implemented at the Site. Wells are currently in place and could be augmented with new wells, as needed.

- Cost: The capital and O&M costs for long-term groundwater monitoring would be relatively low.

Conclusion – Groundwater monitoring would be an effective and implementable method to observe ongoing changes to current groundwater conditions during and after implementation of other remedial technologies, and to support LUCs and other remedial efforts implemented.

Monitored Natural Attenuation

Unlike natural attenuation of organic contaminants, natural attenuation of metals does not result in the actual destruction of contaminants. The natural attenuation of metals relies upon the immobilization of the mineral into a stable and/or nontoxic species. If stabilization and/or toxicity reduction is occurring via natural processes, then natural attenuation is occurring and MNA could be a viable alternative. Appendix A5 of this FS report describes the groundwater geochemistry for DU 5-1. It also concludes that redox fluctuations are likely to be caused by the biological degradation of petroleum hydrocarbons at and upgradient of the Site that may be occurring, resulting in elevated concentrations of dissolved manganese, iron and cobalt in site groundwater. Over time, it is anticipated that the dissolved concentrations of these metals will be reduced by the continued redox fluctuations as the petroleum degradation process completes itself.

The required timeframe for this process is currently estimated at 11 years (bedrock) and 23 years (overburden) based on a predicted rate for three volumes of groundwater to fully flow through the Site's saturated zone (Appendix A-7). However, a trend analysis would need to be conducted using data as it is collected over time, which will help to refine the required period of time for levels of COCs in groundwater to be reduced to levels less than PRGs, and ultimately to reach an unrestricted use condition for the local groundwater at DU 5-1.

Conceptually, once it was confirmed that such attenuation is occurring, groundwater monitoring would be conducted at regular intervals. The monitoring would include the collection and analysis of samples to determine the chemistry of the plume and the distribution of contaminants between solid (particulate) and aqueous (dissolved) phases, to monitor the progress of the natural attenuation in immobilizing and/or changing the COCs to nontoxic species. The chemistry of the groundwater would be determined by measurements of chemical parameters such as oxidation-reduction potential (ORP), dissolved oxygen (DO), pH, alkalinity, temperature, conductivity, total organic carbon (TOC), ferrous and total iron, and other major cations and anions, as well as for the COCs themselves. The distribution of contaminants between solid and aqueous phases would be determined by laboratory analysis of contaminant concentrations in aquifer solids and in groundwater.

- Effectiveness: MNA may be effective in reducing dissolved concentrations of manganese, iron and cobalt to the levels of the PRGs. It is likely that the degradation of petroleum at and upgradient of DU 5-1 has been occurring for some time, and this process has resulted in elevated levels of dissolved metals. As the petroleum decreases through natural degradation and through previous petroleum removal actions both at the Site and upgradient, the naturally occurring processes acting on the metals could immobilize or speciate those metals to particulate, non-toxic or less toxic species over the long term. Since extensive removal actions have been conducted at DU 5-1 and tank areas upgradient, it is possible that this degradation process is already near conclusion. Limited data from historical sampling events are available and more data over time would be necessary for additional evaluation of whether further immobilization or speciation of COCs is occurring at the Site.

  Groundwater monitoring is a necessary part of MNA for the purpose of evaluating progress toward PRGs. Long-term monitoring of COCs in groundwater would provide an assessment of whether concentrations of COCs are changing through time. Institutional controls such as LUCs would be required in conjunction with the MNA, to limit the future use of groundwater until cleanup goals are reached. Effectiveness of the MNA as a component of a remedy would need to be evaluated as part of the five-year review process.

- Implementability: MNA would be easy to implement, although it could continue for an extended period. Monitoring groundwater quality and periodically reviewing site conditions could readily be performed, and the necessary resources are available to provide these services.

- Cost: The capital and O&M costs for MNA would be relatively low, depending on the frequency and duration of the effort.

Conclusion – MNA is retained in conjunction with LUCs as a potential remedy for the COCs in groundwater at the DU 5-1 Site.

3.4.3 Containment

The only containment method evaluated in this section is hydraulic containment.

Hydraulic Containment

Hydraulic containment would use a pumping well system, composed of a series of wells installed in the bedrock aquifer (the water table is in the bedrock) to capture, and control flow of contaminated groundwater. A hydraulic containment system is identical to an extraction well system; containment and extraction are achieved in the same manner. The wells used in a groundwater extraction system would be designed and situated to provide optimum efficiency in maintaining contaminated groundwater in place, and removed, if possible. In turn, the extracted groundwater would require disposal via re-injection to the aquifer or offsite disposal. As necessary, re-injection would be achieved either by injection wells or an infiltration gallery.

- Effectiveness: The effectiveness of a hydraulic containment system depends largely on the geology and hydrogeology of the aquifers. Hydraulic containment systems have the most chance of success in homogeneous, isotropic overburden aquifers with well-defined source areas and plume extents. At this Site, no defined source or plume has been identified for the COCs in groundwater that pose risk, and as such, there is no target area that can be addressed through capture for either treatment or containment. This suggests that groundwater containment by use of an extraction system would be ineffective at the Site unless it was large enough to capture all water entering and leaving the Site.

- Implementability: Complete hydraulic containment using a pumping well system in bedrock is not a proven technology. Even partial hydraulic control in bedrock in similar situations has been shown to be inconsistently effective. Implementation of this technology would require long-term O&M of wells and pumps. It would also include the construction and O&M of an infiltration gallery or injection wells or the disposal of extracted groundwater at an offsite permitted facility. Required maintenance may include periodic replacement of mechanical components and well-flushing to remove fine-grained material that may clog the wells and the infiltration gallery. Overall, it is not expected that effective containment would be implementable at this Site.

- Cost: The capital costs for groundwater extraction wells are low. The capital costs for groundwater infiltration basin or re-injection wells are also low. The anticipated number and size of these that would be required to capture groundwater entering and leaving the Site would be high. The O&M of extraction wells, injection wells or an infiltration gallery, as needed, or disposal of extracted groundwater, would result in an overall cost for this action to be moderate to high.

Conclusion – While hydraulic containment of the groundwater is possible, the application at sites where widespread COCs are present at concentrations only slightly greater than PRGs is not viable in controlling those COCs because there is no source/plume to address. Therefore, hydraulic containment is not retained for further development into remedial action alternatives.

3.4.4 Removal

The only technology and process option considered under this GRA is groundwater extraction with wells.

Extraction Wells

The extraction well option would use a pumping well system identical to a hydraulic containment system described in Section 3.4.3, composed of a series of wells installed in the bedrock aquifers, to capture contaminated groundwater for treatment (as needed) and eventual disposal either via re-injection or offsite disposal at a permitted facility. The wells used in a groundwater extraction system are normally designed and situated to provide optimum efficiency in capturing contaminated groundwater as it is traveling within a predicted flow path, while minimizing the collection of uncontaminated groundwater. There is no source or plume to intercept, causing this standard approach to not apply.

- Effectiveness: The effectiveness of a groundwater extraction system depends largely on the geology and hydrogeology of the aquifers, and the confidence in the contaminant plume flow path. At this Site there is no defined source or plume for the COC in groundwater that poses risk, as such there is no target area that can be addressed through capture for either treatment or containment. This suggests that capturing COCs through groundwater extraction would be ineffective at the Site.

- Implementability: Groundwater extraction in bedrock is not a proven technology. Even partial plume capture in bedrock has been shown to be inconsistently effective. Implementation of this technology would require long-term O&M of wells and pumps. It would also include the construction and O&M of an infiltration area or re-injection wells or the disposal of extracted groundwater at a permitted offsite facility. Required maintenance may include periodic replacement of mechanical components and well flushing to remove fine-grained material that may clog the wells. Overall, it is not expected that effective containment would be implementable at this Site.

- Cost: The capital costs for groundwater extraction wells are low. The capital costs for groundwater infiltration gallery or re-injection wells are low. The O&M of extraction wells, injection wells or an infiltration gallery, as needed, or disposal of extracted groundwater, would result in moderate additional costs. The costs of the treatment plant, as needed, are high and would likely be required for an extended timeframe. These added costs would result in the cost for this action to be high.

Conclusion – While groundwater extraction is possible, its application at sites where widespread COCs are present at concentrations only slightly greater than PRGs would not be viable in controlling those COCs because there is no source/plume to address. Therefore, groundwater extraction is not retained for further development into remedial action alternatives.

3.4.5 In-Situ Treatment (Bioprecipitation)

In-situ treatment is selected for further evaluation based on the CSM indicating that releases of petroleum to the subsurface at and upgradient of DU 5-1 have occurred in the past. As the petroleum is degraded through natural bacterial action, a side effect is the creation of oxidation-reduction (redox) conditions in those release areas, which liberate some metals from their natural sequestration in soil and rock, becoming mobile in groundwater. As such, the degradation of petroleum is contributing to geochemical conditions that promote higher than normal concentrations of metals in the groundwater (particularly iron and manganese). Success of this treatment alternative in permanently achieving PRGs in groundwater in the long term is uncertain: ultimately, treatment of water for elevated metals content is best performed at an extraction-delivery system, and not in–situ. However, since there is currently no end-user for groundwater in this area, in-situ treatment is identified as a GRA.

This GRA is also developed to accommodate USEPA preference for treatment and to provide a somewhat aggressive remedial option. Other treatment systems are not effective on metals, or are dependent upon extraction of the water for the treatment process. It is presumed for this FS that the source of the elevated metals in the groundwater is the historic release of petroleum at and upgradient of the Site and the redox conditions that are continuing as this petroleum naturally degrades. As such, this treatment process is only intended to address the groundwater during the attenuation process.

A detoxification process was selected as a representative process option for treatment to address the metals present in groundwater. Bioprecipitation is a process by which the toxic forms of metals mobilized in groundwater can be sequestered through their precipitation into insoluble metal sulfides. This is typically accomplished by installation of a permeable reactive barrier installed to intercept a plume carrying dissolved metals (Hayes, 2009). However, at this Site, since there is no mapped plume of metals that can be targeted for interception, it is theorized that a similar effect may be accomplished through delivery of nutrients to encourage sulfate-reducing bacteria in groundwater to grow and transform sulfates into sulfides, which will in turn precipitate the metals present as insoluble metal sulfides (Diels et.al, 2010). This approach has been utilized on mine waste sites where high concentrations of metals are present, including arsenic, cobalt, and iron, though documentation has not been found regarding use for manganese.

This option is evaluated as follows:

- Effectiveness: The effectiveness of an in-situ bioprecipitation is based on the concentrations present, and also on some complex geochemical conditions. Concentrations of COCs in groundwater are actually quite low, and reduction of those concentrations will be possible within the area of influence of the injections, as long as those injections are continued. All in-situ treatment is based on delivery of the treatment chemicals to the water as it passes through the formation. The effectiveness is also based on the source of the metals being addressed. Treatment of the groundwater will provide reduced metals concentrations in the downgradient water; however, as soon as treatment is discontinued, the concentrations could rebound unless the source is addressed. It is presumed for this FS that the source of the elevated metals in the groundwater is the geochemical condition resulting from the degradation of the historic release of petroleum at and upgradient of the Site, and as such, this treatment process is only intended to address the groundwater during the attenuation process.

- Implementability: In-situ injections are implementable through proven technologies that include temporary or permanent groundwater injection wells, pumping equipment and flow control. Careful design and pilot testing of the treatment system would be required to assure proper density of injection wells is utilized, and the proper delivery rate of treatment chemicals is achieved based on the groundwater flow rates and the geology of the subsurface.

- Cost: The capital costs for in-situ groundwater treatment are moderate, but costs over time are considered to be high, and treatment would likely be required for an extended time frame. The total cost for this action is considered high.

Conclusion – Groundwater treatment is theoretically possible and can be utilized, if necessary, in order to assist in bringing the groundwater at the Site to its beneficial reuse, as long as it is supported by adequate monitoring actions both during and after injections to identify contaminant rebound if it does occur. Therefore, in-situ groundwater treatment is retained for further development into remedial action alternatives.

3.4.6 Summary of Retained Groundwater Process Options

The following options have been retained for the development of remedial action alternatives to address the groundwater contamination causing risk at DU 5-1.

General Response Action	Representative Process Option
No Action	No Action
Limited Action	Monitored Natural Attenuation
	LUCs and Inspections
	Groundwater Monitoring
Treatment	In-situ Bioprecipitation

3.5 DEVELOPMENT OF REMEDIAL ALTERNATIVES

Remedial alternatives are developed to comply with regulatory criteria applicable to site conditions and the media of concern, as directed by the following regulations and guidance:

- *Navy/Marine Corps Installation Restoration Manual* (2000), which dictates that remedial alternatives be consistent with the procedures outlined in the NCP (40 CFR 300.430).
- NCP (40 CFR 300), which establishes the criteria for development and evaluation of remedial alternatives, and further suggests consideration of applicable USEPA directives and guidance.
- Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (USEPA, 1988a).

These documents require that a range of alternatives be developed that eliminate, reduce, or control human and ecological risks. The goal is to select remedies that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste. According to Section 121 of CERCLA, as amended by SARA, the statutory preference is for remedies that will result in a permanent and significant decrease in toxicity, mobility, or volume of contaminants through treatment and will provide long-term protection. In addition, the NCP requires that certain expectations be considered in developing and screening remedial alternatives. These expectations are as follows:

- Treatment will be used to address the principal threats posed by the Site, wherever practical. Principal threats are considered to be liquids, areas contaminated with high concentrations of toxic compounds, and highly mobile materials, if present.

- Engineering controls, such as containment, will be used for waste that poses a relatively low, long-term threat and for which treatment is impractical.

- A combination of methods will be used, as appropriate, to achieve protection of the environment. In appropriate site situations, treatment of principal threats will be combined with engineering and LUCs for dealing with residuals and relatively low, long-term threats.

- Institutional controls, such as LUCs or deed restrictions, are acceptable to supplement engineering controls for short- and long-term management to prevent or limit exposure to hazardous substances, pollutants, or contaminants.

- The use of innovative technologies will be considered when such use offers the potential for comparable or superior treatment performance or implementability, fewer or lesser adverse impacts, or lower costs for similar levels of performance than previously demonstrated technologies.

Environmental media will be returned to their beneficial uses, when practical, within a reasonable time frame. When restoration of a medium is not practical, actions are expected to prevent further migration and exposure to contaminated media and to evaluate further risk reduction measures.

Alternatives are developed by assembling retained technologies and process options. The *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA* (USEPA, 1988a) identifies six steps for developing alternatives. The six steps as specified by the USEPA are described below.

1. Develop RAOs specifying the chemicals and media of interest, exposure pathways, and PRGs that permit a range of treatment and containment alternatives to be developed. The PRGs are developed on the basis of chemical-specific ARARs and, when available, other available information (e.g., reference doses [RfD]) and site-specific risk-related factors.

2. Develop GRAs for each medium of interest defining containment, treatment, excavation, or other actions, singly or in combination that may be taken to satisfy the RAOs for the site.

3. Identify volumes or areas of media to which GRAs might be applied, taking into account the requirements for protectiveness, as identified in the RAOs, and the chemical and physical characterization of the site.

4. Identify and screen the technologies applicable to each GRA to eliminate those that cannot be implemented at the site. Further define the GRAs to specify remedial technology types (e.g., the GRA of treatment can be further defined to include chemical or biological technology types).

5. Identify and evaluate technological process options to select an RPO for each technology type to be retained for consideration. Although specific processes are selected for alternative development and evaluation, these processes are intended to represent the broader range of process options within a general technology type.

6. Assemble the selected RPOs into alternatives representing a range of treatment and containment combinations, as appropriate.

The purpose of providing a range of alternatives is to ensure that all reasonable GRAs are represented and evaluated. A range of alternatives is required by CERCLA to develop alternatives that differ in time to cleanup, cost, scope of remediation, and to evaluate different remedial process options that provide differing benefits and detriments. The technologies and process options retained from the screening and evaluation process are presented in the above text and in Tables 3-3 (soil) and 3-4 (groundwater). In order to address RAOs, alternatives were developed for soil to address arsenic and manganese, and for groundwater to address manganese, cobalt and iron. The alternatives are as follows:

<u>Soil Alternatives</u>

Alternative SO1	No Action
Alternative SO2	LUCs and Inspections, Long-Term Groundwater Monitoring, Fencing and Signs
Alternative SO3	Soil Cover, LUCs and Inspections, Long-Term Groundwater Monitoring, Signs

<u>Groundwater Alternatives</u>

Alternative GW1	No Action
Alternative GW2	Monitored Natural Attenuation, LUCs and Inspections
Alternative GW3	In-Situ Treatment (Bioprecipitation), Long-Term Groundwater Monitoring, LUCs and Inspections

Detailed descriptions and evaluations of these alternatives are presented in Section 4.0 (soil alternatives) and Section 5.0 (groundwater alternatives). The following section presents the alternative evaluation criteria.

3.6 NATIONAL CONTINGENCY PLAN EVALUATION CRITERIA AND RELATIVE IMPORTANCE OF CRITERIA

The evaluation criteria, as required by the NCP, and the relative importance of these criteria in the CERCLA process, are described in the following sections and are applicable to evaluation of alternatives at DU 5-1.

3.6.1 Evaluation Criteria

In accordance with the NCP (40 CFR 300.430), the following nine criteria are used for the evaluation of remedial alternatives:

- Overall Protection of Human Health and the Environment
- Compliance with ARARs
- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short-Term Effectiveness
- Implementability
- Cost
- State Acceptance
- Community Acceptance

Overall Protection of Human Health and the Environment

Remedial alternatives must be assessed for adequate protection of human health and the environment in both the short and long term. The remedial alternatives must be able to diminish the unacceptable risks posed by hazardous substances or contaminants present at the Site by eliminating, reducing, or controlling exposure to levels exceeding remediation goals.

Compliance with ARARs and TBCs

Remedial alternatives must be assessed to determine whether they attain ARARs and TBCs under federal environmental laws and state environmental or facility citing laws. If one or more regulations that are applicable cannot be complied with, a waiver must be invoked.

Long-Term Effectiveness and Permanence

Remedial alternatives must be assessed for the long-term effectiveness and permanence they offer, along with the degree of certainty that the alternative would prove successful. Factors that are considered, as appropriate, include the following:

- Magnitude of Residual Risk – Risk posed by untreated waste or treatment residuals at the conclusion of remedial activities. The characteristics of residuals are considered to the degree that they remain hazardous, taking into account their volume, toxicity, mobility, and propensity to bio-accumulate.

- Adequacy and Reliability of Controls – Controls, such as containment systems and LUCs, that are necessary to manage treatment residuals and untreated waste must be shown to be reliable. In particular, this evaluation considers the uncertainties associated with land disposal for providing long-term protection from residual contamination, assessment of the potential need to replace technical components of the alternative (such as a surface cover, sign, or treatment system), and the potential exposure pathways and risks posed if technical components or the entire remedial action needs to be replaced.

Reduction of Toxicity, Mobility, or Volume through Treatment

The degree to which the remedial alternative employs recycling or treatment that reduces the toxicity, mobility, or volume is assessed. This assessment includes how treatment is used to address threats posed by the Site. Factors to be considered, as appropriate, include the following:

- Treatment or recycling processes that the remedial alternative employs and the materials that they will treat.

- Amount of hazardous substances, pollutants, or contaminants that will be destroyed, treated, or recycled.

- Degree of expected reduction in toxicity, mobility, or volume of waste caused by treatment or recycling, and the specification of which reduction(s) is occurring.

- Degree to which the treatment is irreversible.

- Type and quantity of residual contamination that will remain following treatment considering the persistence, toxicity, mobility, and propensity to bio-accumulate of such hazardous substances and their constituents.

- Degree to which treatment reduces the inherent hazards posed by principal threats at the Site.

Short-Term Effectiveness

The short-term impacts of the remedial alternative are assessed considering the following:

- Short-term risks that might be posed to the community during implementation.

- Potential impacts on workers during remedial action and the effectiveness and reliability of protective measures taken to minimize these impacts.

- Potential environmental impacts of the remedial action and the effectiveness and reliability of mitigation measures during implementation.

- Time until protection is achieved.

Implementability

The ease or difficulty of implementing the alternative is assessed considering the following types of factors, as appropriate:

- Technical feasibility, including technical difficulties and unknowns associated with the construction and operation of a technology, reliability of the technology, ease of undertaking additional remedial actions, and ability to monitor the effectiveness of the remedy.

- Administrative feasibility, including activities needed to coordinate with other offices and agencies and the time required to obtain approvals from other agencies.

- Availability of services and materials, including the availability of adequate offsite treatment, storage capacity, and disposal capacity and services; availability of necessary equipment, specialists, and additional resources; availability of services and materials; and availability of prospective technologies.

- Sustainability of an alternative is discussed and includes consideration of the relative size of the associated carbon footprint, material usage, and environmental benefit.

Cost

Costs for remedial alternatives include both capital costs and annual O&M costs. Capital costs include both direct and indirect costs expected at the time of alternative implementation. Annual O&M costs include periodic costs that occur following alternative implementation. Typical O&M costs can include periodic inspections and long-term monitoring. A present-worth of the capital and O&M costs is also provided. The present worth of a remedial alternative is the total of all capital and O&M costs expressed in today's dollars. Typically, the cost estimate accuracy range during the FS stage is +50 percent to -30 percent of the actual remedial action cost.

State Acceptance

This criterion reflects the statutory requirements to provide for substantial and meaningful regulatory involvement. Formal assessment of regulatory acceptance is completed during the ROD phase, occurring after the public comment period on the Proposed Plan for the remedial action. In addition, regulatory concerns are continually considered through resolution of regulatory comments received on the FS Report and the Proposed Plan.

Community Acceptance

This criterion refers to comments from community members on the remedial alternatives under consideration, where "community" is broadly defined to include all interested parties. These comments are considered throughout the CERCLA process. The community acceptance criterion is evaluated as part of the responsiveness summary presented in the ROD after the public comment period on the Proposed Plan is held.

3.6.2 Relative Importance of Criteria

Among the nine criteria, the threshold criteria are considered to be:

- Overall Protection of Human Health and the Environment
- Compliance with ARARs and TBCs

The threshold criteria must be satisfied for an alternative to be eligible for selection.

Among the remaining criteria, the following five criteria are considered to be the primary balancing criteria:

- Long-Term Effectiveness and Permanence
- Reduction of Toxicity, Mobility, or Volume through Treatment
- Short-Term Effectiveness
- Implementability
- Cost

The balancing criteria are used to weigh the relative merits of alternatives.

The remaining two criteria, State Acceptance and Community Acceptance, are considered to be modifying criteria that must be considered during remedy selection. These last two criteria are evaluated after the end of the public comment period on the Proposed Plan. Therefore, Sections 4.0 and 5.0 of this FS evaluate seven of the nine criteria for soil and groundwater alternatives, respectively.

4.0 DESCRIPTION AND SCREENING OF ALTERNATIVES FOR SOIL

The purpose of this section is to describe the remedial alternatives developed in Section 3 for the remediation of the DU 5-1 soil, to evaluate the soil remedial alternatives against the NCP evaluation criteria, and to compare each of the soil remedial alternatives to one another. The remedial action alternatives developed in Section 3.5 include:

Alternative SO1: No Action

Alternative SO2: LUCs and Inspections, Long-Term Groundwater Monitoring, Fencing and Signs

Alternative SO3: Containment/permeable cover, LUCs and Inspections, Long-Term Groundwater Monitoring, and Signs

4.1 DESCRIPTION OF REMEDIAL ACTION ALTERNATIVES

Sections 4.1.1 through 4.1.3 describe the alternatives developed to address the DU 5-1 soil contamination. The alternatives were developed to address soil and debris in the areas identified as posing potential risks to human health and the environment. Target soils to be considered for remedial action are summarized in Section 2.4.1 of this report. An abbreviated summary of the soil alternatives is provided in Table 4-1.

4.1.1 Alternative SO1 - No Action

The no action alternative, as required under the NCP, would involve no remedial response activities and would provide no additional protection of human health or the environment; this alternative provides a baseline for comparison to other alternatives. Under this alternative no remedial actions would be performed, no measures would be implemented to restrict access to DU 5-1, and no actions would be taken to warn people of the hazards. Existing measures that currently provide some protectiveness but that would not be maintained in the future include partial fencing and signs that limit access to portions of the Site.

In accordance with Navy guidance on alternative development, it is assumed that five-year reviews of DU 5-1 would be conducted as part of the facility five-year review process. Under the no action alternative, only nominal costs would be anticipated for review of DU 5-1.

4.1.2 <u>Alternative SO2 – Land Use Controls and Inspections, Long-Term Groundwater Monitoring, Fencing and Signs</u>

Under Alternative SO2, soil would remain onsite at concentrations greater than PRGs; therefore, LUCs would be established to prevent risk to receptors from COCs in soil. The written LUCs would also prevent access to those portions of the Site where the industrial PRGs are exceeded in surface soil, and would also prevent disturbance of any areas of soil where subsurface COCs exceed PRGs, in order to ensure that contaminated soils underlying clean surface soils are not disturbed or contacted in the future (a minimum of two feet of clean soil is required to overlie contaminated soil). Because a state regulatory-based PRG is established for arsenic, and that PRG is exceeded in surface soil, fencing and signage would be required to prevent inadvertent access to any soil area that exceeds PRGs for industrial/restricted recreational users. This would require discontinuing use of this portion of Tank Farm 5 under the restricted recreational use (bow-hunting by Navy staff). Long-term groundwater monitoring would be conducted to assure that soil COCs left in place at levels exceeding residential PRGs are not leaching into the groundwater medium. Details of each component of Alternative SO2 are as follows.

<u>LUCs and Inspections</u> – One purpose of the LUCs is to ensure that the land use (industrial) and site features within the designated areas do not change and remain in place so that contact with COCs at concentrations that could cause an unacceptable risk to human receptors is prevented, for the life of the remedy. LUCs, augmented with signs and partial fencing, would also be written to prevent access to those portions of the Site where the industrial PRGs for arsenic are exceeded, and would serve to prevent use of the Site for residential or unrestricted recreational purposes. LUCs would also aid in preventing risk measured to construction workers exposure to manganese (subsurface) and arsenic that exceed the industrial PRGs in site soils by providing a method for incorporation of warnings into base instructions and construction contracts. As noted above, LUCs would also be written to ensure that contaminated subsurface soils are not disturbed or contacted in the future (a minimum of two feet of clean soil is required to overlie contaminated soil). To implement LUCs, the Navy would prepare a LUC RD that would document the LUCs, O&M requirements, inspection requirements, and organizations responsible for their implementation.

Any time that the Navy retains the property, the “activity” (in this case the “activity” is the NAVSTA Newport Public Works Department) enforces any LUC necessary. Under the FFA, the Navy must allow access to the regulatory agencies to monitor and enforce LUCs; however, the manner in which the LUCs are to be enforced will be addressed in the ROD and the FFA. The Navy’s policies for implementing LUCs and demonstrating that such controls remain protective at NAVSTA Newport were addressed in a letter from the Navy to RIDEM (NAVFAC MidLant, 2007). The letter affirms the FFA requirement for the Navy to allow access to the State and USEPA for inspection and enforcement activities.

The LUC RD is tracked by the Navy through a centralized system to assure each LUC is maintained appropriately. In the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements. The restrictions presented in the LUC RD may limit allowable activities such as development of the Site for residential or uncontrolled recreational use. Restrictions would also prevent the disturbance to any component of the remedy. In accordance with the ROD, LUCs would be monitored and enforced as long as contaminants are present that pose a risk above CERCLA risk levels, as determined through the five-year review process.

If the land is sold and released from Navy jurisdiction, the land use restriction that was incorporated into the base instruction is written into the deed for the new property and recorded against the property title. The format of the land use restriction would meet local or Rhode Island recording standards. The regulatory standards for institutional controls in the State of Rhode Island are termed ELURs. Currently there is no plan for excess of Navy property at or in the vicinity of DU 5-1.

Requirements for management of excavated soil as part of any future construction activities at the Site would also be included as part of the LUCs. For the purposes of the FS and developing a cost estimate, it was assumed that annual inspections of the Site would be conducted to verify continued effectiveness of the LUCs. Annual reports would be submitted to USEPA and RIDEM to document that the conditions of the Site LUCs continue to be met.

<u>Long-term Groundwater Monitoring</u> – Groundwater monitoring would be performed as a component of this soil alternative as a means of verifying that COCs left in place in soil at levels exceeding RGs are not causing associated increases in groundwater concentrations (i.e. are not migrating into/with groundwater).

<u>Fencing and Signs</u> – Fencing would restrict human access to areas where contaminants are present in surface soils at levels exceeding PRGs for industrial use. While access to Tank Farm 5 is currently partially restricted by gates and fencing, and DU 5-1 is bounded on the north, west and south sides by fence, additional fencing would be installed under this alternative to secure DU 5-1 on the east boundary. Signage would consist of warning signs that would alert possible entrants to the presence of contaminated soil and dig restrictions. Fencing and signage requirements and maintenance would be documented in the LUC RD prepared by the Navy. For the purposes of the FS and estimating associated costs, it was assumed that periodic minor repair of fencing and warning signs would be required, as determined during annual Site inspections to be conducted in conjunction with the implementation of the LUCs.

<u>Five-Year Reviews</u> – Contamination would remain in excess of levels that allow for unrestricted use and unlimited exposure, therefore, five-year reviews would be required under this alternative to evaluate the continued adequacy of the remedy. The five-year reviews would be performed as part of the facility five-year reviews.

4.1.3 Alternative SO3 – Containment/Permeable Cover, Land Use Controls and Inspections, Long-Term Groundwater Monitoring, and Signs

Alternative SO3 would include the construction of a soil cover over the area of soil that exceeds PRGs for industrial users and construction workers. Subsurface soil would remain onsite at concentrations that exceed PRGs for unrestricted use; therefore, this alternative also includes LUCs to prevent exposure to those subsurface soils, and groundwater monitoring to ensure contaminants are not migrating in groundwater. Details of each component of Alternative SO3 are as follows.

Soil Cover - Soil containing concentrations of arsenic at levels that exceed industrial PRGs within the top two feet would be covered with a permeable soil cover (either 2 feet or 6 inches depending on arsenic concentrations in that area). Subsurface soils exceeding PRGs for industrial use are already covered by soil below PRGs. For the purpose of this FS, the area of soil cover is based on existing data and is presented on Figure 4-2. A PDI step may be appropriate to better delineate the extent of soils to be covered. This PDI step would include additional sampling on a grid surrounding the former pipeline where PRGs were exceeded. The cover would be approximately 2 feet thick in areas where arsenic levels are greater than 43 mg/kg, and 6 inches where arsenic levels are between 17 and 43 mg/kg. The 2 foot cover would be comprised of one foot of compactable fill, six inches of sand, and six inches of topsoil seeded with a non-invasive grass seed mix, and the 6 inch cover would be comprised of 6 inches of topsoil seeded with a non-invasive grass mix. This cover system is based on RIDEM Remediation Regulations, Section 12.04 (RIDEM, 2011). Improvements on this conceptual plan may be appropriate in wetland resource areas as defined during design.

Cover material would be added by leveling the existing grade and removing excess vegetation. The cover material would be placed in six inch lifts and compacted to stay in place, but not to discourage growth of vegetative cover. A geotextile is not anticipated to be necessary. The cover area would be surveyed and the survey plan would be included in the LUC RD as an attachment. The area is anticipated to require little maintenance under the current and planned future use, other than to prevent interruption of the soil cover by uncontrolled digging and construction. However, annual inspections will be conducted to identify areas of erosion and other problems that could compromise the cover layers. Because there is limited use of the site (industrial use and restricted recreational use) under this remedial alternative, the LUCs would allow for inspections periodically, and prevent uncontrolled excavation and construction.

For the purposes of this FS, it is assumed that an area of 45,436 square feet would be covered, requiring a total of 3,366 cy of soil cover material. The actual area and quantities will be determined during the design step described above.

LUCs and Inspections – In part, the LUCs are to prevent future residential and unrestricted recreational use of DU 5-1, as well as restrict industrial use. Also, the integrity of the soil cover is to be maintained, ensuring that contact with COCs at concentrations that would cause an unacceptable risk to industrial receptors is prevented for the life of the remedy, including exposure of construction workers to manganese in subsurface soil. LUCs would also be required to prevent digging, excavation, or other disturbances where subsurface soil exceeds PRGs in areas that are beyond the limits of the cover to ensure that at least 2 feet of uncontaminated soils remain above these “non-cover” areas of subsurface contaminants. This would be required in order to prevent the possibility of direct contact with these soil contaminants that are currently at depth. To implement LUCs, the Navy would prepare a LUC RD that would document the LUCs, O&M requirements, inspection requirements, signage requirements, and organizations responsible for their implementation. Annual reports would be submitted to USEPA and RIDEM to document the integrity of the soil cover and that the conditions of the Site LUCs continue to be met.

Any time that the Navy retains the property, the “activity” (in this case the “activity” is the NAVSTA Newport Public Works Department) enforces any LUC necessary. Under the FFA, the Navy must allow access to the regulatory agencies to monitor and enforce LUCs; however, the manner in which the LUCs are to be enforced will be addressed in the ROD and the FFA. The Navy’s policies for implementing LUCs and demonstrating that such controls remain protective at NAVSTA Newport were addressed in a letter from the Navy to RIDEM (NAVFAC MidLant, 2007). The letter affirms the FFA requirement for the Navy to allow access to the State and USEPA for inspection and enforcement activities.

The LUC RD is tracked by the Navy through a centralized system to assure each LUC is maintained appropriately. In the event that a property is sold or transferred, the Navy will create and record deed restrictions that will meet local and state requirements. The restrictions presented in the LUC RD may limit allowable activities such as development of the Site for residential or uncontrolled recreational use. Restrictions would also prevent the disturbance to any component of the remedy. In accordance with the ROD, LUCs would be monitored and enforced as long as contaminants are present that pose a risk above CERCLA risk levels, as determined through the five-year review process.

If the land is sold and released from Navy jurisdiction, the land use restriction that was incorporated into the base instruction is written into the deed for the new property and recorded against the property title. The format of the land use restriction would meet local or Rhode Island recording standards. The regulatory standards for institutional controls in the State of Rhode Island are termed ELURs. Currently there is no plan for excess of Navy property at or in the vicinity of DU 5-1.

Requirements for management of excavated soil as part of any future construction activities at the Site would also be included as part of the LUCs. For the purposes of the FS and developing a cost estimate, it was assumed that annual inspections of the Site would be conducted to verify the condition of the soil cover and the continued effectiveness of the LUCs. Annual reports would be submitted to USEPA and RIDEM to document the integrity of the soil cover and that the conditions of the Site LUCs continue to be met.

Long-term Groundwater Monitoring – Groundwater monitoring would be performed as a component of this soil alternative as a means of verifying that COCs left in place in soil at levels exceeding RGs are not causing associated increases in groundwater concentrations (i.e. are not migrating into/with groundwater).

Signs - Signage would consist of warning signs that would alert the public, the site users and trespassers to the presence of contaminated soil and dig restrictions, and to the presence of a soil cover. For the purposes of the FS and developing a cost estimate, it was assumed that periodic minor repair of warning signs would be required, based on the results of the annual site inspections. Fencing is not required under this alternative since the LUCs will prevent unrestricted recreational use, and the soil cover will prevent exposure to the restricted recreational user and the industrial user.

Five Year Reviews – Although risk from soil would be addressed by the soil cover and establishment of LUCs, soil would remain at the Site at levels exceeding state regulatory-based remedial objectives. Five-year reviews to evaluate the continued adequacy of the remedy would be performed as part of the facility five-year reviews.

4.2 DETAILED EVALUATION OF REMEDIAL ALTERNATIVES

The remedial alternatives developed in Section 3.5 and described in Section 4.1 are evaluated against the seven NCP evaluation criteria described in Section 3.6. The evaluation analysis of the alternatives provides information to facilitate selection of a specific remedy or combination of remedies. The detailed evaluation of alternatives was developed in accordance with the NCP [40 CFR 200.430(e)] and the *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (USEPA, 1988a).

4.2.1 Alternative SO1: No Action

Consideration of a no action alternative is required under the NCP. At a minimum, a no action alternative provides a baseline against which other alternatives may be compared. No containment, removal, or treatment of soil contaminants would be conducted. The alternative would provide no mechanism to minimize potential risks to receptors except for the existing fencing and signs, which would not be maintained. The only activities associated with Alternative SO1 are the required five-year reviews, which would be conducted as part of the facility five-year review process.

An analysis of this alternative with respect to the NCP evaluation criteria is as follows:

<u>Overall Protection of Human Health</u>: The no action alternative would not provide long-term protection of human health. Alternative SO1 would not achieve RAOs for the protection of human health, and arsenic and manganese would still remain at the Site at concentrations exceeding acceptable risk levels. COCs in the soil would continue to pose risks to human health in the long-term through dermal contact, incidental ingestion, and fugitive dust inhalation by potential future construction workers and other receptors. Proper maintenance of the existing fencing and signs currently at the Site would not be verified and could become ineffective over time.

<u>Compliance with ARARs</u>: Table 4-2 summarizes the chemical-specific ARARs and TBCs for Alternative SO1. There are no actions associated with this alternative, there are no identified location- or action-specific ARARs or TBCs, as shown in Tables 4-3 and 4-4. This alternative fails to meet chemical-specific ARARs and TBCs because it does not address soil presenting unacceptable risks as determined by the baseline risk assessment.

<u>Long-Term Effectiveness and Permanence</u>: Since no remedial actions would occur under Alternative SO1, the estimated risk of effects to human health and the environment would remain. Potential contaminant migration pathways would not be addressed, and COCs remaining at the Site would continue to pose threats to human health and the environment through various exposure pathways.

Under the no action alternative, no inspections or review of site conditions would be conducted, and no further determination of levels of COCs would be conducted. Similarly, there would be no review of property use to determine if persons were being exposed to COCs present. The five-year reviews of the Site would be performed as part of the facility five-year reviews.

Under the no action alternative, no additional controls would be used to manage the contaminants at the Site. Therefore, the evaluation of the adequacy and reliability of new controls is not applicable.

<u>Reduction of Toxicity, Mobility, or Volume Through Treatment</u>: The no action alternative would not reduce the toxicity, mobility, or volume of contamination through treatment, since no treatment is used to address the contaminated soil. As a result, no hazardous substances would be treated or destroyed, and contaminated soil and debris would remain in place.

Alternative SO1 would not satisfy the statutory preference for treatment to reduce risks posed by contaminated soil.

Short-Term Effectiveness: Since no response actions would be implemented, the no action alternative would not pose additional short-term risks to the local community, base personnel, or the environment. Workers that would perform the five-year reviews would be protected from contaminant-related risks by PPE and proper site safety procedures. Potential risks from soil contamination would remain unabated. None of the RAOs would be achieved.

Implementability: This alternative would require no implementation other than completion of the five-year reviews. This activity would not require any permits, but could require minimal coordination efforts between regulatory agencies. Implementation of the no action alternative would not limit future implementation of additional remedial actions at the Site, if deemed necessary.

Cost: A nominal cost for the no action alternative would be incurred to address the Site in the facility five-year review.

Cost Description	Estimated Cost
Capital Costs	$0
O&M	$0
5-year Reviews	$0*
Present Worth	$0

* Five-year Reviews at this DU are a component of the Newport facility five-year Reviews.

4.2.2 Alternative SO2: Land Use Controls and Inspections, Long-term Groundwater Monitoring, Fencing and Signs

Under Alternative SO2, risk would be addressed by preventing exposure through LUCs that would apply to the entirety of the decision unit. Specifically, the Naval Station will document the formal process that manages the personnel who enter this Site for the locally permitted recreational use (NAVSTA Instruction 5090.25B+). The LUC RD will discuss the process by which staff are able to access the Site for the restricted recreational use of bow hunting for deer during the state legal hunting season.

In addition to the LUCs described above, institutional controls would also be required to prevent unrestricted digging within target areas (locations where industrial PRGs are exceeded, which was previously discussed in Section 2.4.1) thus preventing the exposure that poses risk. These institutional controls would consist of a base instruction describing the area of concern, and would be augmented by installing new fencing connecting the existing fence on the north and south sides of DU 5-1 closing the east boundary of the Site. The fence would prevent persons from using the portion of Tank Farm 5 for the current use (restricted recreational use) until a future industrial use is determined, and the appropriate safeguards are adopted to assure protection of the users. The LUC would ensure that any improvements would address the exposure to arsenic and manganese in soil when the use is planned.

Groundwater monitoring would be performed as a component of this soil alternative as a means of verifying that COCs left in place in soil at levels exceeding RGs are not causing associated increases in groundwater concentrations (i.e. are not migrating into/with groundwater).

An analysis of this alternative with respect to the NCP evaluation criteria is as follows:

<u>Overall Protection of Human Health and the Environment</u>: Alternative SO2 would be protective of human health and the environment under the potential future use (residential) by preventing such use under LUCs. It would be protective of planned future industrial use by establishing LUCs to ensure that any improvements to develop the site for industrial uses would address the surface soil that exceeds the state regulatory-based PRG for arsenic, and the risk-based PRG for manganese. It would be protective of current and planned future restricted recreational use through establishment of institutional controls and fencing: This area would essentially be off limits to the restricted recreational user.

This alternative would be protective of the risk by preventing other potential future uses, such as unrestricted recreational use through implementation of LUCs, which would protect human receptors from exposure to the remaining soil contaminants through limiting future use or activity.

Lastly, five-year reviews would be conducted, as required by CERCLA, to assess changing conditions and potential risks. Five–year reviews would assess whether the controls in place were meeting the objectives of the risk reduction. Once the five-year review results have been evaluated, and if contaminant migration is deemed to pose human health risk, then additional response actions may be warranted.

<u>Compliance with ARARs</u>: Tables 4-5, 4-6, and 4-7 summarize chemical, location, and action-specific ARARs and TBCs, respectively, for Alternative SO2. ARAR-based PRGs would be met through land use controls, operation and maintenance, long-term groundwater monitoring, fencing, and access restrictions to areas that exceed these PRGs.

<u>Long-Term Effectiveness and Permanence</u>: Alternative SO2 would provide long-term effectiveness and permanence. Although contaminated soil will remain at the Site, prevention of exposure to the COCs in soil would be obtained by a long-term management strategy described in a LUC RD, and enforced by CERCLA.

LUCs would prevent residential, unrestricted recreational, and restrict industrial use of the Site, thereby restricting potential human receptors from coming into contact with the soil under scenarios that could pose unacceptable exposure. LUCs would also prevent disturbance of the ground and would prevent site development for other uses that could provide unacceptable exposure to future site users to site contamination. LUCs would minimize exposure to PRGs established for the Site by allowing work to be conducted there only with use of adequate protection. Five-year reviews would be conducted to evaluate the continued adequacy of the remedy.

Reduction of Toxicity, Mobility, or Volume Through Treatment: This alternative would not reduce the toxicity, mobility, or volume of contamination through treatment, since no treatment is used to address the contaminated soil. As a result, no hazardous substances would be treated or destroyed, and contaminated soil and debris would remain in place.

Alternative SO2 would not satisfy the statutory preference for treatment to reduce risks posed by contaminated soil.

Short-Term Effectiveness: Alternative SO2 would be effective in the short term because no active changes to the Site conditions would be undertaken, other than prevention of property use and construction of fencing. Since there is no risk to existing receptors (industrial use), the SO2 remedy would be effective immediately after implementation.

Implementability: Alternative SO2 is implementable. The resources, equipment, and materials required for preparation and implementation of LUCs are readily available, and systems are in place at the Navy and at NAVSTA to enforce those controls. The preparation and implementation of a long-term management plan would require administrative processes that would be easily implemented.

Cost: A detailed estimate of capital, O&M, and present-worth costs for Alternative SO2 is provided in Appendix C-1 and a summary is presented below. Present-worth costs were developed for a 30-year period at a 2.0 percent discount rate.

Cost Description	Estimated Cost
Capital Costs	$64,349
O&M: Inspections and Monitoring	$17,631
5-Year Reviews	$25,300 *
Present Worth	$568,099

* Five-year reviews at this DU are a component of the Newport facility 5-Year Reviews.

4.2.3 Alternative SO3: Containment/Permeable Cover, LUCs and Inspections, Long-term Groundwater Monitoring and Signs

Alternative SO3 would include construction of a permeable cover (soil cover) over those surface soils which exceed industrial PRGs, and together with LUCs and signs, would render the Site suitable for the current and future planned industrial use and the restricted recreational use (seasonal bow hunting only for Navy personnel by permit, and in accordance with the seasonal limitations of the State of Rhode Island). Although a cover over surface soils exceeding PRGs will prevent the receptors' contact with these soils, contaminants exceeding PRGs would remain onsite. Therefore, incorporation of LUCs to prevent unplanned future residential and unrestricted recreational uses and to prevent disturbance of the soil cover would be required. LUCs would also be required in those areas where subsurface soil beyond the limits of the cover exceed PRGs. LUCs implemented in these areas will ensure that at least 2 feet of uncontaminated soils remain above these "non-cover" areas of subsurface contaminants. Long-term groundwater monitoring would be conducted to track any possible change in groundwater COCs that could arise due to soil COCs remaining at the Site at levels exceeding RGs.

The soil cover material would be added by leveling the existing grade and removing excess vegetation. The cover material would be placed in six inch lifts and compacted to stay in place, but not to discourage growth of vegetative cover. As indicated on Figure 4-2, the southern portion of the cap would consist of a 2 foot cover (due to the 43.7 mg/kg arsenic concentration detected in SB972) while the rest of the cover area would consist of a 6 inch soil cover (in response to arsenic concentrations below 43 mg/kg in SB970, SB973, and SB974). This design is in accordance with RIDEM Remediation Regulations, Section 12.04. A geotextile is not anticipated to be necessary. The cover area would be surveyed and the survey plan would be included in the LUC RD as an attachment. The area is anticipated to require little maintenance under the current and planned future use, other than to prevent interruption of the soil cover by uncontrolled digging and construction. However, annual inspections will be conducted to identify areas of erosion and other problems that could compromise the cover layers. There is limited use of the site (industrial use and restricted recreational use) under this remedial alternative, the LUCs would allow for inspections periodically, and prevent uncontrolled excavation and construction.
An analysis of this alternative with respect to the evaluation criteria is as follows:

<u>Overall Protection of Human Health and the Environment</u>: Alternative SO3 would be protective of human health and the environment under the current and planned future use (industrial and restricted recreational).

Under Alternative SO3, risk would be addressed by the covering of target soils (soils exceeding PRGs). Soil exceeding PRGs would remain under the soil cover. Other subsurface soil that exceeds residential PRGs for arsenic also will remain at the site, though not within the 0-2 foot interval, as displayed in Figure

2-5. LUCs would be established to prevent future residential and unrestricted recreational use of the Site and disturbance of the cover and other surface soils (i.e. uncontrolled excavations).

Five-year reviews would be conducted, as required by CERCLA, to assess changing conditions and potential risks. Once the five-year review results have been evaluated additional response actions may be warranted.

Compliance with ARARs: Tables 4-8, 4-9, and 4-10 summarize chemical, location, and action-specific ARARs and TBCs, respectively, for Alternative SO3. This alternative meets all ARARs.

Long-Term Effectiveness and Permanence: Alternative SO3 would provide long-term effectiveness and permanence. Although soils with COCs exceeding PRGs would remain onsite, risk to current and future users will be reduced through the placement of a soil cover. An additional protective measure is proposed to further prevent receptor exposure to the COCs in soil by implementing a long-term management strategy described in a LUC RD, and enforced by CERCLA, the FFA and the ROD.

After completion of Alternative SO3, the Site would be suitable for its current use as industrial and restricted recreational, and LUCs would restrict potential human receptors from residential use of soil, so as to comply with RIDEM residential DECs. LUCs would also prevent disturbance of the ground and would prevent Site development for other uses that could provide unacceptable exposure of future site users to site contamination. Five-year reviews would be conducted to evaluate the continued protectiveness of the remedy.

Reduction of Toxicity, Mobility, or Volume Through Treatment: This alternative would not provide any active treatment technologies that would achieve reductions in the toxicity, mobility, or volume of contaminants.

Short-Term Effectiveness: Alternative SO3 would be effective in the short term, as long as work is done properly, with proper controls in place. With the construction of a soil cover, controls will be implemented to protect remediation construction workers, the public, and the environment until the remedial action is completed. Alternative SO3 would attain the RAOs upon implementation. Remedial design, construction work plan, LUC RD, and long-term management plan preparation would be completed within the first year and then construction activities would be expected to take 8 months or less.

Implementability: Alternative SO3 is implementable. The resources, equipment, and materials required for construction of a cover and erecting additional fencing are readily available. There appear to be no obstructions to placing a cover over the proposed soils.

The remedial design would provide the specifications for construction of a cover and site restoration. The necessary health and safety requirements for construction activities conducted as part of implementation of the remedy would be identified in the work plan. A traffic control plan would also be necessary due to the truck traffic to haul clean cover materials. Lastly, the implementation of LUCs and a long-term groundwater monitoring program would require administrative processes and would be easily implemented.

Cost: A detailed estimate of capital, O&M, and present-worth costs for Alternative SO3 is provided in Appendix C-1 and is summarized below. Present-worth costs were developed for a 30-year period at a 2.0 percent discount rate.

Cost Description	Estimated Cost
Capital Costs	$483,871
O&M: Monitoring and Inspections	$17,631
5-Year Reviews	$25,300 *
Present Worth	$987,621

* Five-year reviews at this DU are a component of the Newport facility five-year reviews.

4.3 COMPARATIVE ANALYSIS OF SOIL ALTERNATIVES

A comparative analysis is conducted to evaluate the significant differences between alternatives based on the threshold and balancing criteria. This comparative analysis of soil alternatives is presented to address how effectively each alternative would comply with the standards listed in the guidance (USEPA, 1994). The analysis is provided below and summarized in Table 4-11.

Overall Protection of Human Health and the Environment

Alternative SO3 would be the most effective at protecting human health and the environment because all soils exceeding PRGs would be sequestered under a permeable soil cover. Alternative SO2 is less protective since it relies only on institutional controls and fencing to assure that risk is reduced adequately. Both Alternatives SO3 and SO2 may eventually lead to equal measures of protectiveness of human health on site because both alternatives prevent use of soils. This would not pose risk as long as the institutional controls are managed properly and restrictions are adhered to for as long as the soils exceed risk-based PRGs.

The energy and cost effort for constructing a soil cover for alternative SO3 needs to be considered, given that the same management practices will still be implemented on site to address remaining soils (subsurface soils) that exceed PRGs for residential land use.

Both Alternatives SO2 and SO3 would include LUCs which add human health protection and prevent exposure to the contaminated soil remaining onsite, and both alternatives include long-term groundwater monitoring. Alternative SO1 would not be protective of human health because contact with the contaminated soil for human receptors would not be prevented.

Compliance with ARARs

Alternatives SO2 and SO3 meet chemical-specific, location-specific, and action-specific ARARs. Implementation of either of these alternatives would be compliant and conducted in accordance with regulations. Alternative SO1 would not comply with ARARs because it does not prevent exposure to contaminated soil containing COCs at concentrations greater than PRGs.

Long-Term Effectiveness and Permanence

Alternative SO3 would have the highest long-term effectiveness due to the effectiveness of the soil cover. However, neither Alternatives SO2 and SO3 are truly permanent, since they rely on LUCs to restrict future use. Alternative SO1 would not be effective or provide permanent protection from contaminants.

Reduction in Toxicity, Mobility, or Volume Through Treatment

None of the three soil alternatives involve reduction in toxicity, mobility, or volume through treatment, as they are presented.

Short-Term Effectiveness

Alternative SO1 would be effective in the short-term in that the alternative does not involve any major construction activities that would expose construction workers, the surrounding community or the environment to COC exposure; however, alternative SO1 would not meet RAOs. Alternative SO2 and SO3 are both the next most effective in the short term, because both alternatives result in the short term isolation of contaminants in soil above PRGs. SO2 may be considered slightly more effective in the short term, since it involves less interaction with the contaminated material.

Implementability

Alternative SO1 would be the easiest to implement since no action is required; however, it is not implementable in an administrative sense because it does not achieve the threshold criteria for the protection of human health and the environment and achieving ARARs. Alternative SO2 would be more easily implemented than alternative SO3, due to the SO3 cover construction activities and transporting clean cover materials onto the Site.

Cost

Capital, O&M, present worth costs for the three soil remediation alternatives are summarized below. It is also noted that for Alternative SO1, the no action alternative, a nominal cost would be incurred to address the Site in the facility five-year review.

Costs	Alternative SO1 No Action	Alternative SO2 Land Use Controls and Inspections, Groundwater Monitoring, Fencing and Signs	Alternative SO3 Containment/Permeable Cover, Land Use Controls and Inspections, Groundwater Monitoring, and Signs
Capital	$0	$64349	$483,871
Annual O&M	$0	$17,631	$17,631,
Five-Year Reviews	$0	$25,300 *	$25,300 *
30-Year Present Worth	$0	$568,099	$987,621

* Five-year reviews at this DU are a component of the Newport facility 5-Year reviews.

5.0 DESCRIPTION AND DETAILED ANALYSIS OF GROUNDWATER ALTERNATIVES

The purpose of this section is to describe the remedial alternatives developed in Section 3 for the remediation of DU 5-1 groundwater, to evaluate the groundwater remedial alternatives against the NCP evaluation criteria, and to compare the two groundwater remedial alternatives. The remedial alternatives developed in Section 3.5 include:

Alternative GW1 No Action

Alternative GW2 MNA, LUCs and Inspections

Alternative GW3: In-Situ Treatment, Long-Term Groundwater Monitoring, LUCs and Inspections

5.1 DESCRIPTION OF ALTERNATIVES

The alternatives described in the sections below were developed to address DU 5-1 groundwater that was identified as posing potential risks to human health. An abbreviated summary of these alternatives is provided in Table 5-1.

5.1.1 Alternative GW1 - No Action

Evaluation of the no action alternative is required under the NCP, and provides a baseline for comparison to other alternatives. The no action alternative assumes no remedial response activities would be conducted, and provides no additional protection of human health or the environment. COCs would remain onsite at levels exceeding PRGs.

Under this alternative, no remedial actions would be performed, no measures would be implemented to restrict access to DU 5-1, and no actions would be taken to warn the public of the hazards. There would be no reduction in toxicity, mobility, or volume of the contaminants other than what would result from natural dispersion, dilution, biodegradation, and other unmeasured attenuating factors. No monitoring would be performed to verify that natural attenuation was occurring. Long-term maintenance of existing measures that provide some protectiveness, including fencing and signs around the Site that limit access, would not be verified or maintained under this alternative.

In accordance with Navy guidance on alternative development, it is assumed that five-year reviews of the Site would be conducted as part of the facility five-year review process. Under the no action alternative, only nominal costs would be anticipated for review of DU 5-1.

5.1.2 Alternative GW2 – Monitored Natural Attenuation, Land Use Controls and Inspections

The two major components of this alternative, MNA and LUCs, are described below. This alternative has been developed based on the CSM indicating that past releases of petroleum to the subsurface at and upgradient of DU 5-1 are indirectly causing elevated concentrations of metals in groundwater. As the petroleum is degraded through natural bacterial action, a side effect is the creation of oxidation-reduction conditions in those release areas which liberates some metals from their natural sequestration in soil and rock. As such, the degradation of petroleum is contributing to geochemical conditions that promote higher than normal concentrations of metals in the groundwater (particularly cobalt, iron and manganese). Figure 5-1 presents the major components of Alternative GW2.

Monitored Natural Attenuation - Under this remedial alternative, MNA would be conducted in order to support the land use controls and document a predicted decrease in concentrations of COCs present.

Attenuation of metals in groundwater at this site is expected to occur as described in Appendix A5 and Section 3.4.2 of this report. Based on these assessments, it is expected that the elevated concentrations of metals (cobalt, iron, and manganese) that exceed PRGs are present as an indirect result of the biodegradation of petroleum at or upgradient of DU 5-1. Although arsenic contributes to risk to the residential receptor, no PRG is set for this constituent because arsenic concentrations in groundwater are below the federal MCL. It is estimated that the natural attenuation process will accomplish a reduction in COC concentrations in groundwater to levels below PRGs in a period of between 11 years (bedrock) and 23 years (overburden).

It is expected that as the biodegradation concludes, much of these dissolved metals will come out of solution and become immobilized in their particulate form. Such attenuation can occur through sequestration by precipitation or adsorption under favorable geochemical conditions to immobilized and/or occluded forms that are rendered inaccessible to persons, even during the residential use of groundwater.

For costing purposes in this FS, in order to demonstrate the effectiveness of natural attenuation, a quarterly groundwater quality monitoring program is assumed for the first two years to define seasonal trends, if any. Once a trend in groundwater quality has been established, the Navy will propose a change in monitoring frequency to the USEPA and RIDEM for review and approval. Specific long term monitoring requirements will be identified in the long-term monitoring plan.

The five-year review would evaluate the data collected over time and conclude if 1) MNA is continuing, 2) to determine if PRGs continue to be exceeded, and 3) determine if continuation of the LUCs and monitoring program is appropriate based on the geochemical conditions measured. The amount of time to achieve groundwater cleanup goals with MNA si as yet uncertain; however, the time required will be reevaluated at each five year cycle, at a minimum, to assure that the remedy remains acceptable.

A MNA Work Plan / SAP would be prepared to identify the wells to be sampled, the analyses to be performed, and the need for any new monitoring wells. For the purposes of this FS, four wells are assumed to be included in this monitoring program, based on the area's size and the thickness of the aquifer. Existing or new monitoring wells will be utilized for monitoring. For the purposes of this FS, it is assumed that four existing wells will be utilized, and an additional four will be installed to augment the MNA program, although the actual number of monitoring wells and frequency of sampling will be established in the MNA Work Plan / SAP. Installation and development of additional monitoring wells would be conducted by a drilling subcontractor; well development would be conducted to assure a good hydraulic connection with the aquifer. Each monitoring event would include measurement of DO, ORP, conductivity, ferrous iron, pH, hydrogen sulfide, sulfate, nitrite, nitrate, temperature, carbon dioxide, alkalinity, PAHs, TPH, as well as total and dissolved arsenic, cobalt, iron, and manganese.

<u>LUCs and Inspections</u> - LUCs would be implemented to control exposure to COCs in groundwater, protect human health during the interim period until PRGs have been achieved in groundwater, and protect the components of the remedy (i.e. monitoring wells). A LUC RD would be prepared in accordance with the Navy's LUC principles to establish and implement methods and procedures to establish and maintain prohibitions for all residential use of groundwater at DU 5-1, including the use of groundwater for irrigation and commercial gardening (DoD, 2003). In addition, regular site inspections would be performed to verify the continued implementation of LUCs until the groundwater PRGs had been achieved. The areas to which the LUCs would apply would be identified and surveyed.

LUCs would be integrated within, and implemented as part of, existing LUCs at the base. If ownership of the Site is transferred with contamination remaining in place, ELURs would be recorded in accordance with applicable laws and the requirements of the RD. Annual reports would be submitted to USEPA and RIDEM to document that the conditions of the Site LUCs have been met.

<u>Five-Year Reviews</u> - This remedy will result in hazardous substances, pollutants, or contaminants remaining onsite in excess of levels that allow for unlimited use and unrestricted exposure, in accordance

with Section 121(c) of CERCLA and NCP §300.430(f)(5)(iii)(c), a statutory review will be conducted within 5 years of initiation of remedial action and every 5 years thereafter to ensure that the remedy continues to be protective of human health and the environment. During such reviews, the Navy, USEPA, and RIDEM would review site conditions and monitoring data to determine whether the continued implementation of the alternative is appropriate.

5.1.3 Alternative GW3 – In-Situ Groundwater Treatment, Long-Term Groundwater Monitoring, Land Use Controls and Inspections

Alternative GW3 would consist of three major components: In-situ biological treatment (in-situ bioprecipitation) and LUCs (with inspections and five-year reviews, as needed). This alternative has been developed based on the CSM indicating that past releases of petroleum to the subsurface at and upgradient of DU 5-1 are indirectly causing elevated concentrations of metals in groundwater at the Site. As the petroleum is degraded through natural bacterial action, a side effect is the creation of oxidation-reduction conditions in those release areas, which liberates some metals from their natural sequestration in soil and rock. Respiration requires the presence of an electron acceptor, which will be 'reduced' as it accepts the electron. Terminal electron acceptors include, in order of use in the environment; oxygen, nitrate, manganese/iron, sulfate and carbon dioxide. As petroleum degradation progresses, the dissolved oxygen present in the subsurface lowers in concentration and the ORP becomes lower/more negative. Dissolved oxygen at TF5 was measured between 0.19 – 4.67 mg/L and ORP was measured between -42.1 - +177.4 mV (Table 1). The values of these parameters generally indicate a low oxygen environment where reducing conditions dominate.

When manganese and iron are reduced, they become soluble and relatively high concentrations of these metals can be measured in the groundwater. There is no classic 'source area' to target to lower the concentrations of metals in the groundwater at the site, their concentration generally depends on the localized geochemical environment, which is presumably being influenced by the natural bacterial degradation of petroleum compounds both at and upgradient of DU 5-1.

The situation at DU 5-1 is not the typical situation when it comes to the remediation of metals; there is not a source area, plume, or a concentration that is orders of magnitude greater than what occurs in nature. In-situ chemical injection programs designed to neutralize inorganics are typically implemented at sites where inorganic concentrations are magnitudes of order higher than what are currently measured at the site. Rebound is expected to occur when geochemical conditions (DO, ORP, pH, etc.) return to their former state, thereby bringing the solid precipitates back into solution.

The success of Alternative GW3 to permanently achieve PRGs in groundwater in the long term is uncertain. Ultimately, treatment of water for metals content is best performed as an extraction-delivery system, and not in–situ. However, lacking an actual use of the groundwater at the Site (and thus a delivery system for in-line treatment), an in-situ system has been selected to represent a treatment alternative for the Site. Figure 5-2 presents the major components of Alternative GW3.

In-Situ Treatment

In-situ treatment for metals at this site is likely best accomplished through precipitation of mobilized metals into insoluble metal sulfides. This is typically accomplished by installation of a permeable reactive barrier installed to intercept a plume carrying dissolved metals (Hayes, 2009), but at this site, since there is no mapped plume of metals that can be targeted for interception, it is theorized that a similar effect may be accomplished through delivery of nutrients to the aquifer to encourage sulfate-reducing bacteria to grow and transform sulfates in groundwater into sulfides, which will, in turn, precipitate the metals present as insoluble metal sulfides (Diels et.al, 2010). This approach has been utilized on mine waste sites where high concentrations of metals are present, including cobalt and iron, though documentation has not been found regarding use for manganese.

Conceptually, a solution containing sulfate-reducing bacteria and appropriate nutrients would be injected into the subsurface through injection wells in selected target treatment zones. Treatment zones would be established based on a pilot study and monitoring program conducted as a part of a design step.

For the purposes of this FS, it is assumed that one treatment zone would be utilized, set as a double line of injection wells between the presumed source areas and the locations where COCs exceed the PRGs in groundwater. This line could be approximately 200 feet long, located hydraulically upgradient of MW916, and downgradient of Tank 50, and the former oil-water separator. Injection locations are typically set on a hexagonal grid with a spacing set up based on the transmissivity of the subsurface conditions and the rate of flow of groundwater through the Site. Injection points can be as close as 10 feet horizontally. In the configuration described above, a total of 40 injection points would be required. Vertical position of the injection points would be determined based on the design plan and the detailed subsurface conditions. The volume of treatment chemicals would be determined also through determination of transmissivity, but can be as great as 1,000 to 2,000 gallons per injection point, so as to saturate the subsurface with nutrients encouraging bacterial growth. Pumping rates are anticipated to be low, so as not to overwhelm the geochemistry of the treatment zone, but to slowly build the bacterial count and slowly build a capacity to sequester the metals in the subsurface materials.

The conceptual approach described herein would be confirmed and possibly modified during the Remedial Design phase. During the design phase, a pilot study may be performed at a selected location(s) to verify the conceptual approach and provide information needed to engineer the full-scale system. Some resolution of the source of the highest concentrations of metals would be required prior to developing an injection plan. Supplemented with an understanding of the overburden and bedrock fracture characteristics, and by adding necessary safety factors into design parameters, the final design would be able to account for some of the uncertainties in the behavior of water flow through the Site.

The treatment pilot study and design would be completed in approximately six months, followed by full implementation within another six months, and it is assumed that PRGs would be achieved for COCs within one year after full injections are completed (a total of 2 years from pilot study completion to PRGs being achieved). After the COCs are depleted, continued quarterly monitoring for one additional year would be required to identify any rebound of COCs in groundwater. For the purposes of this FS, it is assumed that adequate reduction in metals concentrations in and downgradient of the treatment zones would be achieved after two injections, conducted two years apart. Baseline and quarterly monitoring would be performed during and for one year after treatment to evaluate the progress and need to continue the treatment. All monitoring events would use low-flow groundwater sampling techniques. Using this assumption, and assuming use of two treatment periods, four years of quarterly monitoring would be conducted (during pilot study and full implementation [1 year], 2 years following first injection, 1 year following second injection, total 4 years), after which monitoring would be likely conducted annually. However, even after a second series of injections is conducted, reductions may be reversed by the continued oxidation-reduction conditions at and upgradient of the Site, if petroleum degradation is continuing in those areas. Continued treatment on an intermittent basis may be necessary to compensate for this pattern, until the oxidation-reduction conditions subside. The results of the associated groundwater monitoring would determine the necessity for the continued, intermittent treatment.

<u>Long-Term Groundwater Monitoring</u> - A long-term monitoring plan would be prepared to identify the wells to be sampled for the purpose of monitoring the effectiveness of the treatment process. The plan would also identify the analyses to be performed, and the need for any new monitoring wells. For the purposes of this FS, it is anticipated that up to 8 groundwater monitoring wells would be required, four of which are currently present in the affected portions of the site. Installation and development of an additional four wells would be conducted by a drilling subcontractor; well development would be conducted to assure a good hydraulic connection with the aquifer. Each monitoring event would include measurement of DO, ORP, conductivity, ferrous iron, pH, hydrogen sulfide, sulfate, nitrite, and nitrate, temperature, carbon dioxide, alkalinity, PAHs, as well as total and dissolved arsenic, cobalt, iron, and manganese. TPH would be included at RIDEM request. As noted above, for the purpose of this FS and costing estimates, four years of quarterly monitoring would be conducted, followed by 26 years of annual monitoring, or until it is demonstrated that monitoring can be discontinued.

LUCs and Inspections - LUCs would be implemented to control exposure to COCs in groundwater , protect human health during the interim period until PRGs have been achieved in groundwater, and protect the components of the remedy (i.e. monitoring wells and injection wells). A LUC RD would be prepared in accordance with the Navy's LUC principles and procedures to establish and maintain prohibitions for the use of groundwater for human consumption at DU 5-1 (DoD, 2003). In addition, regular site inspections would be performed to verify the continued maintenance of LUCs until the groundwater PRGs have been achieved. The areas to which the LUCs would apply would be identified and surveyed. Although it is not expected to be necessary at this site, the Navy could also coordinate with the property abutters to prevent the installation of a residential drinking water supply well adjacent to (downgradient of) the Site. For DU 5-1, this would not likely be necessary, since the only property downgradient is a small strip of land between the Site and Narragansett Bay, mostly occupied by Defense Highway.

LUCs would be integrated within, and implemented as part of, existing LUCs at the base. If ownership of the Site is transferred with contamination remaining in place, ELURs would be recorded in accordance with applicable laws and the requirements of the LUC RD. Annual inspection reports would be submitted to USEPA and RIDEM to document that the conditions of the Site LUCs have been met.

Five-Year Reviews – Because this remedy will result (at least temporarily) in hazardous substances, pollutants, or contaminants remaining onsite in excess of levels that allow for unlimited use and unrestricted exposure, five-year reviews will be conducted. In accordance with Section 121(c) of CERCLA and NCP §300.430(f)(5)(iii)(c), a statutory review will be conducted within 5 years of initiation of remedial action and every 5 years thereafter, to ensure that the remedy continues to be protective of human health and the environment. During such reviews, the Navy, USEPA, and state would review site conditions and monitoring data to determine whether the continued implementation of the alternative is appropriate. Once PRGs are met, LTM and five-year reviews, as well as LUCs and inspections would be discontinued.

5.2 DETAILED EVALUATION OF REMEDIAL ALTERNATIVES

The remedial alternatives developed in Section 3 and outlined in Section 5.1 are described and evaluated in detail in this section. The evaluation of the alternatives provides information to facilitate selection of a specific remedy or a combination of remedies. The detailed evaluation of alternatives was developed in accordance with the NCP [40 CFR 200.430(e)] and the *Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA* (USEPA, 1988a). The NCP criteria for alternative evaluation are presented and described in Section 3.7.

5.2.1 Alternative GW1: No Action

Consideration of a no action alternative is required under the NCP. At a minimum, it provides a baseline against which other alternatives may be compared. No containment, removal, or treatment of groundwater contaminants would be conducted. The alternative would provide no mechanism to minimize potential risks to receptors except for the existing fencing and signs, which would not be maintained. No groundwater monitoring would occur, and there would be no restrictions on groundwater use.

An analysis of this alternative with respect to the evaluation criteria is as follows:

Overall Protection of Human Health and the Environment: The no action alternative would not provide protection of human health or the environment. If the Site were to be developed with groundwater to be extracted for residential use, the COCs present in groundwater at levels exceeding PRGs would be made available to possible future receptors. Alternative GW1 would not demonstrate that RAOs were achieved and COCs may still exist at concentrations exceeding PRG levels. This alternative would include no groundwater monitoring; therefore, any natural attenuation of groundwater COCs would remain unknown.

Compliance with ARARs: Tables 5-2, 5-3, and 5-4 summarize chemical, location, and action-specific ARARs and TBCs, respectively, for Alternative GW1. Although DU 5-1 groundwater conditions already meet MCLs, non-zero MCLGs, and more stringent State groundwater standards, risk-based PRGs are not met.

Chemical-specific ARARs and TBCs would likely eventually be met through natural attenuation, but this would not be verified through monitoring. There are no location- or action-specific ARARs or TBCs for this alternative.

Long-Term Effectiveness and Permanence: Since no remedial actions would occur under Alternative GW1, the identified risks to human health under the potential future residential use scenario would remain. Since there would be no monitoring, the progress of the natural attenuation of groundwater COCs would remain unknown and the potential offsite migration of these COCs would not be detected.

Under the no action alternative, no inspections or reviews of Site conditions would be conducted to determine if the COCs meet PRGs. Similarly, there would be no review of property use to determine if persons were being exposed to COCs present. The five-year reviews of DU 5-1 would be conducted as part of the facility five-year reviews.

Under the no action alternative, no additional controls would be used to manage the contaminants at the Site. Therefore, the evaluation of the adequacy and reliability of new controls is not applicable.

Reduction of Toxicity, Mobility, or Volume Through Treatment: The no action alternative would not reduce the toxicity, mobility, or volume of contamination through treatment, since no treatment would be used to mitigate COCs present in groundwater at concentrations above PRGs.

Short-Term Effectiveness: No action would occur; implementation of Alternative GW1 would pose no new risks to site workers nor result in short-term adverse impact to the local community or the environment. Alternative GW1 may achieve the groundwater RAOs eventually, and although the groundwater PRGs would likely eventually be met through natural attenuation, this would not be verified because no monitoring would occur.

Implementability: No action would occur; Alternative GW1 would be readily implementable in a technical sense. The technical feasibility criteria, including constructability, operability, and reliability, are not applicable. Implementability of additional administrative measures is not applicable because no such measures would be taken.

Cost: A detailed estimate of capital and O&M costs and net present worth for Alternative GW1 is provided in Appendix C2 and is summarized below. A nominal cost for the no action alternative would be incurred to address the Site in the facility five-year review. Net present worth was developed for a 30-year period at a 2.0 percent discount rate.

Cost Description	Estimated Cost
Capital Costs	$0
O&M	$0
5-Year Reviews	$0*
30-Year Present Worth	$0

* 5-year reviews at this DU are a component of the Newport facility 5-year reviews.

5.2.2 Alternative GW2: Monitored Natural Attenuation, Land Use Controls and Inspections

An analysis of this alternative with respect to the evaluation criteria is as follows:

Overall Protection of Human Health and the Environment: Alternative GW2 would be initially protective of human health, preventing the exposure of people to groundwater via implementation of LUCs. Over the longer term and under favorable geochemical conditions, manganese, iron, and cobalt are expected to be sequestered by precipitation or adsorption, to immobilized and/or occluded forms that are rendered harmless to receptors, as the biodegradation of the petroleum in groundwater at or upgradient of the Site continues and concludes. The required timeframe for this process is currently not known, but a trend analysis can be conducted using data collected, which will assist in evaluating the required period of time for levels of COCs in groundwater to be reduced to levels less than PRGs.

Monitoring is necessary to document the continuation of the natural attenuation and the need for continuation of the LUCs.

Compliance with ARARs: Tables 5-5, 5-6, and 5-7 summarize chemical, location, and action-specific ARARs and TBCs, respectively, for Alternative GW2. Alternative GW2 would comply with chemical-specific ARARs and TBCs through MNA and LUCs. Alternative GW2 would also comply with location- and action-specific ARARs and TBCs.

Long-Term Effectiveness and Permanence: Alternative GW2 provides effectiveness as long as the LUCs remain in place, or until natural attenuation processes reduce the groundwater metals levels. Natural attenuation is expected to permanently reduce groundwater contaminant concentrations to acceptable levels over time, and this will be consistently evaluated over time through the five-year review process, including the trend analysis of data collected during monitoring conducted as part of MNA.

Monitoring is an effective means to evaluate whether or not LUCs need to remain in place, and to document any changes to concentrations of COCs over time. Groundwater use restrictions would effectively prevent the residential use of the groundwater until PRGs are met.

The controls proposed and enforced as part of the LUCs in this alternative are considered reliable.

Reduction of Toxicity, Mobility, or Volume Through Treatment: Alternative GW2 would not reduce the toxicity, mobility, and volume of groundwater COCs through treatment. There will be no active treatment of groundwater, and natural attenuation is not assured.

Short-Term Effectiveness: Alternative GW2 would reduce human health risks in the short term because groundwater use restrictions would be implemented. Exposure of workers to contamination during groundwater sampling would be minimized by compliance with Occupational Safety and Health Administration (OSHA) requirements including wearing appropriate PPE and adherence to site-specific health and safety procedures. Implementation of LUCs and groundwater monitoring as part of MNA would not adversely impact the surrounding community or the environment.

The first groundwater RAO for preventing exposure to COCs would be achieved immediately upon implementation of LUCs. It is assumed that the second RAO for groundwater would be achieved after an estimated 11 years (bedrock) and 23 years (overburden), the required timeframe that is estimated for three volumes of groundwater to fully flow through the Site's saturated zone (Appendix A-7) under Alternative GW2. However, a trend analysis should be conducted using data as it is collected over time, which will help to refine the required period of time for levels of COCs in groundwater to be reduced to levels less than PRGs, and ultimately to reach an unrestricted use condition for the local groundwater at DU 5-1.

Implementability: Sampling and maintenance of existing monitoring wells during activities conducted for MNA and performance of five-year reviews could readily be accomplished. The resources, equipment, and materials required for these activities are readily available.

The administrative aspects of Alternative GW2 would be relatively simple to implement. The LUCs would be incorporated into the existing LUC program at the base.

Cost: A detailed estimate of capital and O&M costs and net present worth for Alternative GW2 is provided in Appendix C2 and is summarized below. Net present worth was developed for a 30-year period at a 2.0 percent discount rate.

Cost Description	Estimated Cost
Capital Costs	$61,963
Quarterly O&M/LTM for MNA – Years 1 and 2	$83,064 per year
Annual O&M/LTM for MNA – Years 3 - 30	$20,766 per year
Annual Costs (Inspections), Years 1-30	$2,585 per year
5-Year Reviews	$25,300/5 years*
Present Worth	$873,385

* 5-year reviews at this DU are a component of the Newport facility 5-year reviews.

5.2.3 Alternative GW3 – In-Situ Groundwater Treatment, Long-Term Groundwater Monitoring, Land Use Controls and Inspections

An analysis of this alternative with respect to the evaluation criteria is as follows:

Overall Protection of Human Health and the Environment

Alternative GW3 is assumed to be protective of human health and the environment through the active remediation (treatment) of the COCs in groundwater and through the implementation of interim LUCs to prevent exposure to the residual COCs until PRGs are achieved. Treatment would reduce the concentrations of cobalt, iron, and manganese during the treatment period until the oxidation–reduction conditions at and upgradient of the Site return to a natural steady state, presumably after the increased bacterial action addresses the historic petroleum releases at the Site.

Monitoring would be necessary to identify reductions and any potential rebound of the COCs after treatment is discontinued.

LUCs would be protective of human health during the remedial period until PRGs are met. Restricting the use of groundwater would be protective of human health by avoiding unacceptable risks from exposure to contaminated groundwater.

Compliance with ARARs

Tables 5-8, 5-9, and 5-10 summarize chemical-, location-, and action-specific ARARs and TBCs, respectively, for Alternative GW3. Alternative GW3 would eventually comply with chemical-specific ARARs and TBCs as long as the treatment system is operated and adjusted as needed to accommodate changing geochemical conditions. Alternative GW3 would be implemented so as to comply with location- and action-specific ARARs and TBCs.

Long-Term Effectiveness and Permanence

Alternative GW3 could provide long-term effectiveness and permanence, though re-treatment may be necessary if rebound of COC concentrations occurs after each treatment period. Because there is uncertainty as to the behavior of the geochemistry during and after treatment periods, careful monitoring of the groundwater downgradient of the treatment zones both prior to, during, and after treatment steps would be necessary to assure eventual compliance with the PRGs.

Groundwater use restrictions, implemented by the Navy and retained by any future land owner, would effectively prevent the use of groundwater until PRGs are met. It is assumed that the second RAO for groundwater would be achieved after the second injection and confirmed after the fourth year of the remedy.

Reduction of Toxicity, Mobility, or Volume through Treatment

Any reduction of the toxicity, mobility, and volume of groundwater COCs under alternative GW3 would be encouraged through active treatment of the metals present. Ultimately, it is assumed that the production of the elevated metals is a side-effect of the natural bacterial reduction of petroleum released at and/or upgradient of the Site. However, it is presumed that treatment would sequester cobalt, iron, and manganese within the soil that is currently mobilized in groundwater. The total mass of COCs that would be addressed is uncertain, but concentrations would be monitored. No treatment residues would be generated or collected under this alternative.

Short-Term Effectiveness

Alternative GW3 would reduce human health risks in the short term because groundwater use restrictions would be implemented, preventing use of groundwater for residential purposes. Exposure of workers to COCs during installation of groundwater injection wells, treatment injections, and groundwater sampling would be minimized by compliance with OSHA requirements, including wearing appropriate PPE and adhering to site-specific health and safety procedures. Implementation of LUCs and monitoring would not adversely impact the surrounding community or the environment. Since in-situ treatment for metals in groundwater has uncertain success, a pre-design, pilot-scale treatability study is anticipated to be needed to evaluate the site-specific application, which would delay the effectiveness of the treatment process and provide further reliance on LUCs in the short term.

The first groundwater RAO for preventing exposure to COCs would be achieved immediately upon implementation of LUCs and monitoring. The treatment pilot study and design would be completed in approximately six months, followed by full implementation within another six months, and it is assumed that PRGs would be achieved for COCs within one month after full injections are completed. After the COCs are depleted, continued quarterly monitoring for one year would be required to identify any rebound of COCs in groundwater. It is assumed that the second RAO, returning groundwater to its beneficial use, would be achieved after the second injection and confirmed after the fourth year of the remedy, though continued monitoring would be required due to the potential for rebound.

As part of the overall evaluation for this alternative, the relative environmental sustainability with respect to greenhouse gas and criteria pollutant emissions, energy usage, water consumption, and worker safety was examined.

Implementability

The injection systems can be readily developed for in-situ treatment. There are a number of qualified contractors to provide both well installation and chemical injection. There are no existing encumbrances on the Site that would interfere with injection system installation or operation. Sampling and maintenance of existing monitoring wells could readily be accomplished. The administrative aspects of Alternative GW3 would be relatively simple to implement. The resources, equipment, and materials required for these activities are readily available, although there are limited electric utilities on site, and these would need to be reestablished for treatment system operation. There is uncertainty associated with the distribution of chemicals injected into the subsurface because of the heterogeneity of subsurface conditions; therefore, a pilot study would be warranted to assist in the full-scale design.

The LUCs would be incorporated into the existing LUC program at the base, and performance of 5-year reviews can readily be accomplished.

Cost

A detailed estimate of capital and O&M cost and net present worth for Alternative GW3 is provided in Appendix C and is summarized below. The net present worth was developed for a 30-year period of performance at a 2.0 percent discount rate.

Cost Description	Estimated Cost
Capital Costs (two injections)	$1,276,775
O&M/Long-Term Monitoring (Years 0-1)	$172,950
O&M/Long-Term Monitoring (Years 2 and 3)	$172,950
O&M/Long-Term Monitoring (Year 4 and after)	$23,558
5-Year Reviews	$23,500/5 years
30-Year Net Present Worth	$2,160,160

5.3 COMPARATIVE ANALYSIS OF GROUNDWATER ALTERNATIVES

A comparative analysis is conducted to evaluate the significant differences between alternatives based on the threshold and balancing criteria. This comparative analysis of groundwater alternatives is presented to address how effectively each alternative would comply with the standards listed in the guidance (USEPA, 1994). This analysis is provided below and is summarized in Table 5-8.

Overall Protection of Human Health and the Environment

Alternative GW2 would be protective of human health and the environment. Under this alternative, the levels of dissolved metals in the aquifer are expected to attenuate as the attenuation of petroleum at or upgradient of the Site concludes, and the natural geochemistry of the aquifer is restored. Until that time, no exposure would be occurring, due to the implementation and enforcement of LUCs.

Alternative GW1 is not protective of human health or the environment because it includes no remedial actions to address Site groundwater contamination. GW1 is identical to GW2 except for the LUCs and monitoring. If GW2 will eventually achieve the PRGs, then so will GW1 except, without the monitoring, that achievement would not be recognized.

Compliance with ARARs

Alternatives GW2 and GW3 would both comply with location- and action-specific ARARs and TBCs. There are no action-specific or location-specific ARARs for alternative GW1. PRGs would need to be achieved for the remedy to be considered complete.

Although alternative GW1 may eventually meet chemical-specific ARARs through natural attenuation, there would be no monitoring to confirm this, and there would be no protection in the meantime.

Under all three alternatives, COCs in groundwater do not exceed MCLs, non-zero MCLGs, or more stringent state groundwater standards. The chemical specific TBC for manganese is not met. Chemical-specific TBCs would only be achieved by GW2 if this alternative (MNA) can achieve PRGs within a reasonable time period as compared to Alternative GW3.

Long-Term Effectiveness and Permanence

Alternative GW2 would provide effectiveness through LUCs alone, but would provide permanence only through natural attenuation. LUCs would be effective for preventing exposure to groundwater COCs as long as the LUCs remain in place.

Alternative GW1 would not be effective, although it might provide protection from contaminants in the long term. This is because LUCs would not be present to prevent use of groundwater, and although natural attenuation may occur, it would not be identified since no monitoring would take place. Additionally, if no residential water source is established, there would be no exposure to the COCs. Although COC concentrations might eventually decrease to PRG levels through natural attenuation, no monitoring or inspections would be conducted to verify this possibility.

Alternatives GW2 and GW3 would achieve the first groundwater RAO immediately upon implementation of LUCs. The second RAO for groundwater, returning the aquifer to its designated beneficial use as a drinking water source, would be achieved under Alternative GW2 after an estimated maximum of 23 years (for overburden groundwater) and after 4 years under Alternative GW3, although there is uncertainty in the permanence of results from Alternative GW3, and additional treatment beyond that already identified in this FS may be required under this alternative. Additionally, there is considerable uncertainty regarding the estimated timeframes for both GW2 and GW3 due to the possibility that former petroleum contamination upgradient of DU 5-1 may lead to continued groundwater contamination as the groundwater from upgradient passes through DU 5-1.

Reduction in Toxicity, Mobility, or Volume Through Treatment

Neither alternative GW1 nor GW2 provides reduction of toxicity, mobility, or volume of waste through treatment, as no active treatment is proposed. Reduction of COC mobility and volume in groundwater through natural attenuation is anticipated; however, under Alternative GW1, this reduction would not be verified or quantified. Alternative GW3 will reduce toxicity, mobility, and volume of COCs through in-situ bioprecipitation.

Short-Term Effectiveness

Implementation of Alternative GW1 would not result in risks to site workers or adversely impact the surrounding community or environment because no remedial activities would be performed.

Alternatives GW2 and GW3 would achieve the first groundwater RAO immediately upon implementation of LUCs. The second RAO for groundwater would be achieved after an estimated maximum of 23 years (for overburden groundwater) under Alternative GW2, and after an estimated 4 years under Alternative GW3, although there is uncertainty in the permanence of Alternative GW3, and additional treatment beyond that already identified in this FS may be required under this alternative. Additionally, there is considerable uncertainty regarding the estimated timeframes for both GW2 and GW3 due to the possibility that former petroleum contamination upgradient of DU 5-1 may lead to continued groundwater contamination as the groundwater from upgradient passes through DU 5-1.

Implementability

Alternative GW1 would be easiest to implement in a technical sense since no action is required.

Alternative GW2 would be easily implemented because it would include only minimal, if any, construction effort (e.g., potential new monitoring wells) and because of the relative simplicity and ease of conducting a long-term monitoring program. Administrative, management, and operational issues, and coordination with other agencies or acquiring permits under this alternative are easily achievable, as well. Future remedial actions would not be hindered by this alternative.

Alternative GW3 would be difficult to implement as there is no defined groundwater plume that can be targeted for treatment. It is assumed that further study would be required to map groundwater flow and geochemical conditions at the Site so that the treatment system can be properly designed and constructed for optimum operation.

Cost

Capital, O&M, LTM, 5-year, and present worth costs for the groundwater alternatives for DU 5-1 at Tank Farm 5 are summarized below. It is also noted that under alternative GW1, the no action alternative, a nominal cost would be incurred to address the Site in the facility five-year review.

Cost Description	Alternative GW1 No Action	Alternative GW2 Monitored Natural Attenuation, Land Use Controls and Inspections	Alternative GW3 In-Situ Treatment, Long-Term Groundwater Monitoring, Land Use Controls and Inspections
Capital	$0	$61,963	$1,276,775
O&M/Long-Term Monitoring (Total)	$0	$659,622	$981,966
5-Year Reviews	$0*	$151,800	$151,800
Present Worth	$0	$873,385	$2,160,160

* 5-year reviews at this DU are a component of the Newport facility 5-year reviews.

TABLES

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants in site media.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Used to calculate potential carcinogenic risks caused by exposure to contaminants in site media.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants in site media.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)	40 Code of Federal Regulations (CFR) 141 Subpart G	Applicable	Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies that are potential drinking water sources.	MCLs were used in the development of PRGs, based on the use of the groundwater for a drinking water supply.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)	40 CFR 141 Subpart F	Applicable (non-zero MCLGs only)	Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.	MCLGs were considered in development of PRGs based on the use of the groundwater for a drinking water supply. (The MCLG of arsenic is zero.)

TABLE 2-1
CHEMICAL-SPECIFIC ARARs AND TBCs
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal (Continued)				
Drinking Water Health Advisory for Manganese (EPA Office of Drinking Water), 2004	-	To Be Considered	Health Advisories are estimates of risk from consumption of contaminated drinking water. They consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 ppm.	Health advisory will be used to evaluate the non-carcinogenic risk resulting from exposure to manganese.
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Sections 8.02 and 8.03, with the exception of 8.02A(iv) – TPH.	Relevant and Appropriate	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they pertain to CERCLA hazardous substances, pollutants, or contaminants and are more stringent than federal standards. Establishes criteria for groundwater and soil.	These criteria were considered in development of PRGs for both soil and groundwater based on different land uses.
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Section 12.04 B(i)	Applicable	When arsenic is the only COC present and its levels are between 15 and 43 ppm, encapsulation of existing soils with six inches of Clean Soil is considered acceptable.	Cover areas where arsenic concentrations in surface soils are between 15 and 43 ppm with a six inch soil cover rather than a 2 foot soil cover.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 Code of Federal Regulations (CFR) 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 Floodplain Management and Executive Order 11990, Protection of Wetlands.	Remedial alternatives conducted within the 100-year floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage, the effects of soil remedial actions on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by soil remediation will be mitigated in accordance with requirements. Remedial activities will take place in or near floodplains. Public comment will be solicited in the Proposed Plan.
Clean Water Act	Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR 230	Applicable	These regulations outline the requirements for the discharge of dredged or fill materials into surface waters including Federal jurisdictional wetlands. No activity that impacts waters of the United States shall be permitted if a practicable alternative that has less adverse impact exists. If there is no other practicable alternative, the impacts must be mitigated.	Remedial activities that have the potential to impact nearby wetlands will be designed to avoid wetlands and any adverse impacts will be mitigated.

TABLE 2-2
LOCATION-SPECIFIC ARARs AND TBCs
DU 5-1 AT SITE 13 – TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act - RIGL 2-1-18 *et seq.*	Rhode Island Freshwater Wetlands Act, RIGL 2-1-18 *et seq.*	Applicable	Defines and establishes provisions for the protection of Rhode Island jurisdictional wetlands (including area of land within 50 feet of the edge of the wetland). Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Part of the Site is a freshwater wetland area and applicable freshwater wetland requirements will be met during the remedial action.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Groundwater Protection Strategy	August 1984; NCP Preamble, Vol. 55, No. 46, March 8, 1990, 40 CFR 300, p. 8733); Guidelines for Ground-Water Classification (November 1986)	To Be Considered	The Groundwater Protection Strategy provides a common reference for preserving clean groundwater and protecting the public health against the effects of past contamination. Guidelines for consistency in groundwater protection programs focus on the highest beneficial use of a groundwater aquifer.	Guidance standards will be met through meeting federal drinking water standards, non-zero MCLGs, more stringent state groundwater standards, and/or risk-based standards in the groundwater.
Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites	OSWER Directive 9200.4-17P (April 21, 1999)	To Be Considered	EPA guidance regarding the use of monitored natural attenuation for the cleanup of contaminated soil and groundwater. In particular, a reasonable time frame for achieving cleanup standard though monitored attenuation would be comparable to that which could be achieved through active restoration.	This guidance will be used to determine success of monitored natural attenuation component of any alternative to attain all groundwater cleanup standards within a reasonable time frame.
Clean Water Act – National Pollutant Discharge Elimination System (NPDES) – Storm Water from Construction Activity	40 CFR 122.26	Applicable	Includes storm water standards for construction activities disturbing more than 1 acre.	Best management practices will be used to meet storm water standards during the remedial action if disturbed area is greater than 1 acre.
Underground Injection Control (UIC)	40 CFR Parts 144, 146, and 147.2000	Applicable	These regulations address the discharge of wastes, chemicals or other substances into the subsurface. The federal UIC program designates injection wells incidental to aquifer remediation as Class V wells.	These regulations apply to underground injection of treatment substances.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant	40 Code of Federal Regulations (CFR) 141 Subpart G	Applicable	Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants	MCLs were used in the development of PRGs, based on the use of the groundwater for a drinking water supply.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Levels (MCLs)			applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies that are potential drinking water sources.	
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)	40 CFR 141 Subpart F	Applicable (non-zero MCLGs only)	Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.	MCLGs were considered in development of PRGs based on the use of the groundwater for a drinking water supply. (The MCLG of arsenic is zero.)
Drinking Water Health Advisory for Manganese (EPA Office of Drinking Water), 2004	-	To Be Considered	Health Advisories are estimates of risk from consumption of contaminated drinking water. They consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 ppm.	Health advisory will be used to evaluate the non-carcinogenic risk resulting from exposure to manganese.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Standards for Identification and Listing of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, Code of Rhode Island Rules (CRIR), 12-030-003, Rule 5.8	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. Defines the listed and characteristic hazardous wastes.	These regulations apply to all waste generated during actions at the site, such as investigation-derived waste (IDW) from monitoring. Will be used when determining whether or not a solid waste is hazardous. The IDW is not expected to be hazardous.
Standards for Generators of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, CRIR 12-030-003, Rule 5.2, 5.3, and 5.4	Applicable	Establishes accumulation, manifesting, and pre-transport requirements for hazardous waste.	These regulations would apply to any waste generated at the site that is determined to be hazardous, such as IDW. The IDW is not expected to be hazardous.
Drilling of Drinking Water Wells; Rules and Regulations Governing the Enforcement of Chapter 46-13.2 Relating to the Drilling of Drinking Water Wells	Rule 7.01	Applicable	Prohibits installing drinking water wells near pollution sources or potential contamination sources.	Under these standards drinking water wells are prohibited near pollution sources or potential contamination sources until groundwater cleanup standards are achieved.
Rules and Regulations for Groundwater Quality (Well Standards) – Appendix 1	-	Applicable	Identifies the standards and specification that must be followed for the installation or abandonment of monitoring wells.	Applies to the abandonment of existing monitoring wells.
Clean Air Act - Fugitive Dust Control	RIGL 23-23 *et seq.*; CRIR 12-31-05	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Storage, placement, and grading of soil would be performed to prevent material from becoming airborne, such as by water sprays.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Water Pollution Control - Pollution Discharge Elimination System– Storm Water from Construction Activity	RIGL 42-16 et seq.; CRIR 12-190-003, Rule 31	Applicable	Includes storm water requirements for construction projects that disturb over 1 acre.	Best management practices will be used to meet storm water standards during the remedial action if disturbed area is greater than 1 acre.
Soil Erosion and Sediment Control Handbook, 1989	-	To Be Considered	Identifies soil erosion and sediment control (E & SC) requirements for construction activities involving land-disturbance activities.	E & SCs will be used during soil disturbance activities, such as cover placement.
Rhode Island Solid Waste Regulations – Dust Control	DEM OWM-SW0401, 1.7.10	Relevant and Appropriate	Requires dust control.	Dust must be controlled at the site during any construction and maintenance activities.
Rhode Island Solid Waste Regulations – Health and Safety	DEM OWM-SW0401, 1.7.12 (a)	Relevant and Appropriate	Requires solid waste management facilities be designed and maintained to protect the health and safety of personnel at the facility and persons in close proximity.	Under this subsection health and safety of construction workers and persons in the proximity of the site would be maintained during construction and maintenance activities.
Rhode Island Solid Waste Regulations	DEM OWM-SW04-01, 1.7.14 (b)	Relevant and Appropriate	Regulation states that an approved closure plan must be implemented.	The site will be closed under a plan developed in accordance with the substantive requirements of this section of the regulations as needed, to be incorporated into the remedial design (RD), and the Operations and Maintenance Plan (O&M) (including a monitoring plan).

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rhode Island Solid Waste Regulations	DEM OWM-SW04-01, 1.8.01 (a) and 1.8.01 (b)	Relevant and Appropriate	Requires facilities to monitor groundwater and to meet closure requirements.	The substantive requirements of this section of the regulations will be met by monitoring groundwater and meeting closure requirements as needed. If site contaminants are left in place, the site will be closed as a waste management unit. The remedial design (RD), remedial action work plan (RAWP), operations and monitoring plan (O&M) (including the long term monitoring plan [LTMP]) developed for this cleanup will contain the specific monitoring and closure requirements for the waste management unit that will comply with the substantive requirements.
Rhode Island Solid Waste Regulations – Sedimentation and Erosion Control	DEM OWM-SW0401, 2.1.04	Relevant and Appropriate	Requires a “Sedimentation and Erosion Control Plan” be developed.	If the soils are altered, an erosion and sediment control plan will be developed for this site in accordance with the substantive requirements of this section. The RD and the RAWP, to be developed for this cleanup, will contain the specific erosion and sediment controls requirements for the remedial construction.
Rhode Island Solid Waste Regulations	DEM OWM-SW04-01, 2.1.08 (a) (8)	Relevant and Appropriate	Contains requirements for construction of monitoring wells to monitor a solid waste landfill.	The substantive requirements of this section of the regulations will be met for construction of new monitoring wells.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rhode Island Solid Waste Regulations – Long-term Monitoring	DEM OWM-SW0401, 2.1.08 (c)	Relevant and Appropriate	Contains requirements for monitoring wells.	The substantive requirements of this section of the regulations will be met by maintaining monitoring wells for the purpose of monitoring groundwater conditions at the site. Because this remedy leaves contamination in place, it will be supported with a Long Term Monitoring Plan (LTMP) for groundwater. The LTMP will be directed by a work plan that will contain the specific monitoring requirements.
Rhode Island Solid Waste Regulations, Vegetated Top Cover	DEM OWM-SW0401, 2.2.12 (d) (1) and 2.2.12 (d) (2) (ii)(iii) and (v)	Relevant and Appropriate	Contains requirements for construction and maintenance of the vegetative cover final cover system.	Remedies including cover systems will include appropriate vegetation requirements of a soil cover in compliance with these standards.
Rhode Island Solid Waste Regulations, Permeability	DEM OWM-SW04-01, 2.3.04 (e) and (f)	Relevant and Appropriate	Outlines the requirements for the maintenance and permeability of cover material.	If cover systems are used in the remedy, this section of the regulations will be met by installing a cover that has been determined to provide an adequate barrier for the contaminants remaining in the soil.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rhode Island Solid Waste Regulations – Compliance Boundaries	DEM OWM-SW0401, 2.3.05	Relevant and Appropriate	Establishes requirement for compliance boundary for pollution of ground waters or surface waters.	The substantive requirements of this section of the regulations will be met by the requirement that no contamination of groundwater be permitted. Because this remedy leaves contamination in place, groundwater monitoring will be conducted to assure that no contaminants are transported to the groundwater
Rhode Island Solid Waste Regulations, Surface Drainage	DEM OWM-SW04-01, 2.3.10	Relevant and Appropriate	Contains requirements for surface water drainage.	If cover systems are installed, the substantive requirements of this section of the regulations will be met through design of appropriate surface drainage considerations for the cover. The cover system would be designed to prevent erosion, sedimentation, and standing water on the cover. However, minimum slope requirements for solid waste landfills are not relevant or appropriate for a soil cover which is not intended to reduce infiltration.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rhode Island Solid Waste Regulations - Monitoring Wells	DEM OWM-SW0401, 2.3.11	Relevant and Appropriate	Contains requirements for monitoring wells.	The substantive requirements of this section of the regulations will be met by having and maintaining monitoring wells for the purpose of monitoring groundwater conditions by the soil cover and the waste management area. Because this remedy leaves contaminants in place, it will be supported with a Long Term Monitoring Plan (LTMP) for groundwater. The LTMP will be directed by a work plan that will contain the specific monitoring well requirements.
Rhode Island Solid Waste Regulations – Siting in and Adjacent to Wetlands and Floodplains	DEM OWM-SW0401, 2.3.14	Relevant and Appropriate	Provides requirements for new solid waste landfill units and expansions that impact wetlands and coastal wetlands, coastal flood zones, etc.	These regulations would apply to alternatives that involve alteration of land within wetlands (as defined by RIDEM). The substantive requirements of this section of the regulations would be met by protecting wetland resources during construction and maintenance of a cover over soil containing residual contamination. The RD and RAWP would be developed and would provide specific requirements, to meet the substantive requirements of this section.
Rhode Island Solid Waste Regulations – Closure in “Unstable Areas”	DEM OWM-SW0401, 2.3.23	Relevant and Appropriate	Provides requirements for closure of solid waste units in “unstable areas”, interpreted to include wetland and floodplains.	These regulations would apply to alternatives that establish a waste management area in or adjacent to “unstable areas.” The substantive requirements of this section of the regulations would be met through cover design that prevents the release of contaminants during a 100-year flood event.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Injection Control Regulations	Underground Injection Control Program Rules and Regulations	Applicable	Establishes a State Underground Injection Control Program consistent with federal requirements to preserve the quality of the groundwater of the state.	These regulations apply to underground injection of treatment substances.
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Section 12.04 B(i)	Applicable	When arsenic is the only COC present and its levels are between 15 and 43 ppm, encapsulation of existing soils with six inches of Clean Soil is considered acceptable.	Cover areas where arsenic concentrations in surface soils are between 15 and 43 ppm with a six inch soil cover rather than a 2 foot soil cover.

TABLE 2-4
SELECTION OF PRGs - SOIL
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

PARAMETER (COPCs) (mg/kg)	Site Data [1]				PRGs					BACKGROUND [3]		Surface Soil		Subsurface Soil	
	Surface Soil (0-1 foot)		All Soil (0-10 feet)		Risk-Based PRGs [2]		ARAR-Based PRGs								
	Conc.	FOD	Conc.	FOD	Cancer	Non-Cancer	RIDEM DEC	RIDEM LC	EPA	Surface Soil	Subsurface Soil	Selected PRGs	Comment	Selected PRGs	Comment
Residential															
benzo(a)anthracene	0.097	11/11	0.036	15/32	NA	NA	0.9	NA	NA	0.158	NA	NA	6	NA	6
benzo(a)pyrene	0.119	11/11	0.046	15/32	NA	NA	0.4	240	NA	0.155	NA	NA	6	NA	6
benzo(b)fluoranthene	0.204	11/11	0.073	16/32	NA	NA	0.9	NA	NA	0.099	NA	NA	6	NA	6
dibenzo(a,h)anthracene	0.022	7/11	0.01	7/32	NA	NA	0.4	NA	NA	NA	NA	NA	6	NA	6
indeno(1,2,3-cd)pyrene	0.089	11/11	0.03	14/32	NA	NA	0.9	NA	NA	NA	NA	NA	6	NA	6
benzo(a)pyrene equivalents	NA	11/11	NA	17/32	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	6
1,2,3,4,6,7,8,9-OCDD	NA [4]	11/11	NA [4]	22/22	NA	NA	NA	NA	NA	NA	NA	NA	4,6	NA	6
2,3,7,8-TCDD TEQs	0.0000041	11/11	0.0000042	22/22	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	4,6
arsenic	26.410	11/11	29.8	32/32	NA	NA	7	NA	NA	17	24	17	5	24	5
beryllium	0.495	11/11	0.414	32/32	NA	NA	1.5	0.6 [9]	NA	0.62	0.64	NA	6	NA	6
cobalt	10.3	11/11	15.4	32/32	NA	NA	NA	NA	NA	9.6	15.7	NA	6	NA	6
iron	25703	11/11	37930	32/32	NA	NA	NA	NA	NA	28404	34880	NA	6	NA	6
manganese	342.7	11/11	1053	32/32	NA	NA	390	NA	NA	261/489[10]	448/1086[10]	NA/NA	6	448/1086	10
thallium	2.065	11/11	2.6	31/32	NA	NA	5.5	0.1 [9]	NA	NA	NA	NA	6,9	NA	6
Industrial															
benzo(a)anthracene	0.097	11/11	0.036	15/32	NA	NA	7.8[8]	NA	NA	0.158	NA	NA	6	NA	6
benzo(a)pyrene	0.119	11/11	0.046	15/32	NA	NA	0.8[8]	NA	NA	0.155	NA	NA	6	NA	6
benzo(b)fluoranthene	0.204	11/11	0.073	16/32	NA	NA	7.8[8]	NA	NA	0.099	NA	NA	6	NA	6
dibenzo(a,h)anthracene	0.022	7/11	0.01	7/32	NA	NA	0.8[8]	NA	NA	NA	NA	NA	6	NA	6
indeno(1,2,3-cd)pyrene	0.089	11/11	0.03	14/32	NA	NA	7.8[8]	NA	NA	NA	NA	NA	6	NA	6
benzo(a)pyrene equivalents	NA	11/11	NA	17/32	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	6
1,2,3,4,6,7,8,9-OCDD	NA [4]	11/11	NA [4]	22/22	NA	NA	NA	NA	NA	NA	NA	NA	6	NA	6
2,3,7,8-TCDD TEQs	0.0000041	11/11	0.0000042	22/22	NA	NA	NA	NA	NA	NA	NA	NA	4,6	NA	4,6
arsenic	26.410	11/11	29.8	32/32	NA	NA	7[8]	NA	NA	17	24	17	5	24	5,8
beryllium	0.495	11/11	0.414	32/32	NA	NA	1.5[8]	NA	NA	0.62	0.64	NA	6	NA	6
cobalt	10.3	11/11	15.4	32/32	NA	NA	NA	NA	NA	9.6	15.7	NA	6	NA	6
iron	25703	11/11	37930	32/32	NA	NA	NA	NA	NA	28404	34880	NA	6	NA	6
manganese	342.7	11/11	1053	32/32	NA	585	10000[8]	NA	NA	261/489[10]	448/1086[10]	NA/NA	6	585/1086	10
thallium	2.065	11/11	2.6	31/32	NA	NA	140[8]	NA	NA	NA	NA	NA	6	NA	6

PRG Selection was as follows: The lowest PRG value was compared to the site concentration (surface and subsurface); if the site concentration exceeded the lowest PRG, that value was selected as the PRG and then adjusted to background

Yellow shaded Values are selected PRGs for COCs

Bold - parameters are COPCs that were retained as COCs through the HHRA in the Data Gaps Assessment Report

FOD - Frequency of Detection

DEC - RIDEM Direct Exposure Criteria

Site Concentration is 95% UCLs calcuated in the data report

(1) EPCs used to represent site data are presented in Table 3.6 (RME) of Appendix H-2 of the Data Gaps Assessment Report

(2) Risk-based PRGs are calculated and presented in Appendix B of this FS report.

(3) Background data 95% UPLs are presented for combined background soils, refer to Appendix B, Attachment B2 and Table 2-8

(4) Dioxin-like congeners are evaluated together as a toxicity equivalency quotient (TEQ)

(5) PRG adjusted based on background: If Site concentration does not exceed the PRG, then the constituent is not a COC.

(6) Constituent does not pose risk* and does not exceed any ARAR.

(7) PRGs are not calculated for TPH Under CERCLA

(8) Industrial DECs are applicable to surface soil (0 to 2 feet in depth)

(9) Leachability criteria for metals in soil are minimum concentrations that could provide an exceedance of the aqueous criteria cited in RIDEM Regulations, they do not reflect actual conditions.

(10) Two background values based on two background soil types (Ne/Pm).

* Risk: Cancer risk exceeding 1E-6, and non cancer risk hazard quotient of 1

TABLE 2-5
DU 5-1 SOIL EXCEEDANCES OF SELECTED PRGS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

PRG TYPE			**RESIDENTIAL**			**INDUSTRIAL**		
UNITS			MG/KG			MG/KG		
PARAMETER			ARSENIC	MANGANESE (Ne)*	MANGANESE (Pm)*	ARSENIC	MANGANESE (Ne)*	MANGANESE (Pm)*
SURFACE SOIL PRG			17	NA	NA	17	NA	NA
SUBSURFACE SOIL PRG			24	448	1086	24	585	1086
LOCATION ID	**TOP DEPTH (FT)**	**BOTTOM DEPTH (FT)**						
TF5-SB966 (Pm)	0	1	5.6		225	5.6		225
	4	6	46.1		262	46.1		262
	6	8	30.7		239	30.7		239
TF5-SB967 (Pm)	0	1	13.7		221	13.7		221
	2	4	11.9		114	11.9		114
TF5-SB968 (Ne)	0	1	7.1	95.8 J		7.1	95.8 J	
	2	4	11.6	274 J		11.6	274 J	
	8	10	52.5	613 J		52.5	613 J	
TF5-SB969 (Ne)	0	1	13.8 J	412 J		13.8 J	412 J	
	2	4	12.4 J	435 J		12.4 J	435 J	
	8	10	9.7 J	593 J		9.7 J	593 J	
TF5-SB970 (Ne)	0	1	34.6	289 J		34.6	289 J	
	2	4	19.8	121		19.8	121	
	8	10	67.2	4220		67.2	4220	
TF5-SB971 (Pm)	0	1	5.6 J		210 J	5.6 J		210 J
	2	4	6.4 J		200 J	6.4 J		200 J
	8	10	20.6 J		716 J	20.6 J		716 J
TF5-SB972 (Ne)	0	1	43.7	415 J		43.7	415 J	
	2	4	29.6	407 J		29.6	407 J	
	8	10	50.7	1560 J		50.7	1560 J	
TF5-SB973 (Ne)	0	1	27.8	384 J		27.8	384 J	
	2	4	42.3	462 J		42.3	462 J	
	8	10	31.9	215 J		31.9	215 J	
TF5-SB974 (Pm)	0	1	17.5		462	17.5		462
	2	4	20.6		183	20.6		183
	8	10	26.2		162	26.2		162
TF5-SB975 (Pm)	0	1	7.2		140	7.2		140
	2	4	23.7		306	23.7		306
	8	10	46.7		778	46.7		778
TF5-SB976 (Ne)	0	1	4.3 J	157 J		4.3 J	157 J	
	2	4	3.5 J	300 J		3.5 J	300 J	
	8	10	8.1	387 J		8.1	387 J	

BLUE SHADING - RESULT LESS THAN PRG, YELLOW SHADING - RESULT BETWEEN 1 AND 10 TIMES PRG,
RED SHADING - RESULT BETWEEN 10 AND 100 TIMES PRG, PURPLE SHADING - RESULT GREATER THAN 100 TIMES THE PRG

TABLE 2-5
DU 5-1 SOIL EXCEEDANCES OF SELECTED PRGS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

PRG TYPE			**RESIDENTIAL**			**INDUSTRIAL**		
UNITS			MG/KG			MG/KG		
PARAMETER			ARSENIC	MANGANESE (Ne)*	MANGANESE (Pm)*	ARSENIC	MANGANESE (Ne)*	MANGANESE (Pm)*
SURFACE SOIL PRG			17	NA	NA	17	NA	NA
SUBSURFACE SOIL PRG			24	448	1086	24	585	1086
LOCATION ID	**TOP DEPTH (FT)**	**BOTTOM DEPTH (FT)**						

COLOR KEY:

Exceeds PRG
Below PRG
No PRG Established

* PRGs for manganese based on two background soil types (Ne and Pm).

TABLE 2-6
SELECTION OF PRGs - GROUNDWATER
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

PARAMETER (COPCs) (ug/L)	Site Data [(1)] Groundwater		PRGs Risk-Based PRGs [(2)]		ARAR-Based PRGs		Selected PRGs
	Conc.	FOD	Cancer	Non-Cancer	RIDEM GA	EPA [(6)]	
Residential							
benzene	1.2(J)	1/4	NA	NA	5	5	NA[(3)]
aluminum	1480	1/4	NA	NA	NA	NA	NA[(3)]
arsenic	8.8	4/4	0.039	3.3	10	10	NA[(4)]
cobalt	19	4/4	NA	3.3	NA	NA	3.3
iron	24300	4/4	NA	10900	NA	NA	10900
manganese	2510	4/4	NA	320	NA	300[(5)]	300
Industrial							
None	NA	NA	NA	NA	NA	NA	NA

Bold - parameters are COPCs that were retained as COCs through the HHRA in the Data Gaps Assessment Report
FOD - Frequency of Detection
MCL - EPA Maximum Concentration Level
Site Concentration is 95% UCLs calcuated in the data report

(1) Site concentrations are maximums
(2) Risk-based PRGs are calculated and presented in Appendix B of this FS report.
(3) Constituent does not pose risk* and does not exceed any ARAR.
(4) Arsenic does not exceed the MCL; therefore, it is not a COC and has no PRG.
(5) The EPA health advisory is presented for informational purposes.
(6) The EPA ARAR-based PRGs are MCLs unless otherwise noted.
* Risk: Cancer risk exceeding 1E-6, and non cancer risk hazard quotient of 1

TABLE 2-7
DU 5-1, GROUNDWATER EXCEEDANCES OF SELECTED PRGS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

PRG TYPE	**RESIDENTIAL**		
UNITS	UG/L		
PARAMETER	COBALT	IRON	MANGANESE
PRG	3.3	10900	300
LOCATION ID			
TF5-MW-915	10.6	17500	1580
TF5-MW-916	14.3	2260	498
TF5-MW-923	19	24300	2510
TF5-MW-924	0.427 J	225	82.4

COLOR KEY:

Exceeds 10 x PRG
Exceeds PRG
Below PRG

TABLE 2-8
BACKGROUND CONCENTRATIONS - SOIL
DU 5-1 AT SITE 13 - TANK FARM 5 FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT RI

Constituent	Background Values					
	Soil Type Ne		Soil Type Pm		Combined Types Ne and Pm	
	Surface Soil	Subsurface Soil	Surface Soil	Subsurface Soil	Surface Soil	Subsurface Soil
Inorganic constituents: mg/kg						
Aluminum	18585	12541	13919	12586	16614	12480
Antimony	NA	NA	NA	NA	NA	NA
Arsenic	16.71	9.35	17.42	22.84	17.31	23.63
Barium	34.07	40.53	51.86	33.16	49.69	36.61
Beryllium	0.72	0.52	NA	0.68	0.62	0.64
Cadmium	0.19	0.07	NA	0.14	0.08	0.11
Calcium	550.6	820.9	NA	1565	510.9	1524
Chromium	19.44	15.27	15.99	17.65	16.96	17.22
Cobalt	7.22	10.43	10.58	16.98	9.59	15.72
Copper	20.59	17.35	NA	22.42	16.29	20.18
Iron	22940	26927	31206	38017	28404	34880
Lead	31.12	11.22	47.46	11.2	45.88	11.15
Magnesium	2799	3720	1925	34.59	2509	3563
Manganese	260.5	448	489.3	1086		
Mercury	0.215	0.015	0.353	NA	0.295	0.011
Nickel	16.2	20.23	13.73	25.89	15.98	24.1
Potassium	519	2013	NA	547.4	555.5	1743
Selenium	1.27	NA	NA	NA	0.62	0.6
Silver	NA	NA	NA	NA	NA	NA
Sodium	NA	NA	NA	106.5	NA	19.83
Thallium	NA	NA	NA	NA	NA	NA
Vanadium	23.9	17.94	35.75	28.08	37.55	23.33
Zinc	65.66	45.47	85.07	58.02	76.51	54.01
Organic constituents: ug/kg						
Benzo(a)anthracene	NA	NA	158	NA	158	NA
Benzo(a) pyrene	NA	NA	155.5	NA	155.5	NA
Benzo(b)fluoranthene	NA	NA	98.97	NA	98.97	NA
Dibenzo(a,h)anthracene	NA	NA	NA	NA	NA	NA
indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA

Ne - Newport Soil Type

Pm - Pittstown Soil Type

NA - Not enough data to generate UPL value. Typically a result of low frequency of detection.

TABLE 3-1
PRELIMINARY SCREENING OF SOIL TECHNOLOGIES AND PROCESS OPTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

General Response Action	Technology	Process Option	Description	Screening Comments
No Action	None	Not Applicable	No activities conducted to address contamination.	Required by National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Retain for baseline comparison.
Limited Action	Access Restrictions	Physical Barriers	Fencing, markers, and warning signs to restrict site access and communicate hazards.	Retain, in conjunction with additional controls, to limit exposure to contaminated media.
	Institutional Controls	Land Use Controls (LUCs)	Administrative action using site use prohibitions to restrict future use, activities, and digging.	Retain, in conjunction with additional controls and actions, to limit exposure to contaminated media.
	Monitoring	Groundwater Monitoring	Action to identify migration of COCs from impacted soils to groundwater so that other actions can be considered and implemented if necessary.	COCs do not appear to be leaching to groundwater. However, retain in conjunction with alternatives that leave contaminated soil in place to monitor potential future contaminant migration via groundwater.
		Physical Inspections	Action to periodically check to assure land uses have not changed over time, to assure that land alterations are not present and property remains under Navy ownership	Retain, in support of any remedy that leaves contaminants in place, either under cover systems or without.

TABLE 3-1
PRELIMINARY SCREENING OF SOIL TECHNOLOGIES AND PROCESS OPTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

General Response Action	Technology	Process Option	Description	Screening Comments
Containment	Impermeable Cap	Engineered Cap	Use of low permeability soil or low permeability geosynthetic barriers to minimize exposure to contaminant soil and to minimize migration of contaminants to groundwater.	Retain for further evaluation.
	Permeable Cover	Soil Cover	Use of soil material to minimize exposure to contaminated soil.	Retain for further evaluation.
Removal	Excavation	Bulk Excavation	Means for removal of contaminated soil. This technology is coupled with disposal or treatment technologies to address the disposition of excavated material.	Retain for further evaluation – useful to remove limited quantities of contaminated media.
In-Situ Treatment	Thermal	Vitrification	Thermal destruction process that immobilizes soil contaminants by converting soil to a chemically inert, stable glass product.	Eliminate due to the complexity of the technology, and the high cost would not be cost effective relative to the site risks.
	Physical/Chemical	Soil Flushing	Use of water or solvents to remove contaminants from the vadose zone by leaching and collecting contaminated wastewater in the saturated zone followed by aboveground treatment.	Eliminate due to questionable effectiveness for the concentrations present and implementability concerns due to the propensity of constituents adhere to soils.
		Solidification/Stabilization	Use of pozzolanic materials in the vadose zone to chemically fix inorganics and solidify the matrix to reduce leachability.	Eliminate due to questionable effectiveness and implementability in situ.

General Response Action	Technology	Process Option	Description	Screening Comments
Ex-Situ Treatment	Physical/Chemical	Soil Washing/Solvent Extraction	Use of water and solvents to remove contaminants from solid materials.	Eliminate due to the complexity of the technology, and the presence of constituents that will not be treated through this process.
		Solidification/Stabilization	Use of pozzolanic materials to chemically fix inorganics and solidify the matrix to reduce leachability.	Eliminate as leachability is not a primary concern.
	Biological	Aerobic Biodegradation	Use of microorganisms to chemically break down and detoxify organic compounds in the presence of oxygen.	Eliminate due to lack of effectiveness for site-specific COCs (metals).
		Phytoremediation	Use of plants to treat contamination.	Eliminate due to lack of effectiveness for site-specific COCs (PAHs and metals).
	Thermal	Incineration	Use of high temperature to destroy organic contaminants.	Eliminate because ineffective in treating inorganics and the high cost would not be cost effective relative to the site risks.
		Low-Temperature Thermal Desorption	Use of low to moderate temperature to volatilize contaminants.	Eliminate due to lack of volume of affected soil.
Disposal	Off-Base Landfill	Hazardous or Non-Hazardous Waste Landfill	Disposal of excavated material at a permitted offsite landfill or treatment, storage and disposal facility (TSDF).	Retain as a disposal option for excavated and other contaminated materials.
	Onsite Backfill	Onsite Backfill	Use of treated or clean soil as backfill for any excavated areas at the site	Eliminate as a disposal option because treatment is eliminated.
	Onsite Landfill	Consolidation	Excavation and placement in one location on site to minimize space and closure requirements.	Eliminate due to significant management requirements.

TABLE 3-2
PRELIMINARY SCREENING OF GROUNDWATER TECHNOLOGIES AND PROCESS OPTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

General Response Action	Technology	Process Options	Description	Screening Comments
No Action	None	Not Applicable	No activities conducted at site to remedy or monitor contamination. Site is not transferred and remains industrial/unused.	Retain. No action is retained as a baseline for comparison with other technologies.
Limited Action	Access Restrictions	Active Controls: Physical Barriers/ Security Guards	Fencing, markers, and warning signs to restrict access to contaminated groundwater.	Eliminate as not applicable. The exposure pathway of concern pertains to the use of groundwater as a water supply.
	Institutional Controls	Land Use Controls (LUCs) and Inspections	Administrative action using LUCs to prohibit use of groundwater for residential purposes.	Retain. Groundwater is currently not used for residential purposes (drinking water, or otherwise). This action would limit future uses of groundwater and thus limit human exposure to COCs in groundwater.
	Monitoring	Groundwater Sampling and Analysis	Periodic sampling and analysis of groundwater to track changes in contaminant concentrations.	Retain. This technology would assess any changes (attenuation or concentration), and support the continuation of LUCs, if present, as well as the progress of any active remediation efforts.
	Monitored Natural Attenuation (MNA)	Naturally Occurring Degradation and Dilution	Monitoring groundwater to assess the reduction in concentrations of chemical of concern (COCs) through natural processes.	Retain for further evaluation: Natural processes may decrease concentrations of COCs over time. Other controls will be required until cleanup goals are reached.

General Response Action	Technology	Process Options	Description	Screening Comments
Containment	Vertical Barriers	Slurry Wall	Low-permeability wall formed in a perimeter trench to restrict horizontal migration of groundwater.	Eliminate. There is no defined groundwater contaminant plume posing risk that could be redirected or controlled. This technology also would not restore groundwater quality.
		Sheet Piling	Metal sheet piling driven into the ground to restrict horizontal migration of groundwater.	Eliminate. There is no defined groundwater contaminant plume posing risk that could be redirected or controlled. This technology also would not restore groundwater quality.
		Grout Curtain	Pressure injection of grout to form a low-permeability perimeter wall to restrict horizontal migration of groundwater.	Eliminate. There is no defined groundwater contaminant plume posing risk that could be redirected or controlled. This technology also would not restore groundwater quality.
		Hydraulic Barrier	Use of extraction wells and/or collection trenches to restrict horizontal migration of groundwater.	Retain for further evaluation: Although there is no defined groundwater contaminant plume, hydraulic containment could be used to redirect groundwater flow if necessary for other remedies.
	Horizontal Barriers	Physical Barrier	Injection of bottom-sealing slurry beneath source to minimize vertical migration of contaminants to groundwater.	Eliminate. There is no defined source posing risk that could be controlled vertically. This technology also would not restore groundwater quality.

General Response Action	Technology	Process Options	Description	Screening Comments
Removal	Groundwater Extraction	Extraction Wells	Series of conventional pumping wells used to remove contaminated groundwater.	Retain for further evaluation: Although there is no defined groundwater contaminant plume posing risk, downgradient movement can be controlled in certain circumstances.
		Collection Trench	A permeable trench used to intercept and collect groundwater.	
Ex-Situ Treatment	Biological	Aerobic/ Anaerobic	Natural degradation of organic COCs via microorganisms in an aerobic (oxygen-rich) or anaerobic (oxygen-deficient) environment.	Eliminate. Not effective on site-specific COCs (inorganics).
	Physical	Filtration	Separation of suspended solids from water via entrapment in a bed of granular media or membrane.	Eliminate. Dissolved metals are in excess of PRGs as well as non-dissolved metals.
		Air Stripping	Contact of water with an air stream to remove volatile organic compounds (VOCs).	Eliminate. Not effective on site-specific COCs (inorganics).
		Granular Activated Carbon (GAC) Adsorption	Separation of dissolved contaminants from water or air streams via adsorption onto GAC.	Eliminate. Not effective on site-specific COCs (inorganics).
		Solvent Extraction	Separation of contaminants from a solution by contact with an immiscible liquid with a higher affinity for the COCs.	Eliminate. Not effective on site-specific COCs (inorganics).
		Sedimentation	Separation of solids from water via gravity settling.	Eliminate. Not effective on site-specific COCs (inorganics).

General Response Action	Technology	Process Options	Description	Screening Comments
Ex-Situ Treatment (continued)	Chemical	Neutralization/pH Adjustment	Use of acid or base to counteract high or low pH conditions.	Eliminate: Conditions in groundwater do not indicate high or low pH conditions.
		Ion Exchange	Removal of dissolved ions through exchange with similarly charged ions held on the active sites of a synthetic resin that is contacted with the liquid to be treated.	Eliminate. Not effective on site-specific COCs (inorganics).
		Chemical Oxidation	Use of oxidizers such as ozone, hydrogen peroxide, or potassium permanganate to break down certain organic compounds.	Eliminate. Not effective on site-specific COCs (inorganics).
		Ultraviolet Oxidation (UV)	Use of a controlled combination of ozone and/or hydrogen peroxide and UV light to induce photochemical oxidation of organic compounds.	Eliminate. Not effective on site-specific COCs (inorganics).
		Precipitation/ Flocculation	Use of chemicals to convert soluble compounds into insoluble compounds, neutralize surface charges and promote attraction of colloidal particles to facilitate settling.	Retain, However, metals are present in both dissolved and total fractions.

General Response Action	Technology	Process Options	Description	Screening Comments
In-Situ Treatment	Biological	Anaerobic/ Aerobic	Enhancement of biodegradation of organics in an anaerobic (oxygen-deficient) or aerobic (oxygen-rich) environment by injection of electron-donor compounds or oxygen source. Microorganism cultures may need to be added.	Eliminate. Not effective on site-specific COCs (inorganics).
		Bioprecipitation	Enhancement of sulfides through bacteria cultures, which in turn sequester metals into soil through precipitation.	Retain for inorganics in groundwater.
	Physical/Thermal	Air Stripping (AS) or AS/Soil Vapor Extraction (SVE)	Volatilization and enhancement of biodegradation of organic compounds by supply of air with or without capture and treatment of volatilized compounds.	Eliminate. Not effective on site-specific COCs (inorganics).
		Dynamic Underground Stripping	Steam injection at the periphery of the contaminated area resulting in the vaporization of volatile compounds bound to soil and the movement of contaminants to a centrally located extraction well.	Eliminate. Not effective on site-specific COCs (inorganics).
	Thermal	Electrical Resistance Heating	Volatilization of organic COCs through groundwater and soil heating with electrical electrodes in combination with vacuum extraction of volatilized material.	Eliminate. Not effective on site-specific COCs (inorganics).
	Chemical	Chemical Oxidation	Chemical destruction of organic COCs through oxidation with hydrogen peroxide and ferrous iron (Fenton's Reagent), catalyzed percarbonate (RegenOx™), or potassium permanganate.	Eliminate. Not effective on site-specific COCs (inorganics).

TABLE 3-2
PRELIMINARY SCREENING OF GROUNDWATER TECHNOLOGIES AND PROCESS OPTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

General Response Action	Technology	Process Options	Description	Screening Comments
In-Situ Treatment (continued)	Chemical (continued)	Chemical Reduction	Chemical destruction of COCs through reduction with nano- or micro-size zero-valent iron (ZVI) in emulsions.	Eliminate. Not effective on site-specific COCs (inorganics).
		ZVI-Permeable Reactive Barrier (PRBs)	Use of a permeable barrier with ZVI, which allows the passage of groundwater and reacts with the contaminants.	Eliminate. Not effective on site-specific COCs (inorganics).
Discharge/ Disposal	Surface Discharge	Direct Discharge	Discharge of treated water to surface water.	Eliminate. Groundwater extraction was not retained.
		Indirect Discharge	Discharge of collected/treated water to local sewage treatment plant.	Eliminate. Groundwater extraction was not retained.
		Offsite Treatment Facility	Treatment and disposal of water at an off-site treatment works.	Eliminate. Groundwater extraction was not retained.
	Subsurface Discharge	Reinjection	Use of injection wells, spray irrigation, or infiltration to discharge of treated groundwater underground.	Eliminate. Groundwater extraction was not retained.

TABLE 4-1
SUMMARY OF SOIL ALTERNATIVES
DU 5-1 AT SITE 13 – TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Alternative	Alternative Description
Alternative 1: No Action	• No Action • 5-year reviews will be conducted as part of facility 5-year reviews
Alternative 2: LUCs and Inspections, Fencing and Signs	• Land use controls limiting the use of soil, and to protect the components of the remedy • Yearly compliance monitoring of the controls at the Site • Long-term groundwater monitoring to monitor soil contaminants left in place • Additional fencing to enclose the DU 5-1 soils where manganese and arsenic exceed PRGs • 5-year reviews
Alternative 3: Soil Cover, LUCs and Inspections, Signs	• Permeable cover over soil where manganese and arsenic exceed PRGs • Land use controls limiting the use of soil , and to protect the components of the remedy • Long-term groundwater monitoring to monitor soil contaminants left in place • Yearly compliance monitoring of the controls at the Site • 5-year reviews

TABLE 4-2
CHEMICAL-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO1 – NO ACTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media. There are no actions for this alternative, so unacceptable risk remains.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	Code of Rhode Island Rules (CRIR) 12-180-001; DEM-DSR-01-93, Section 8.02, and 8.03 (with the exception of 8.02A(iv)-TPH)	Applicable	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards. Establishes criteria for groundwater and both direct contact and leachability of contaminants in soil.	There are no actions for this alternative, so these standards would not be met.

TABLE 4-3
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO1 - NO ACTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
There are no federal location-specific ARARs.				
State				
There are no state location-specific ARARs.				

TABLE 4-4
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO1 - NO ACTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
There are no federal action-specific ARARs.				
State				
There are no state action-specific ARARs.				

TABLE 4-5
CHEMICAL-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO2 – LUCs AND INSPECTIONS, LONG-TERM GROUNDWATER MONITORING, FENCING AND SIGNS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media. LUCs will prevent exposure to site contaminants exceeding risk levels.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. LUCs will prevent exposure to site contaminants exceeding risk levels.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. LUCs will prevent exposure to site contaminants exceeding risk levels.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. LUCs will prevent exposure to site contaminants exceeding risk levels.
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	Code of Rhode Island Rules (CRIR) 12-180-001, DEM-DSR-01-93, Section 8.02, and 8.03 (with the exception of 8.02A(iv)-TPH).	Applicable	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards. Establishes criteria for groundwater and both direct contact and leachability of contaminants in soil.	Although some COCs will remain at concentrations greater than PRGs, the LUCs and fencing will prevent exposure to the COCs (arsenic and manganese).

TABLE 4-6
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO2 - LUCs AND INSPECTIONS, LONG-TERM GROUNDWATER MONITORING, FENCING AND SIGNS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 C.F.R. 9	Relevant and Appropriate	Implements Executive Order 11990 (Protection of Wetlands)). Prohibits activities that adversely affect a federally-regulated wetland unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	During the remedial design stage the effects of installing and maintaining monitoring wells on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by well installation and maintenance will be mitigated in accordance with requirements. Public comment will be solicited in the Proposed Plan.
State				
Fresh Water Wetlands Act	RIGL 2-1, Sections 2-1-18 through 2-1-20.2; Fresh Water Wetlands Act; DEM Rules And Regulations Governing the Administration and Enforcement of the Fresh Water Wetlands Act (Dec 2010), Rules 4.00 and 5.00	Applicable	Rules and regulations governing the administration and enforcement of the Fresh Water Wetlands Act. Defines and establishes provisions for the protection of swamps, marshes and other fresh water wetlands in the state. Actions are required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction of a wetland. Also establishes standards for land within 50 feet of the edge of a state-regulated wetlands.	Monitoring well installation, and monitoring activities will be conducted to minimize the disturbance of state jurisdictional wetland and perimeter wetland.

TABLE 4-7
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO2 - LAND USE CONTROLS AND INSPECTIONS, FENCING AND SIGNS, GROUNDWATER MONITORING
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, PORTSMOUTH, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
There are no federal action-specific ARARs.				
State				
Rules and Regulations for Groundwater Quality (Well Standards)	RIGL Ch. 46-12, Section 46-12-2; Ch. 46-13.1, Ch. 23-18.9, Sec. 23-18-9.1; DEM Rules and Regulations for Groundwater Quality (Mar 2005), Appendix 1	Applicable	Identifies the standards and specification that must be followed for the installation or abandonment of monitoring wells.	Under this alternative, any wells installed for monitoring the COCs that remain in soils will be installed according to these standards. Existing wells and any new wells will be abandoned according to these standards.

TABLE 4-8
ASSESSMENT OF CHEMICAL-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO3 – SOIL COVER, LUCs AND INSPECTIONS, LONG-TERM GROUNDWATER MONITORING AND SIGNS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media. Soil cover and LUCs will prevent exposure to site contaminants exceeding risk levels.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. Soil cover and LUCs will prevent exposure to site contaminants exceeding risk levels.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. Soil cover and LUCs will prevent exposure to site contaminants exceeding risk levels.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. Soil cover and LUCs will prevent exposure to site contaminants exceeding risk levels.

TABLE 4-8
ASSESSMENT OF CHEMICAL-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO3 – SOIL COVER, LUCs AND INSPECTIONS, LONG-TERM GROUNDWATER MONITORING AND SIGNS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
State of Rhode Island Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Section 8.02, and 8.03 (with the exception of 8.02A(iv)-TPH)	Applicable	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards. Establishes criteria for groundwater and both direct contact and leachability of contaminants in soil.	A minimum two-foot cover of clean material will be maintained over subsurface soils left on site that exceed industrial/commercial direct contact standards. LUCs will prevent the residential and unrestricted recreational use of the site.
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Section 12.04 B(i)	Applicable	When arsenic is the only COC present and its levels are between 15 and 43 ppm, encapsulation of existing soils with six inches of Clean Soil is considered acceptable.	Cover areas where arsenic concentrations in surface soils are between 15 and 43 ppm with a six inch soil cover rather than a 2 foot soil cover.

TABLE 4-9
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs
SOIL ALTERNATIVE SO3 – SOIL COVER, LUCS AND INSPECTIONS, SIGNS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 Code of Federal Regulations (CFR) 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 Floodplain Management and Executive Order 11990, Protection of Wetlands.	Remedial alternatives conducted within the 100-year floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage the effects of soil remedial actions on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by soil remediation will be mitigated in accordance with requirements. Remedial activities and placement of soil cover will take place in or near floodplains. Public comment will be solicited in the Proposed Plan.
Clean Water Act	Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR 230	Applicable	These regulations outline the requirements for the discharge of dredged or fill materials into surface waters including Federal jurisdictional wetlands. No activity that impacts waters of the United States shall be permitted if a practicable alternative that has less adverse impact exists. If there is no other practicable alternative, the impacts must be mitigated.	Placement of soil cover will be in the vicinity of wetlands. Remedial activities will be designed to avoid wetlands and any adverse impacts will be mitigated.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act	Rhode Island Freshwater Wetlands Act RIGL 2-1-18 et seq.	Applicable	Defines and establishes provisions for the protection of Rhode Island jurisdictional wetlands (including area of land within 50 feet of the edge of the wetland). Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Part of the site is a freshwater wetland and applicable freshwater wetland requirements will be met during the remedial action.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 Code of Federal Regulations (CFR) 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 Floodplain Management and Executive Order 11990, Protection of Wetlands.	Remedial alternatives conducted within the 100-year floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage, the effects of soil remedial actions on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by soil remediation will be mitigated in accordance with requirements. Remedial activities will take place in or near floodplains. Public comment will be solicited in the Proposed Plan.
Clean Water Act	Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 40 CFR 230	Applicable	These regulations outline the requirements for the discharge of dredged or fill materials into surface waters including Federal jurisdictional wetlands. No activity that impacts waters of the United States shall be permitted if a practicable alternative that has less adverse impact exists. If there is no other practicable alternative, the impacts must be mitigated.	Remedial activities that have the potential to impact nearby wetlands will be designed to avoid wetlands and any adverse impacts will be mitigated.
Clean Water Act – National Pollutant Discharge Elimination System (NPDES) – Storm Water from Construction Activity	40 CFR 122.26	Applicable	Includes storm water standards for construction activities disturbing more than 1 acre.	Installation of the cover may disturb more than 1 acre. Best management practices will be used to meet storm water standards during the remedial action.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Clean Air Act - Fugitive Dust Control	RIGL 23-23 *et seq.*; CRIR 12-31-05	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	During the temporary storage, placement, and final grading of soil for cover, during the implementation of alternative, measures would be taken to prevent material from becoming airborne, such as using water sprays.
Soil Erosion and Sediment Control Handbook, 1989	-	To Be Considered	Identifies soil erosion and sediment control (E & SC) requirements construction activities involving land-disturbance activities.	E &SC controls will be used during soil disturbance activities, such as placement of soil cover.
Water Pollution Control - Pollution Discharge Elimination System – Storm Water from Construction Activity	RIGL 42-16 et seq.; CRIR 12-190-003, Rule 31	Applicable	Includes storm water requirements for construction projects that disturb over 1 acre.	Installation of the cover may disturb more than 1 acre. Best management practices will be used to meet storm water standards during the remedial action.
Rhode Island Solid Waste Regulations – Dust Control	DEM OWM-SW0401, 1.7.10	Relevant and Appropriate	Requires dust control.	Dust must be controlled at the site during cover construction and during maintenance activities.
Rhode Island Solid Waste Regulations – Sedimentation and Erosion Control	DEM OWM-SW0401, 2.1.04	Relevant and Appropriate	Requires a “Sedimentation and Erosion Control Plan” be developed.	An erosion and sediment control plan will be developed for this site in accordance with the substantive requirements of this section. The Remedial Design and the RAWP, to be developed for this cleanup, will contain the specific erosion and sediment controls requirements for the remedial construction.
Rhode Island Solid Waste Regulations – Vegetated Top Cover	DEM OWM-SW0401, 2.2.12 (d) (1) and 2.2.12 (d) (2) (ii)(iii) and (v).	Relevant and Appropriate	Contains requirements for construction and maintenance of the vegetative cover final cover system.	Remedies including cover systems will include appropriate vegetation requirements of a soil cover in compliance with these standards.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rhode Island Solid Waste Regulations – Cover Permeability	DEM OWM-SW0401, 2.3.04(e), (f)	Relevant and Appropriate	Outlines the requirements for the maintenance and permeability of cover material.	The substantive requirements of this section of the regulations will be met by maintaining a cover that has been determined to provide an adequate barrier for the contaminants remaining in the soil.
Rhode Island Solid Waste Regulations – Surface Water Drainage	DEM OWM-SW0401, 2.3.10	Relevant and Appropriate	Contains requirements for surface water drainage.	The substantive requirements of this section of the regulations will be met through design of appropriate surface drainage considerations for the cover. The cover system would be designed to prevent erosion, sedimentation, and standing water on the cover. Minimum slope requirements for solid waste landfills have been determined not relevant or appropriate for a soil cover which is not intended to reduce infiltration.
Rhode Island Solid Waste Regulations – Siting in and Adjacent to Wetlands and Floodplains	DEM OWM-SW0401, 2.3.14	Relevant and Appropriate	Provides requirements for new solid waste landfill units and expansions that impact wetlands and coastal wetlands, coastal flood zones, etc.	This alternative will involve alteration of land within wetlands (as defined by RIDEM). The substantive requirements of this section of the regulations will be met by protecting adjacent wetland and floodplain resources during construction and maintenance of a cover over soil containing contaminants above PRGs. The Remedial Design and RAWP will be developed and will provide specific requirements to meet the substantive requirements of this section.
Rhode Island Solid Waste Regulations – Closure in “Unstable Areas”	DEM OWM-SW0401, 2.3.23	Relevant and Appropriate	Provides requirements for closure of solid waste units in “unstable areas”, interpreted to include wetland and floodplains.	This alternative establishes a soil cover within and/or adjacent to “unstable areas.” The substantive requirements of this section of the regulations will be met through cover design that prevents the release of contaminants during a 100-year flood event.

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	CRIR 12-180-001, DEM-DSR-01-93, Section 12.04 B(i)	Applicable	When arsenic is the only COC present and its levels are between 15 and 43 ppm, encapsulation of existing soils with six inches of Clean Soil is considered acceptable.	Cover areas where arsenic concentrations in surface soils are between 15 and 43 ppm with a six inch soil cover rather than a 2 foot soil cover.
Rhode Island Solid Waste Regulations – Compliance Boundaries	DEM OWM-SW0401, 2.3.05	Relevant and Appropriate	Establishes requirement for compliance boundary for pollution of ground waters or surface waters.	Because this remedy leaves contamination in place, groundwater monitoring will be conducted to assure that no contaminants are transported to the groundwater
Rhode Island Solid Waste Regulations - Monitoring Wells	DEM OWM-SW0401, 2.3.11	Relevant and Appropriate	Contains requirements for monitoring wells.	The substantive requirements of this section of the regulations will be met by having and maintaining monitoring wells for the purpose of monitoring groundwater conditions by the soil cover. A Long Term Monitoring Plan (LTMP) will be developed for groundwater and be directed by a work plan that will contain the specific monitoring well requirements.

TABLE 4-11
SUMMARY OF DETAILED ANALYSES OF SOIL REMEDIAL ALTERNATIVES
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Criteria	Alternative SO1 No Action	Alternative SO2 LUCs and Inspections, Fencing and Signs	Alternative SO3 Soil Cover, LUCs and Inspections
THRESHOLD CRITERIA			
Overall Protection of Human Health and the Environment			
Does Alternative Protect Current and Future Users?	No	Yes[(a)]	Yes
Are Environmental Risks Reduced by Alternative?	No	Yes	Yes
Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)			
Compliance with Chemical-Specific ARARs	No	Yes	Yes
Compliance with Location-Specific ARARs	Not applicable	Yes	Yes
Compliance with Action-Specific ARARs	Not applicable	Yes	Yes
Compliance with Other Criteria	No	Yes	Yes
BALANCING CRITERIA			
Long-Term Effectiveness and Permanence			
Does Alternative Reduce Residual Risk?	No	Yes	Yes
Does Alternative Provide Adequate Remedial Controls?	No	Yes	Yes
Need a 5-Year Review?	No	Yes	Yes
Need for Long-Term Management?	No	Yes	Yes
Reduction of Toxicity, Mobility, or Volume through Treatment			
Treatment Process Used	None	None	None
Soil Treated	No	No	No
Reduction in Toxicity, Mobility, or Volume	None	None	None
Type and Quantity of Residuals Remaining after Treatment	No treatment so no residuals	No treatment so no residuals	No residuals
Short-Term Effectiveness			
Risks to the Community during Remedial Action	No treatment so no construction risks	Minimal	Moderate, primarily due to truck traffic
Risk to Workers during Remedial Action	No treatment so no construction risks	Some risks; easily controlled	Some risks; easily controlled
Environmental Impacts	No treatment so no additional impacts	Minimal	Minimal
Time until Remedial Action Objectives Achieved	No remedial action; time >30 years.	Estimated 6 to 12 months	Estimated 6 to 12 months

TABLE 4-11
SUMMARY OF DETAILED ANALYSES OF SOIL REMEDIAL ALTERNATIVES
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Criteria	Alternative SO1 No Action	Alternative SO2 LUCs and Inspections, Fencing and Signs	Alternative SO3 Soil Cover, LUCs and Inspections
Implementability			
Constructable	No construction activities	Yes	Yes
Reliability of Technology	No technology implemented	Moderate	Reliable
Ease of Undertaking Additional Remedial Action, if Necessary	Easily implementable	High	High
Ability to Monitor Effectiveness of Remedy	Not applicable	Yes	Yes
Ability to Coordinate with Other Agencies	Easy	Moderately easy	Moderately easy
Availability of Off-Site Disposal Services	None required	Available	Available
Availability of Equipment and Specialists	None required	Available	Available
Availability of Prospective Technologies	None required	Available	Available
Cost[b]			
Capital Costs	$0	$64,349	$483,871
Total Annual Operations and Maintenance (O&M)	$0	$17,631	$17,631
5-Year Review Costs	$0	$25,300 *	$25,300 *
Total Present Worth Project Costs	$0	$568,099	$987,621

[a] Eliminates current restricted recreational use.
[b] Detailed cost estimates are presented in Appendix C.

TABLE 5-1
GROUNDWATER ALTERNATIVES DESCRIPTION SUMMARY
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Alternative	Description
Alternative GW1: No Action	• No Action • Five-year reviews (conducted as part of facility five-year reviews)
Alternative GW2: Monitored Natural Attenuation (MNA) and Land Use Controls (LUCs) and Inspections	• Monitored natural attenuation to document decrease in metals levels in groundwater (the result of petroleum releases at the Site and upgradient) • Land Use Controls preventing the use of Site groundwater until PRGs are reached, and protection of remedy components • Yearly compliance inspections of the controls at the Site (groundwater use restrictions) • Five-year reviews (conducted as part of facility five-year reviews)
Alternative GW3: In-Situ Groundwater Treatment	• Chemical injections to precipitate the metals in solution so that they are trapped in the soil matrix. • Land Use Controls preventing the use of Site groundwater until PRGs are reached, and protection of remedy components • Monitoring to determine the effectiveness of the treatment • Yearly compliance inspections of the controls at the Site (groundwater use restrictions) • Five-year reviews (conducted as part of facility five-year reviews)

TABLE 5-2
CHEMICAL-SPECIFIC ARARs AND TBCs
GROUNDWATER ALTERNATIVE GW1 - NO ACTION
DU 5-1 AT SITE 13 – TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	These are guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media. There are no actions for this alternative, so unacceptable risk remains.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risk.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance of assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. There are no actions for this alternative, so unacceptable risk remains.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)	40 Code of Federal Regulations (CFR) 141 Subpart G	Relevant and Appropriate	Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies that are potential drinking water sources.	There are no actions for this alternative so unacceptable risk remains. Concentrations of COCs are already less than MCLs.

TABLE 5-2
CHEMICAL-SPECIFIC ARARs AND TBCs
GROUNDWATER ALTERNATIVE GW1 - NO ACTION
DU 5-1 AT SITE 13 – TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal (Continued)				
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)	40 CFR 141 Subpart F	Applicable (non-zero MCLGs only)	Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.	There are no actions for this alternative so unacceptable risk remains. Concentrations of COCs are already less than non-zero MCLGs.
Drinking Water Health Advisory for Manganese (EPA Office of Drinking Water), 2004	-	To Be Considered	Health Advisories are estimates of risk from consumption of contaminated drinking water. They consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 ppm.	Health advisory will be used to evaluate the non-carcinogenic risk resulting from exposure to manganese. There are no actions for this alternative so unacceptable risk remains.
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	Code of Rhode Island Rules (CRIR) 12-180-001; DEM-DSR-01-93, Section 8.03, A and B	Applicable	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards. Establishes criteria for groundwater.	There are no actions for this alternative. Concentrations of COCs are already less than Groundwater Objectives.

TABLE 5-3
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW1 - NO ACTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
There are no federal location-specific ARARs.				
State				
There are no state location-specific ARARs.				

TABLE 5-4
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW1 - NO ACTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
There are no federal action-specific ARARs.				
State				
There are no state action-specific ARARs.				

TABLE 5-5
CHEMICAL-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW2 – MONITORED NATURAL ATTENUATION AND LUCS AND INSPECTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	Guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in site media. Land Use Controls (LUCs) will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, and MNA will attain PRGs within a reasonable time frame.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, and MNA will attain PRGs within a reasonable time frame.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risks.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, and MNA will attain PRGs within a reasonable time frame.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance for assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, and MNA will attain PRGs within a reasonable time frame.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)	40 Code of Federal Regulations (CFR) 141 Subpart G	Applicable	Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies which are potential drinking water	Concentrations of Contaminants of Concern (COCs) are already less than MCLs. LUCs will prevent residential use of groundwater. Periodic monitoring will verify that MCLs are not exceeded.

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
			sources.	
Federal (Continued)				
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)	40 CFR 141 Subpart F	Applicable (non-zero MCLGs only)	Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.	Concentrations are already less than non-zero MCLGs. LUCs will be established to temporarily prevent residential use of groundwater. Periodic monitoring to be conducted as part of MNA will verify that non-zero MCLGs are not exceeded. (The MCLG for arsenic is zero.)
Drinking Water Health Advisory for Manganese (EPA Office of Drinking Water), 2004	None	To Be Considered	Health Advisories are estimates of risk from consumption of contaminated drinking water. They consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water purposes, where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 mg/L.	Health advisory will be used to evaluate the non-carcinogenic risk resulting from exposure to manganese. LUCs will prevent exposure to contaminant in groundwater exceeding risk level, and MNA will attain PRGs within a reasonable time frame.
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	Code of Rhode Island Rules (CRIR) 12-180-001, DEM-DSR-01-93, Section 8.02, and 8.03 (with the exception of 8.02A(iv)-TPH)	Relevant and Appropriate	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards, though for this site, no COCs are identified for contaminants for which state standards are more stringent than federal standards.	Concentrations of COCs are already less than State Groundwater Objectives. LUCs will prevent residential use of groundwater. Periodic monitoring to be conducted as part of MNA will verify that Groundwater Objectives are not exceeded.

TABLE 5-6
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW2 - MONITORED NATURAL ATTENUATION AND LUCs AND INSPECTIONS
DU 5-1 AT SITE 13- TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 Code of Federal Regulations (CFR) 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 Floodplain Management and Executive Order 11990, Protection of Wetlands.	Remedial alternatives (construction of groundwater monitoring wells) conducted within the 100-year floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage the effects of MNA on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by MNA activities will be mitigated in accordance with requirements. Remedial activities will take place in or near floodplains. Public comment will be solicited in the Proposed Plan.
State				
Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act	Rhode Island Freshwater Wetlands Act RIGL 2-1-18 et seq.	Applicable	Defines and establishes provisions for the protection of Rhode Island jurisdictional wetlands (including area of land within 50 feet of the edge of the wetland). Actions required to prevent the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Part of the Site is a freshwater wetland and applicable freshwater wetland requirements will be met during the remedial action, which includes construction of groundwater monitoring wells.

TABLE 5-7
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW2 - MONITORED NATURAL ATTENUATION AND LUCS AND INSPECTION
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILTY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
EPA Groundwater Protection Strategy	August 1984; NCP Preamble, Vol. 55, No. 46, March 8, 1990, 40 CFR 300, p. 8733); Guidelines for Ground-Water Classification (November 1986)	To Be Considered	The Groundwater Protection Strategy provides a common reference for preserving clean groundwater and protecting the public health against the effects of past contamination. Guidelines for consistency in groundwater protection programs focus on the highest beneficial use of a groundwater aquifer.	Risk based standards will be met through MNA within the time frame identified in the text. LUCs will be maintained throughout this period to prevent groundwater use until the PRGs are met, and monitoring will confirm that concentrations remain below RGs in a time frame estimated at 11-23 years. LUCs will be maintained until groundwater cleanup standards are achieved.
Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites	OSWER Directive 9200.4-17P (April 21, 1999)	To Be Considered	EPA guidance regarding the use of monitored natural attenuation for the cleanup of contaminated soil and groundwater. In particular, a reasonable timeframe to achieve cleanup standards through monitored attenuation would be comparable to that achieved by active restoration.	MNA is expected to take approximately 23 years to achieve groundwater cleanup standards. Although this is significantly longer than the GW-3 treatment alternative, there are a number of technical issues regarding GW-3 that may alter its effectiveness. The effectiveness of GW2 will be assessed during each five year review, and if necessary an alternative technology may be implemented if a trend showing natural attenuation is not apparent.
State				
Standards for Identification and Listing of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, Code of Rhode Island Rules (CRIR), 12-030-003, Rule 5.8	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. Defines the listed and characteristic hazardous wastes.	These regulations apply to all waste generated during actions at the Site, such as investigation-derived waste (IDW) from monitoring. Will be used when determining whether or not a solid waste is hazardous. IDW is not expected to be hazardous.
Standards for Generators of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, CRIR 12-030-003, Rule 5.2, 5.3, and 5.4	Applicable	Establishes accumulation, manifesting, and pre-transport requirements for hazardous waste.	These regulations would apply to any waste generated at the Site that is determined to be hazardous, such as IDW from monitoring. IDW is not expected to be hazardous.

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
State (Continued)				
Drilling of Drinking Water Wells; Rules and Regulations Governing the Enforcement of Chapter 46-13.2 Relating to the Drilling of Drinking Water Wells	Rule 7.01	Applicable	Prohibits installing drinking water wells near pollution sources or potential contamination sources.	LUCs would prevent the installation of residential groundwater wells near pollution sources or potential contamination sources.
Rules and Regulations for Groundwater Quality (Well Standards)	Appendix 1	Applicable	Identifies the standards and specification that must be followed for the installation or abandonment of monitoring wells.	Applies to the abandonment of existing monitoring wells.
Clean Air Act - Fugitive Dust Control	RIGL 23-23 et seq.; CRIR 12-31-05	Applicable	Requires that reasonable precaution be taken to prevent particulate matter from becoming airborne.	Removal and temporary storage of soil would be performed to prevent material from becoming airborne, such as by water sprays.
Clean Air Act - Emissions Detrimental to Persons or Property	RIGL 23-23 et seq.; CRIR 12-31-07	Applicable	Prohibits emissions of contaminants which may be injurious to humans, plant or animal life, or cause damage to property, or reasonably interfere with the enjoyment of life and property.	Removal and temporary storage of soil would be performed to prevent material from becoming airborne. Monitoring of air emissions during removal will be used to assess compliance with the standard.
Soil Erosion and Sediment Control Handbook, 1989	-	To Be Considered	Identifies soil erosion and sediment control (E & SC) requirements for construction activities involving land-disturbance activities.	E & SCs will be used during soil disturbance activities, such as excavation.

TABLE 5-8
CHEMICAL-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW3 – IN SITU BIOREMEDIATION, LUCS AND INSPECTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
EPA Human Health Assessment Cancer Slope Factors (CSFs)	None	To Be Considered	Guidance values used to evaluate the potential carcinogenic hazard caused by exposure to contaminants.	Used to compute the individual incremental cancer risk resulting from exposure to carcinogenic contaminants in groundwater. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.
Reference Dose (RfD)	None	To Be Considered	Guidance used to compute human health hazard resulting from exposure to non-carcinogens in site media.	Used to calculate potential non-carcinogenic hazards caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.
Guidelines for Carcinogen Risk Assessment	EPA/630/P-03/001F (March 2005)	To Be Considered	Guidance for assessing cancer risks.	Used to calculate potential carcinogenic risks caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.
Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens	EPA/630/R-03/003F (March 2005)	To Be Considered	Guidance for assessing cancer risks to children.	Used to calculate potential carcinogenic risks to children caused by exposure to contaminants. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Levels (MCLs)	40 Code of Federal Regulations (CFR) 141 Subpart G	Applicable	Establishes maximum contaminant levels (MCLs) for common organic and inorganic contaminants applicable to public drinking water supplies. Used as relevant and appropriate cleanup standards for aquifers and surface water bodies which are potential drinking water sources.	MCLs were considered in development of PRGs. Concentrations of COCs are already less than MCLs. LUCs will prevent residential use of groundwater which poses CERCLA risk. Periodic monitoring will verify that MCLs are not exceeded during in-situ treatment.

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal (Continued)				
Safe Drinking Water Act, National Primary Drinking Water Regulations - Maximum Contaminant Level Goals (MCLGs)	40 CFR 141 Subpart F	Applicable (non-zero MCLGs only)	Establishes maximum contaminant level goals (MCLGs) for public water supplies. MCLGs are health goals for drinking water sources. These unenforceable health goals are available for a number of organic and inorganic compounds.	Concentrations of COCs are already less than non-zero MCLGs. LUCs will be established to temporarily prevent residential use of groundwater in order to meet PRGs for residential risk. Periodic monitoring to be conducted as part of in-situ treatment through bioprecipitation will verify that non-zero MCLGs are not exceeded. (The MCLG for arsenic is zero.)
Drinking Water Health Advisory for Manganese (EPA Office of Drinking Water), 2004	None	To Be Considered	Health Advisories are estimates of risk from consumption of contaminated drinking water. They consider non-carcinogenic effects only. To be considered for contaminants in groundwater that may be used for drinking water purposes, where the standard is more conservative than either federal or state statutory or regulatory standards. The Health Advisory standard for manganese is 0.3 mg/L.	Health advisory was considered in development of PRG for manganese. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
State				
Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Short Title: Remediation Regulations)	Code of Rhode Island Rules (CRIR) 12-180-001, DEM-DSR-01-93, Section 8.02, and 8.03 (with the exception of 8.02A(iv)-TPH)	Relevant and Appropriate	These regulations set remediation standards for contaminated media. These standards are applicable to a CERCLA remedy when they are more stringent than federal standards, though for this site, no COCs are identified for contaminants for which state standards are more stringent than federal standards.	Concentrations of COCs are already less than State Groundwater Objectives. LUCs will temporarily prevent exposure to contaminants in groundwater exceeding risk levels, in-situ treatment through bioprecipitation will attain PRGs, and monitoring will assure that these PRGs continue to be met over time.

TABLE 5-9
ASSESSMENT OF LOCATION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW3 – IN-SITU BIOREMEDIATION, LUCs AND INSPECTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to Be Taken to Attain ARAR
Federal				
Floodplain Management and Protection of Wetlands	44 Code of Federal Regulations (CFR) 9	Relevant and Appropriate	FEMA regulations that set forth the policy, procedure and responsibilities to implement and enforce Executive Order 11988 Floodplain Management and Executive Order 11990, Protection of Wetlands. Prohibits activities that adversely affect a federally-regulated wetland unless there is no practicable alternative and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.	Remedial alternatives (construction of groundwater injection and monitoring wells) conducted within the 100-year floodplain or within federal jurisdictional wetlands and aquatic habitats will be implemented in compliance with these standards. During the remedial design stage the effects of groundwater treatment operations on federal jurisdictional wetlands will be evaluated. All practicable means will be used to minimize harm to the wetlands. Wetlands disturbed by these activities will be mitigated in accordance with requirements. Remedial activities will take place in or near floodplains. Public comment will be solicited in the Proposed Plan.
State				
Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act	Rhode Island Freshwater Wetlands Act RIGL 2-1-18 et seq.	Applicable	Defines and establishes provisions for the protection of Rhode Island jurisdictional wetlands (including area of land within 50 feet of the edge of the wetland). Actions are required preventing the undesirable drainage, excavation, filling, alteration, encroachment or any other form of disturbance or destruction to a wetland.	Injection well installation, injection, and monitoring activities will be conducted to minimize the disturbance of state jurisdictional wetland and perimeter wetland.

TABLE 5-10
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW3 – IN-SITU BIOREMEDIATION, LUCS AND INSPECTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILTY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
Federal				
EPA Groundwater Protection Strategy	August 1984; NCP Preamble, Vol. 55, No. 46, March 8, 1990, 40 CFR 300, p. 8733); Guidelines for Ground-Water Classification (November 1986)	To Be Considered	The Groundwater Protection Strategy provides a common reference for preserving clean groundwater and protecting the public health against the effects of past contamination. Guidelines for consistency in groundwater protection programs focus on the highest beneficial use of a groundwater aquifer.	Risk based standards are anticipated to be met under this alternative through in-situ treatment within an estimated four years. However, the permanence of the treatment is uncertain, and continued monitoring will be required to assure criteria continue to be met in the long term. LUCs will be maintained throughout this period to prevent groundwater use until the PRGs are met.
Underground Injection Control (UIC)	40 CFR 144 146, and 147.200	Applicable	These regulations address the discharge of wastes, chemicals or other substances in the subsurface. The federal UIC program designates injection wells incidental to aquifer remediation as Class V wells.	These regulations apply to certain substances that may be included in the injected nutrient mix that will be utilized to enhance bioprecipitation. The design step will adhere to these regulations as the injected material mix is determined.
State				
Standards for Identification and Listing of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, Code of Rhode Island Rules (CRIR), 12-030-003, Rule 5.8	Applicable	Rhode Island is delegated to administer the federal RCRA statute through its state regulations. Defines the listed and characteristic hazardous wastes.	These regulations apply to all waste generated during actions at the Site, such as investigation-derived waste (IDW) from monitoring. Will be used when determining whether or not a solid waste is hazardous. IDW is not expected to be hazardous.
Standards for Generators of Hazardous Waste	Rules and Regulations for Hazardous Waste Management, CRIR 12-030-003, Rule 5.2, 5.3, and 5.4	Applicable	Establishes accumulation, manifesting, and pre-transport requirements for hazardous waste.	These regulations would apply to any waste generated at the Site that is determined to be hazardous, such as IDW from in-situ biological treatment. IDW is not expected to be hazardous.

TABLE 5-10
ASSESSMENT OF ACTION-SPECIFIC ARARs AND TBCs - GROUNDWATER ALTERNATIVE GW3 – IN-SITU BIOREMEDIATION, LUCS AND INSPECTIONS
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILTY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Requirement	Citation	Status	Synopsis of Requirement	Action to be Taken to Attain ARAR
State (Continued)				
Drilling of Drinking Water Wells; Rules and Regulations Governing the Enforcement of Chapter 46-13.2 Relating to the Drilling of Drinking Water Wells	Rule 7.01	Applicable	Prohibits installing drinking water wells near pollution sources or potential contamination sources.	LUCs would prevent the installation of residential groundwater wells near pollution sources or potential contamination sources.
Rules and Regulations for Groundwater Quality (Well Standards)	Appendix 1	Applicable	Identifies the standards and specification that must be followed for the installation or abandonment of injection and monitoring wells.	Applies to the installation and abandonment of injection and monitoring wells.
Soil Erosion and Sediment Control Handbook, 1989	-	To Be Considered	Identifies soil erosion and sediment control (E & SC) requirements for construction activities involving land-disturbance activities.	E & SCs will be used during soil disturbance activities, such as installation of injection wells.
Injection Control Regulations	Underground Injection Control Program Rules and Regulations	Applicable	Established a State Underground Injection Control Program consistent with federal requirements to preserve the quality of the groundwater of the state.	These regulations apply to certain substances that may be included in the injected nutrient mix that will be used to enhance Bioprecipitation. The design step will adhere to these regulations as the injected material mix is determined.

TABLE 5-11
SUMMARY OF DETAILED ANALYSIS OF GROUNDWATER REMEDIAL ALTERNATIVES
DU 5-1 AT SITE 13 - TANK FARM 5, FEASIBILITY STUDY
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Criteria	Alternative GW1 No Action	Alternative GW2 Monitored Natural Attenuation and Land Use Controls and Inspections	Alternative GW3 In-Situ Treatment, Land Use Controls and Inspections
THRESHOLD CRITERIA			
Overall Protection of Human Health and the Environment			
Does Alternative Protect Current and Future Users?	No	Yes	Yes
Are Environmental Risks Reduced by Alternative?	No	Yes, by natural processes	Yes
Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)			
Compliance with Chemical-Specific ARARs	No	Yes[a]	Yes
Compliance with Location-Specific ARARs	Not applicable	Yes	Yes
Compliance with Action-Specific ARARs	Not applicable	Yes	Yes
Compliance with Other Criteria	No	Yes[a]	Yes
BALANCING CRITERIA			
Long-Term Effectiveness and Permanence			
Does Alternative Reduce Residual Risk?	No	Yes	Yes
Does Alternative Provide Adequate Remedial Controls?	No	Yes	Yes
Need a 5-Year Review?	Yes	Yes	Yes
Need for Long-Term Management?	Yes	Yes	Yes
Reduction of Toxicity, Mobility, or Volume through Treatment			
Treatment Process Used	None	None	None
Groundwater Treated	No	Only by natural processes	Yes
Reduction in Toxicity, Mobility, or Volume	None	To be confirmed	To be confirmed
Type and Quantity of Residuals Remaining after Treatment	No treatment so no residuals	No treatment so no residuals	None
Short-Term Effectiveness			
Risks to the Community During Remedial Action	No action so no construction risks	Minimal	Minimal
Risk to Workers During Remedial Action	No action so no construction risks	Minimal	Minimal
Environmental Impacts	No action so no additional impacts	Minimal	Minimal
Time until Remedial Action Objectives Achieved	No remedial action; time >30 years [c]	11-23 years	4 + years

Criteria	**Alternative GW1** No Action	**Alternative GW2** Monitored Natural Attenuation and Land Use Controls and Inspections	**Alternative GW3** In-Situ Treatment, Land Use Controls and Inspections
Implementability			
Constructable	No construction activities	No construction activities	Yes
Reliability of Technology	No technology implemented	Moderate	Moderate
Ease of Undertaking Additional Remedial Action, if Necessary	Easily implementable	High	High
Ability to Monitor Effectiveness of Remedy	Not applicable	Yes	Yes
Ability to Coordinate with Other Agencies	Easy	Easy	Moderate
Availability of Off-Site Disposal Services	None required	None Required	None Required
Availability of Equipment and Specialists	None required	Available	Available
Availability of Prospective Technologies	None required	Available	Available
Cost[b]			
Capital Costs	$0	$61,963	$1,276,775
Total Annual Operation & Maintenance (O&M) and Monitoring	$0	$659,622	$981,966
5-Year Review Costs	$0[d]	$23,300/5 years	$23,000/5 years
Total Present Worth Project Costs	$0	$873,385	$2,161,160

[a] The Health Advisory for manganese, selected as a PRG for groundwater at the site, will be met over time, following attenuation of historic petroleum releases (see text).
[b] Detailed cost estimates for groundwater alternatives are presented in Appendix C 2.
[c] The time listed for this remedial action to achieve RAOs is defined as >30 years because no monitoring will occur, so the achievement of RAOs will not be recognized, although it would be identical to the time specified under GW2.
[d] 5-Year Reviews would be conducted as part of the entire NAVSTA Newport facility 5-Year Reviews, and costs are nominal.

FIGURES

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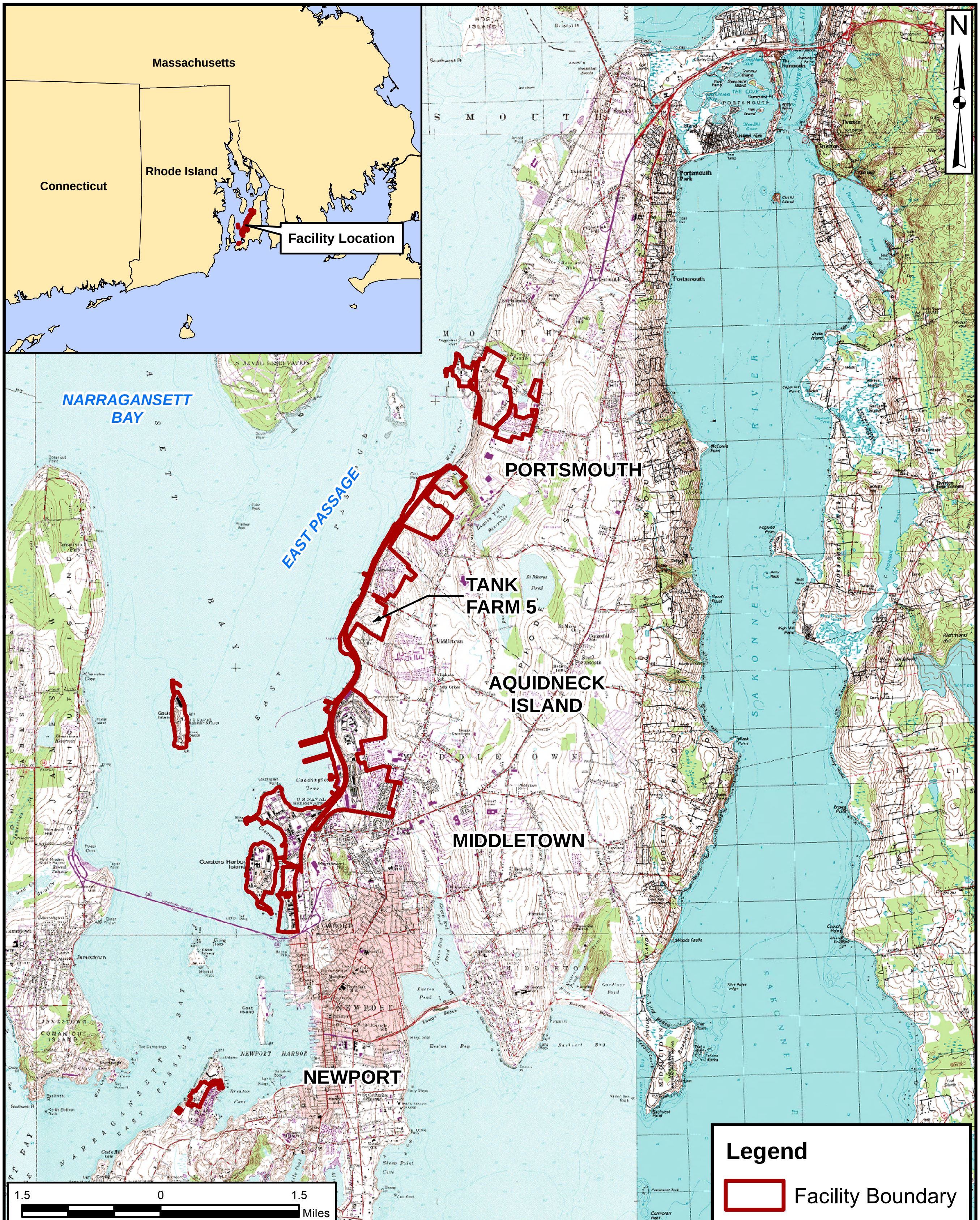

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

VICINITY MAP

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_VICINITY.MXD
REV	0
DATE	08/29/12
FIGURE NUMBER	1-1

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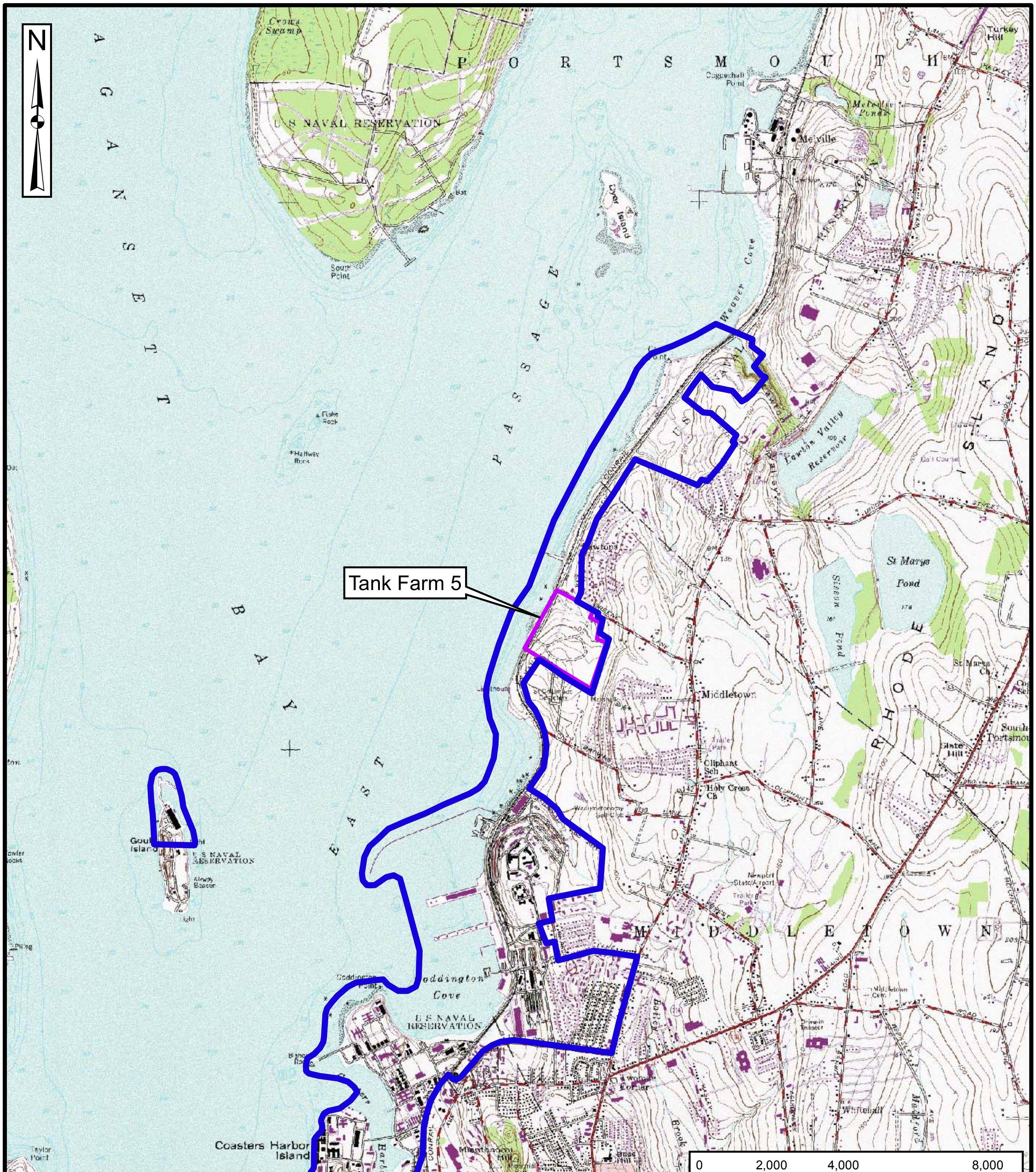

SOURCE:
BASE MAP IS A PORTION OF THE FOLLOWING 7.5 x 1 5 MINUTE USGS QUADRANGLE: PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975.

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SITE LOCUS

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
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REV	DATE
0	08/29/12
FIGURE NUMBER	
1-2	

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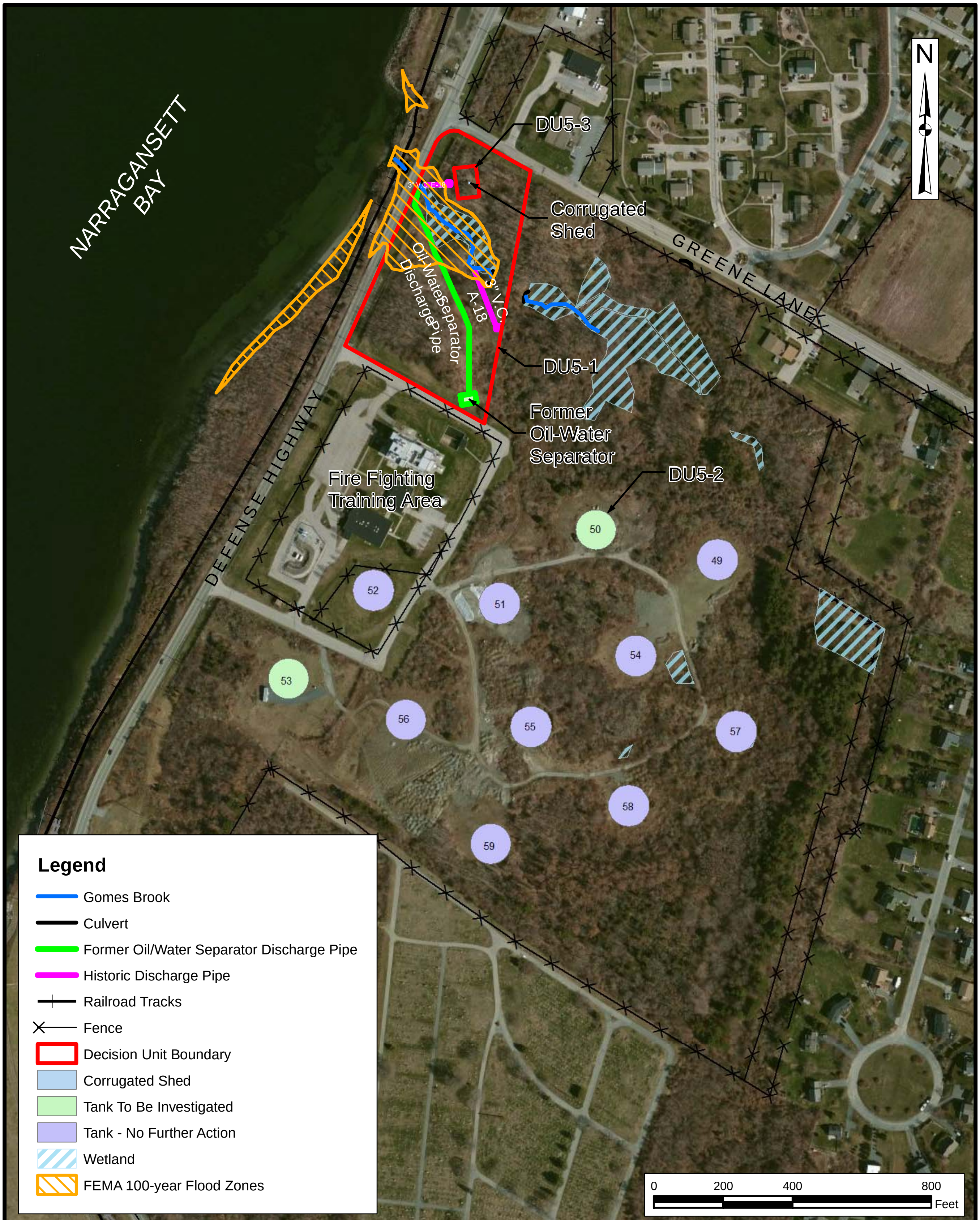

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NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SITE MAP

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_SITEMAP_FIG1-3.MXD
REV 0	DATE 11/27/13
FIGURE NUMBER	1-3

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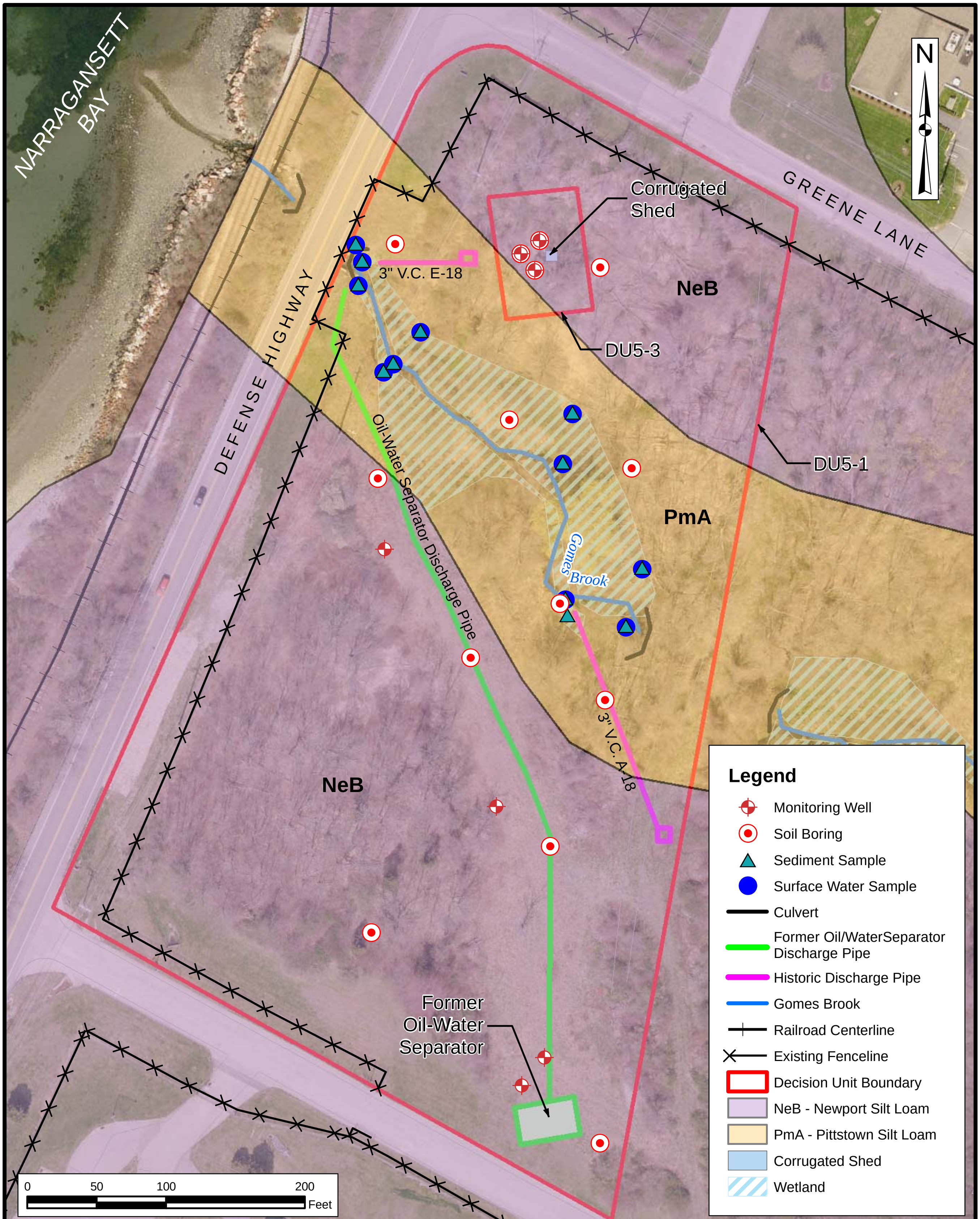

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NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

DU 5-1 SITE MAP

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
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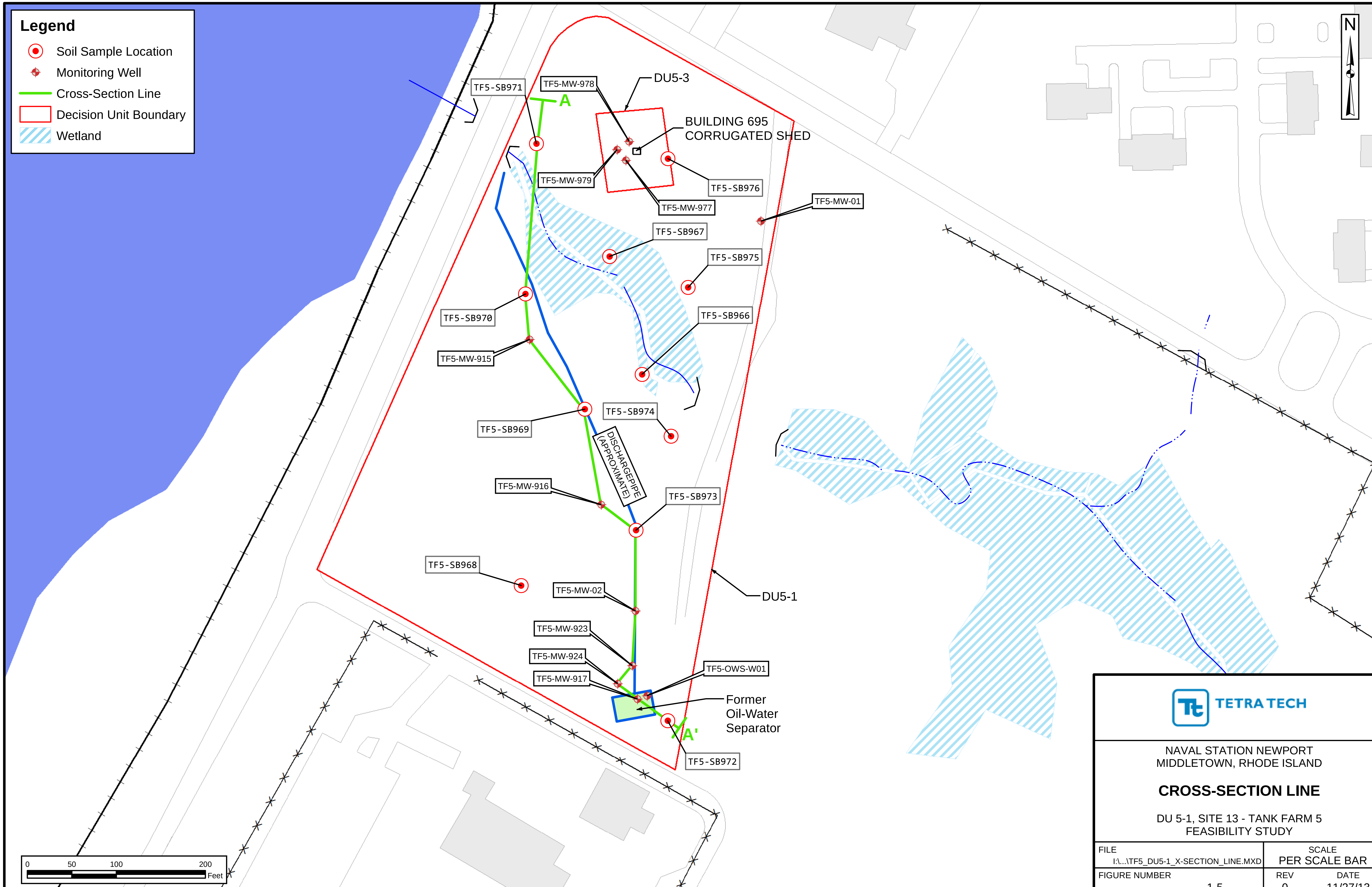
FIGURE NUMBER	
1-4	



TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

CROSS-SECTION LINE

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

FILE	SCALE
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FIGURE NUMBER	REV	DATE
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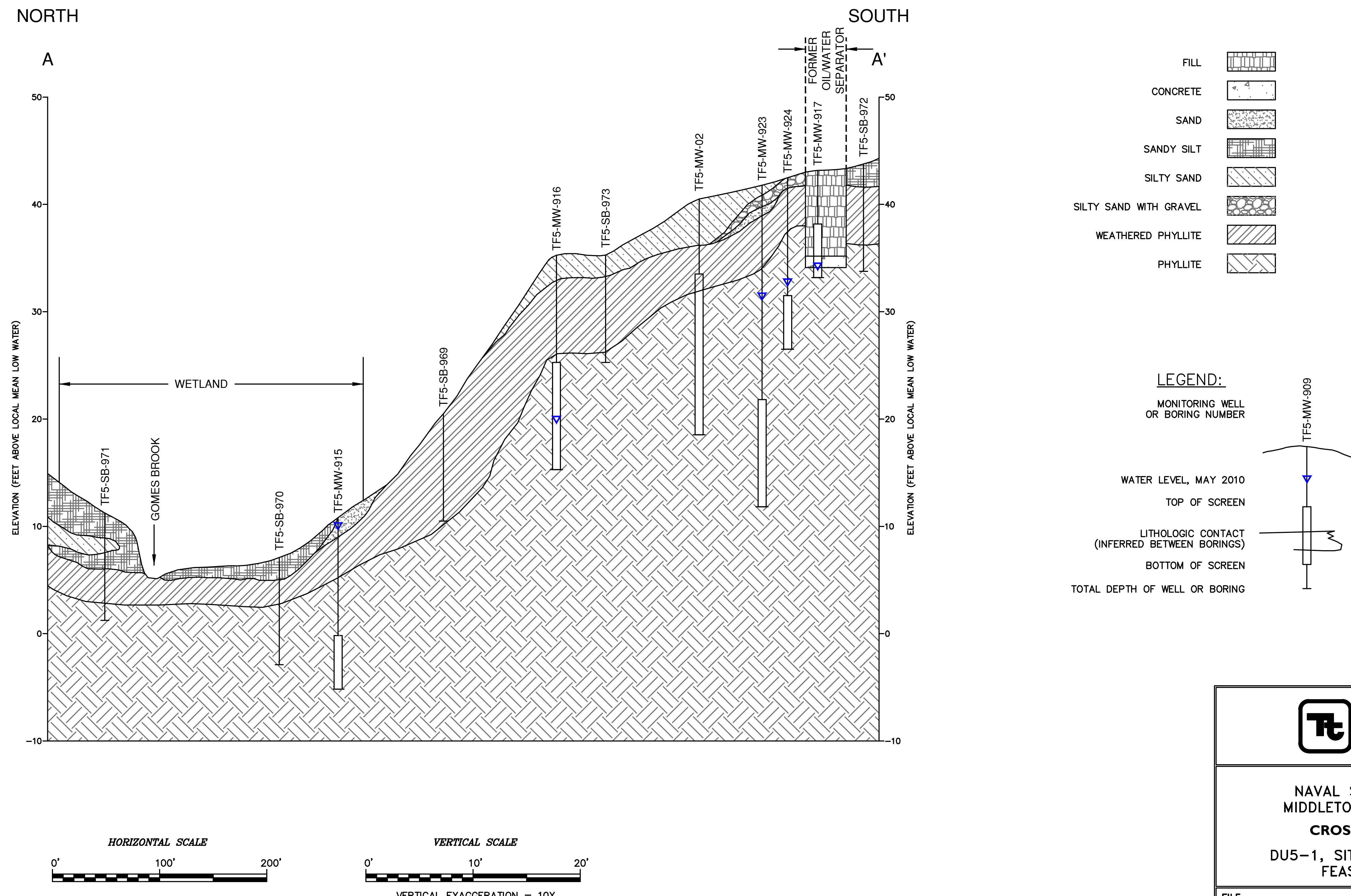

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NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

CROSS SECTION A-A'

DU5–1, SITE 13, TANK FARM 5
FEASIBILITY STUDY

FILE	SCALE
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FIGURE NUMBER	REV	DATE
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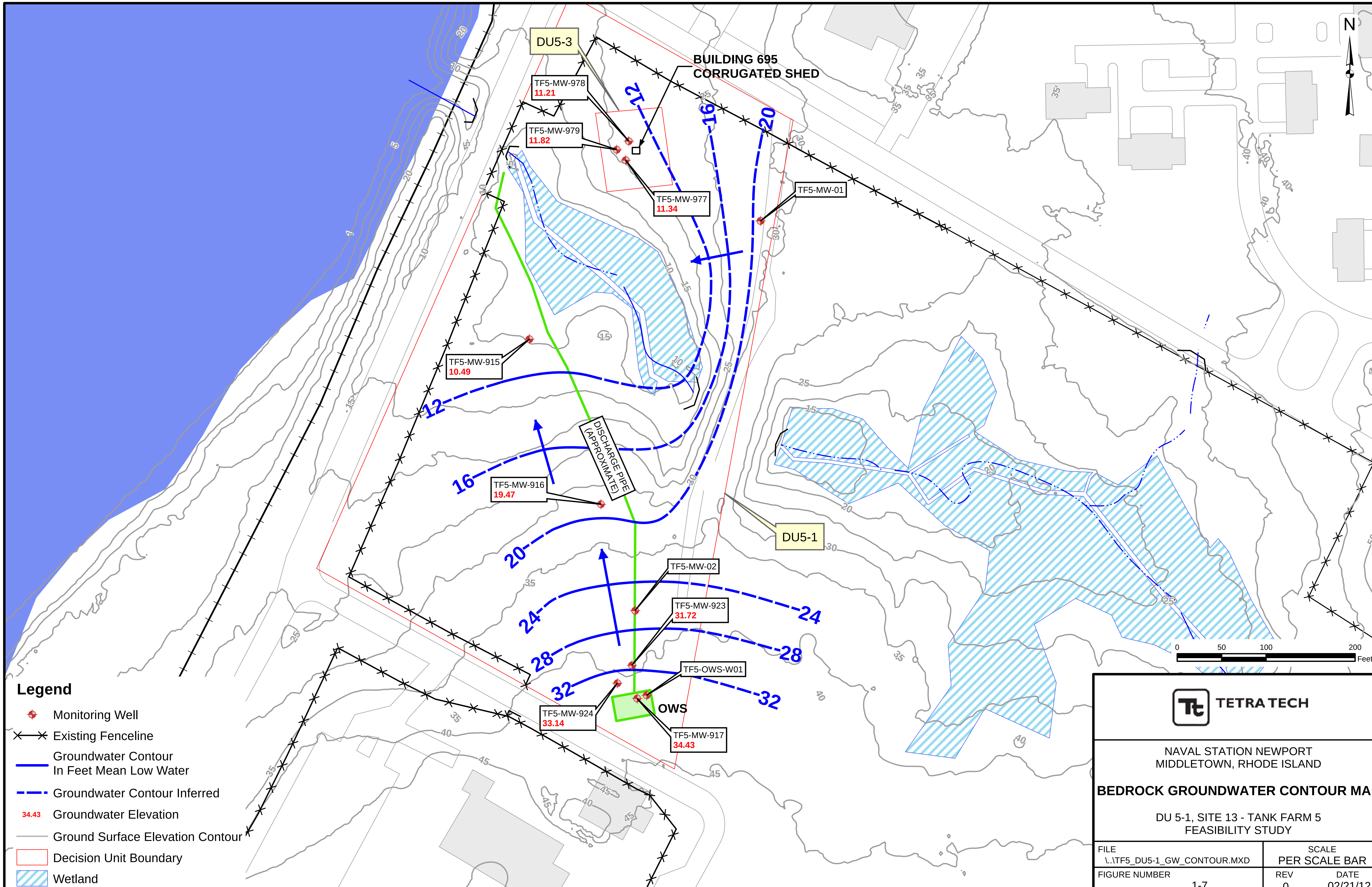

Legend

- Monitoring Well
- Existing Fenceline
- Groundwater Contour In Feet Mean Low Water
- Groundwater Contour Inferred
- 34.43 Groundwater Elevation
- Ground Surface Elevation Contour
- Decision Unit Boundary
- Wetland

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

BEDROCK GROUNDWATER CONTOUR MAP

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

FILE	SCALE
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FIGURE NUMBER	REV	DATE
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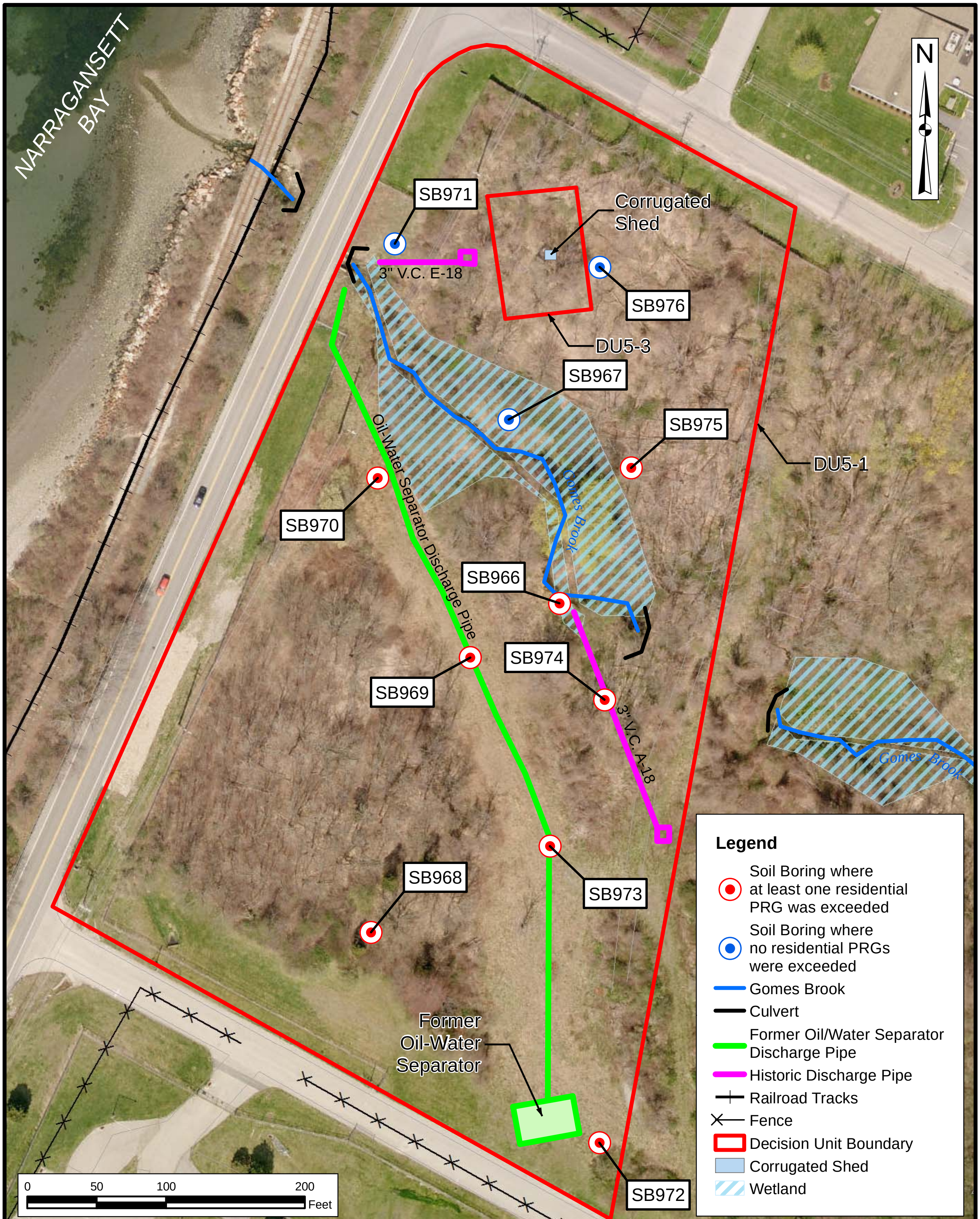

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SOILS EXCEEDING RESIDENTIAL PRGs

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_RESSOILEXCEEDANCELOCATIONS_FIG2-1.MXD
REV 0	DATE 11/07/13
FIGURE NUMBER	2-1

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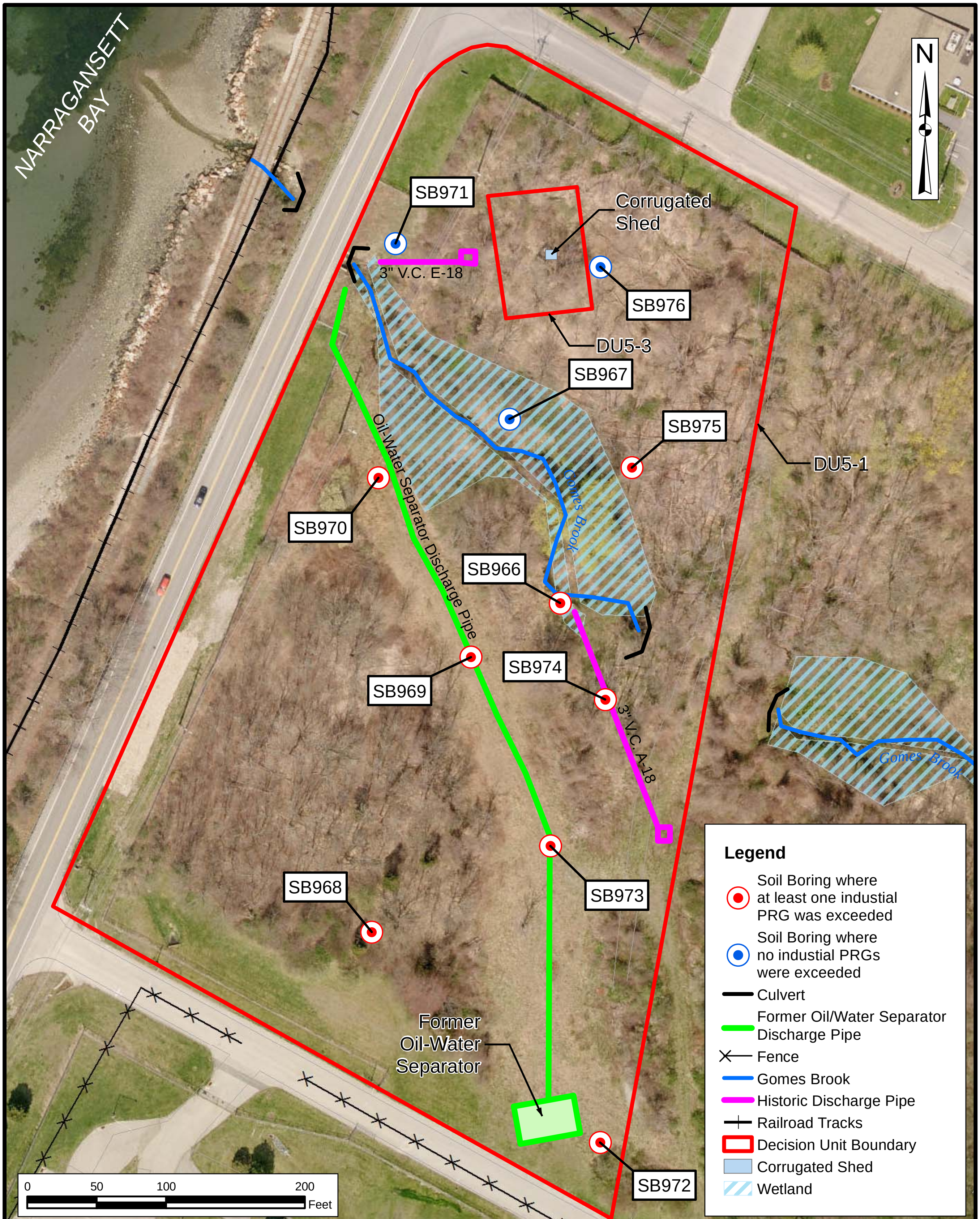


TETRA TECH

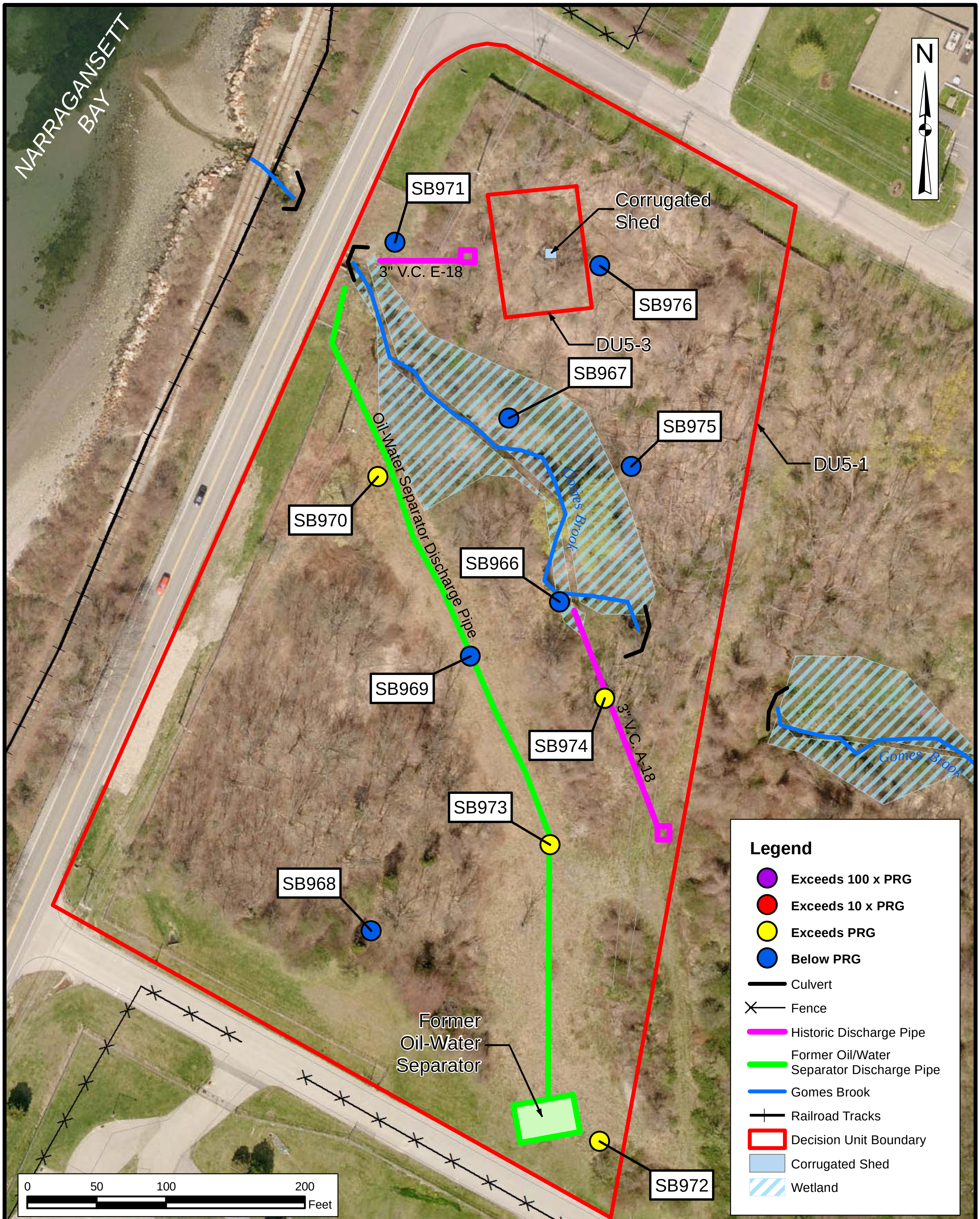
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SOILS EXCEEDING INDUSTRIAL PRGs

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_INDSOILEXCEEDANCE LOCATIONS_FIG2-2.MXD
REV 0	DATE 11/07/13
FIGURE NUMBER	2-2

I:\02698\FS.DR.13\TF5_FS\TF5_FS_ASSSRES_FIG2-3.MXD GJG/NEC 11/07/13



TETRA TECH

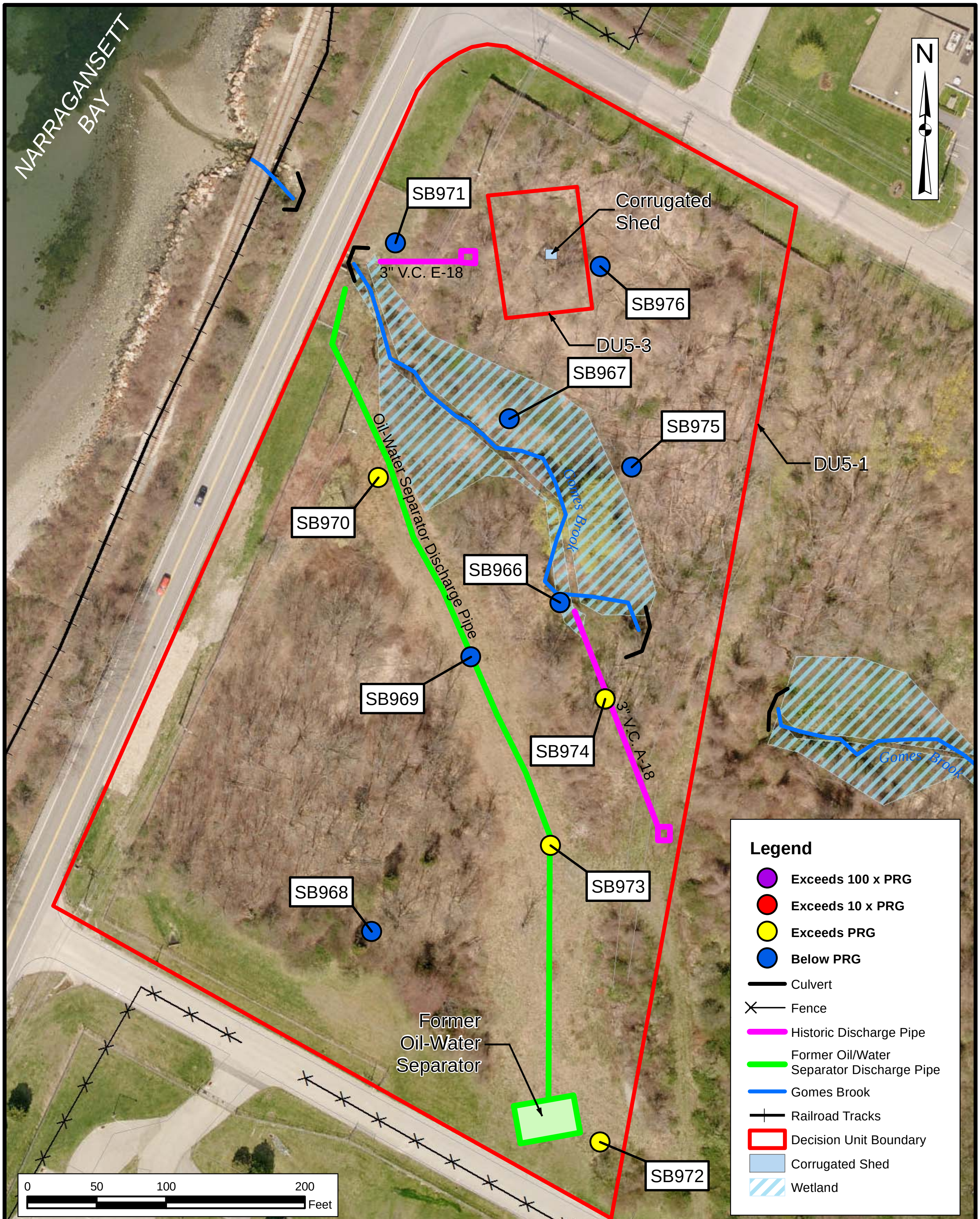
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SURFACE SOIL:
ARSENIC COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_ASSSRES_FIG2-3.MXD
REV 0	DATE 11/07/13
FIGURE NUMBER	2-3

I:\02698\FS.DR.13\TF5_FS\TF5_FS_ASSSIND_FIG2-4.MXD GJG/NEC 11/07/13



TETRA TECH

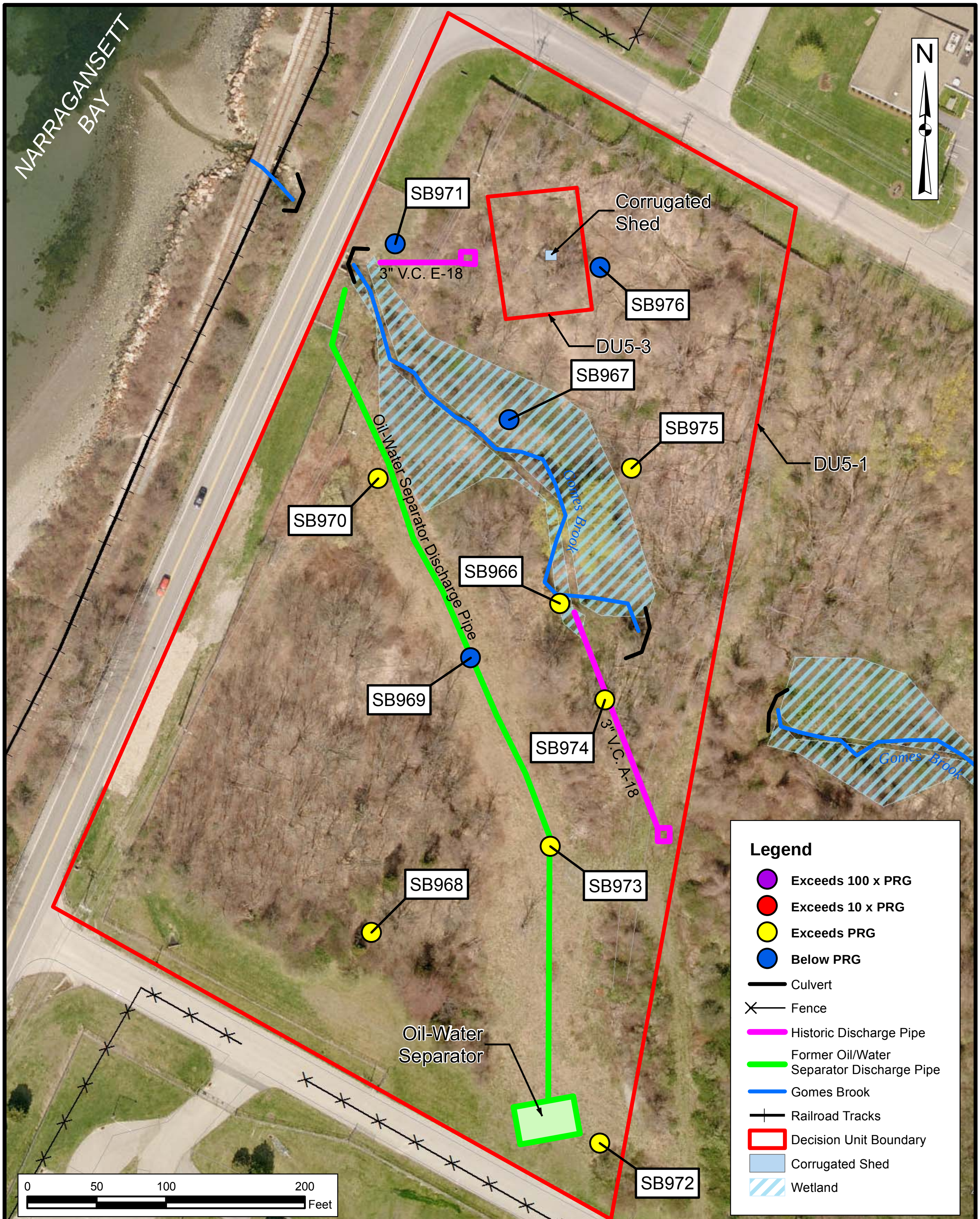
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SURFACE SOIL:
ARSENIC COMPARISON TO INDUSTRIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE I:\...\TF5_FS_ASSSIND_FIG2-4.MXD	
REV	DATE
0	11/07/13
FIGURE NUMBER	
2-4	

I:\02698\FS.DR.13\TF5_FS\TF5_FS_ASSBRES_FIG2-5.MXD GJG/NEC 08/29/12



TETRA TECH

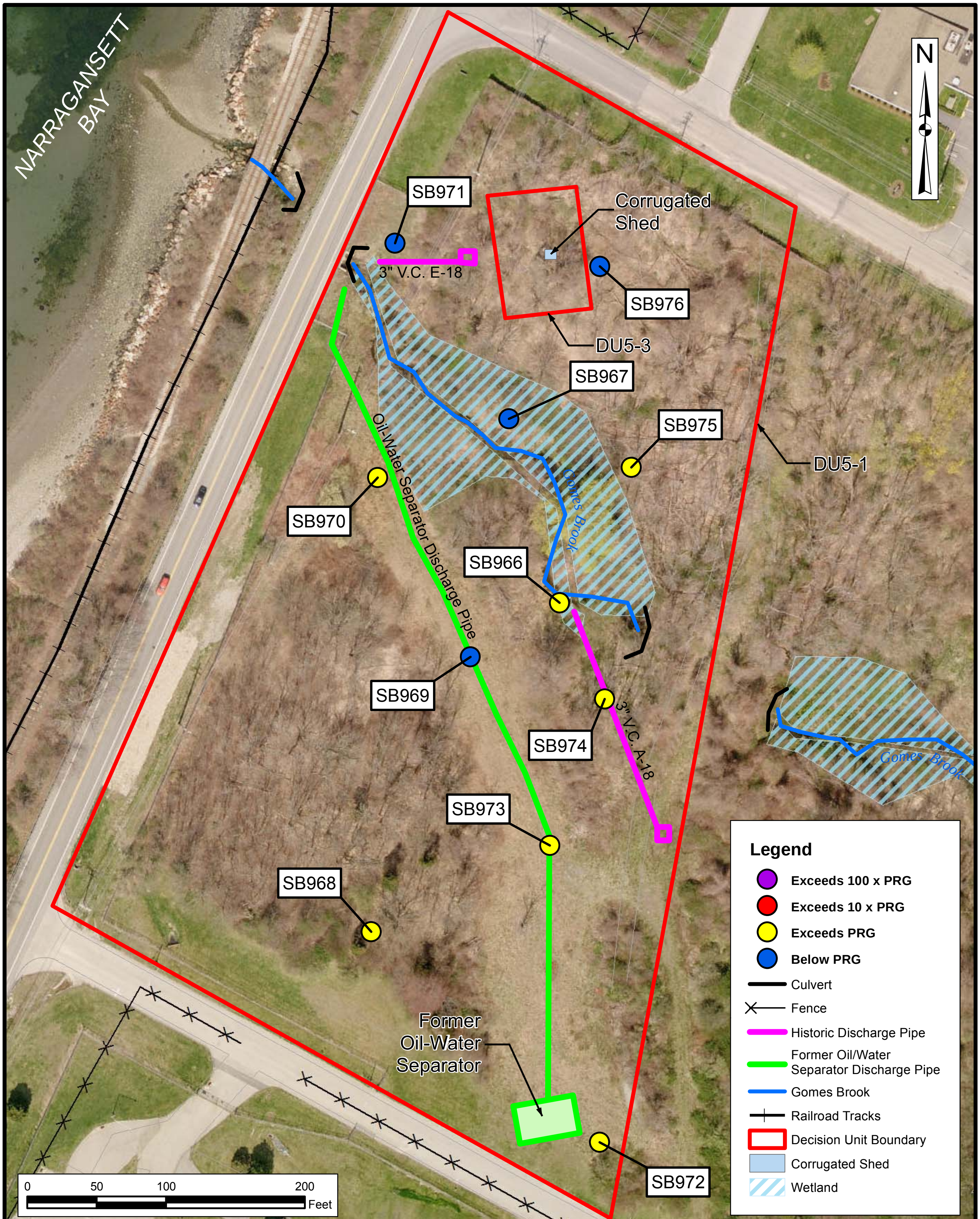
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SUBSURFACE SOIL: ARSENIC COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_ASSBRES_FIG2-5.MXD
REV	0
DATE	08/29/12
FIGURE NUMBER	2-5

I:\02698\FS.DR.13\TF5_FS\TF5_FS_ASSBIND_FIG2-6.MXD GJG/NEC 08/29/12



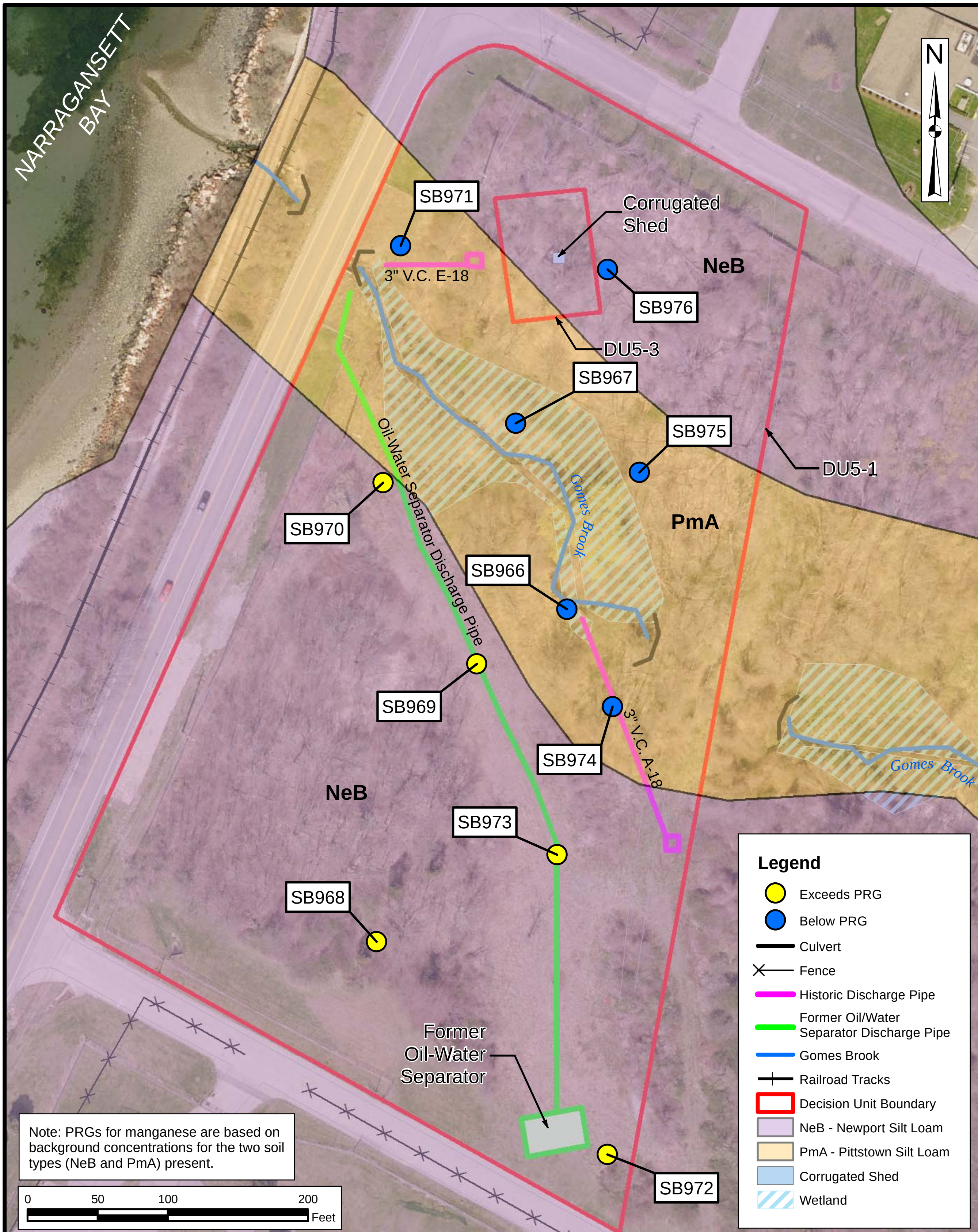
TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SUBSURFACE SOIL:
ARSENIC COMPARISON TO INDUSTRIAL PRG

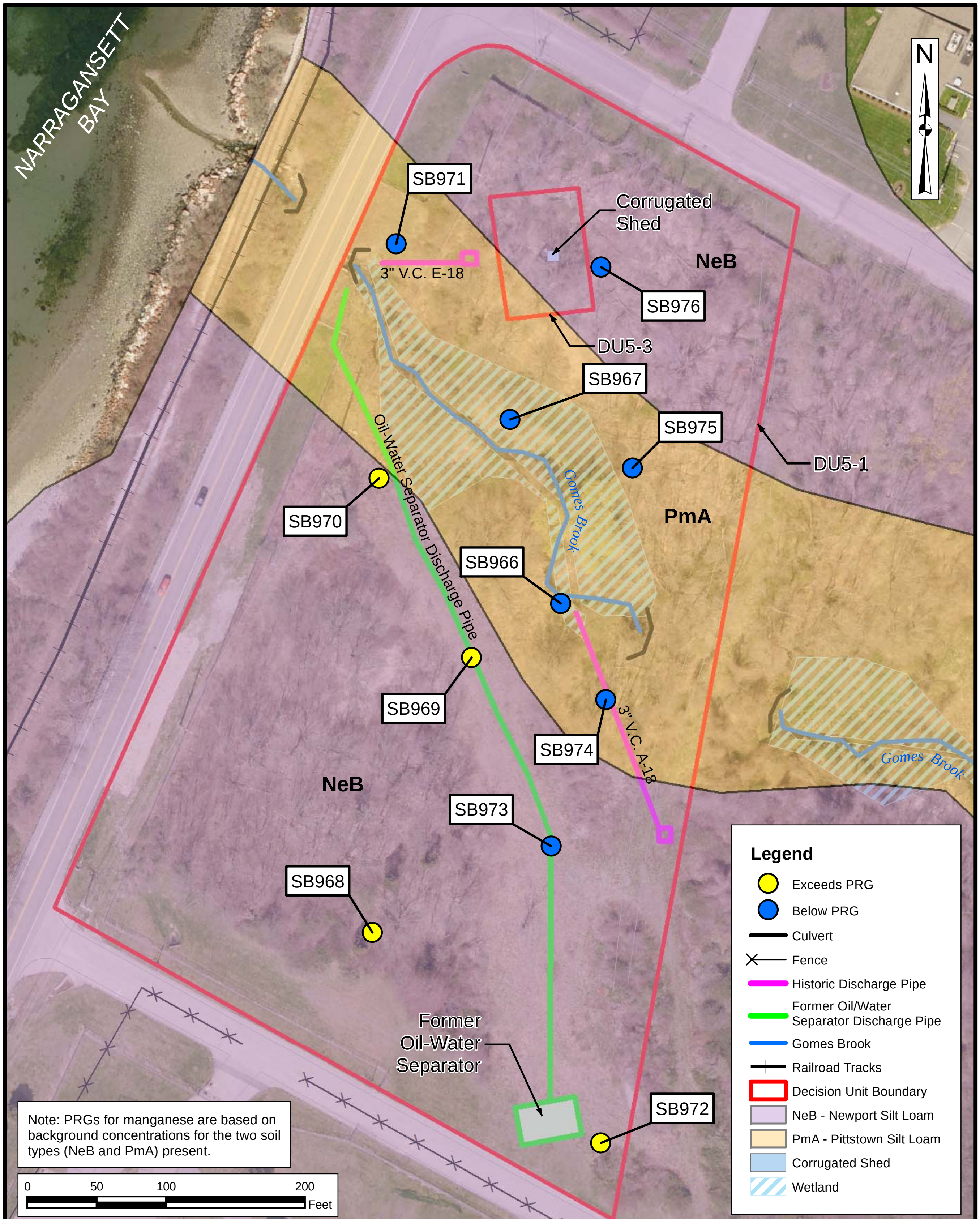
DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_ASSBIND_FIG2-6.MXD
REV	0
DATE	08/29/12
FIGURE NUMBER	2-6



Note: PRGs for manganese are based on background concentrations for the two soil types (NeB and PmA) present.

TETRA TECH	NAVAL STATION NEWPORT MIDDLETOWN, RHODE ISLAND **SUBSURFACE SOIL: MANGANESE COMPARISON TO RESIDENTIAL PRG** DU 5-1, SITE 13 - TANK FARM 5 FEASIBILITY STUDY	SCALE PER SCALE BAR	
		FILE I:\...\TF5_FS_MNSBRES_FIG2-7.MXD	
		REV 0	DATE 11/07/13
		FIGURE NUMBER 2-7	



TETRA TECH

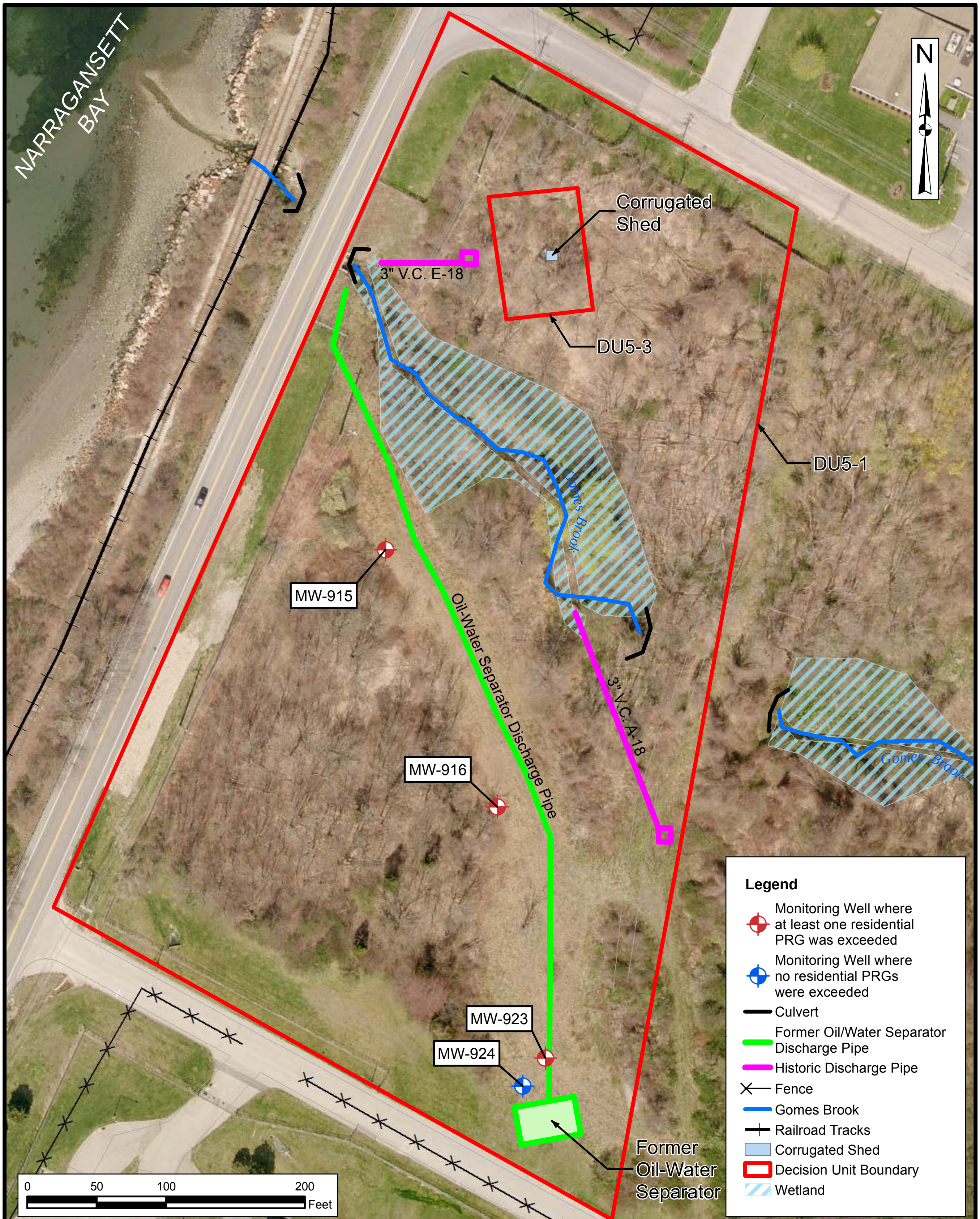
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

SUBSURFACE SOIL:
MANGANESE COMPARISON TO INDUSTRIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_MNSBIND _FIG2-8.MXD
REV 0	DATE 11/07/13
FIGURE NUMBER	2-8

I:\02698\FS.DR.13\TF5_FS\TF5_FS_GWEXCEEDANCELOCS_FIG2-9.MXD GJG/NEC 08/29/12



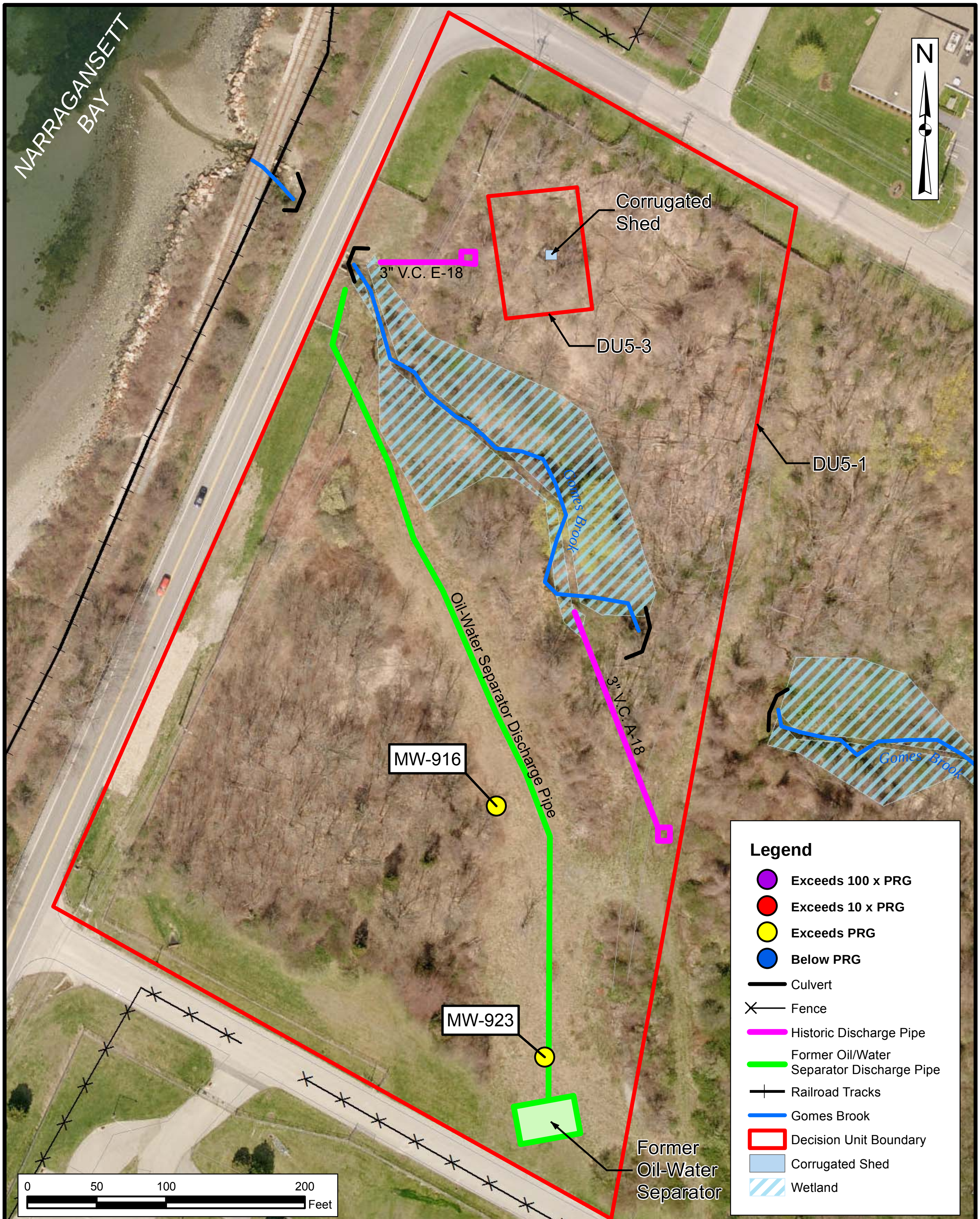
TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER EXCEEDING RESIDENTIAL PRGs

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_GWEXCEEDANCE LOCS_FIG2-9.MXD
REV 0	DATE 08/29/12
FIGURE NUMBER	2-9



I:\02698\FS.DR.13\TF5_FS\TF5_FS_DISSCOGWRES_FIG2-10.MXD GJG/NEC 08/29/12

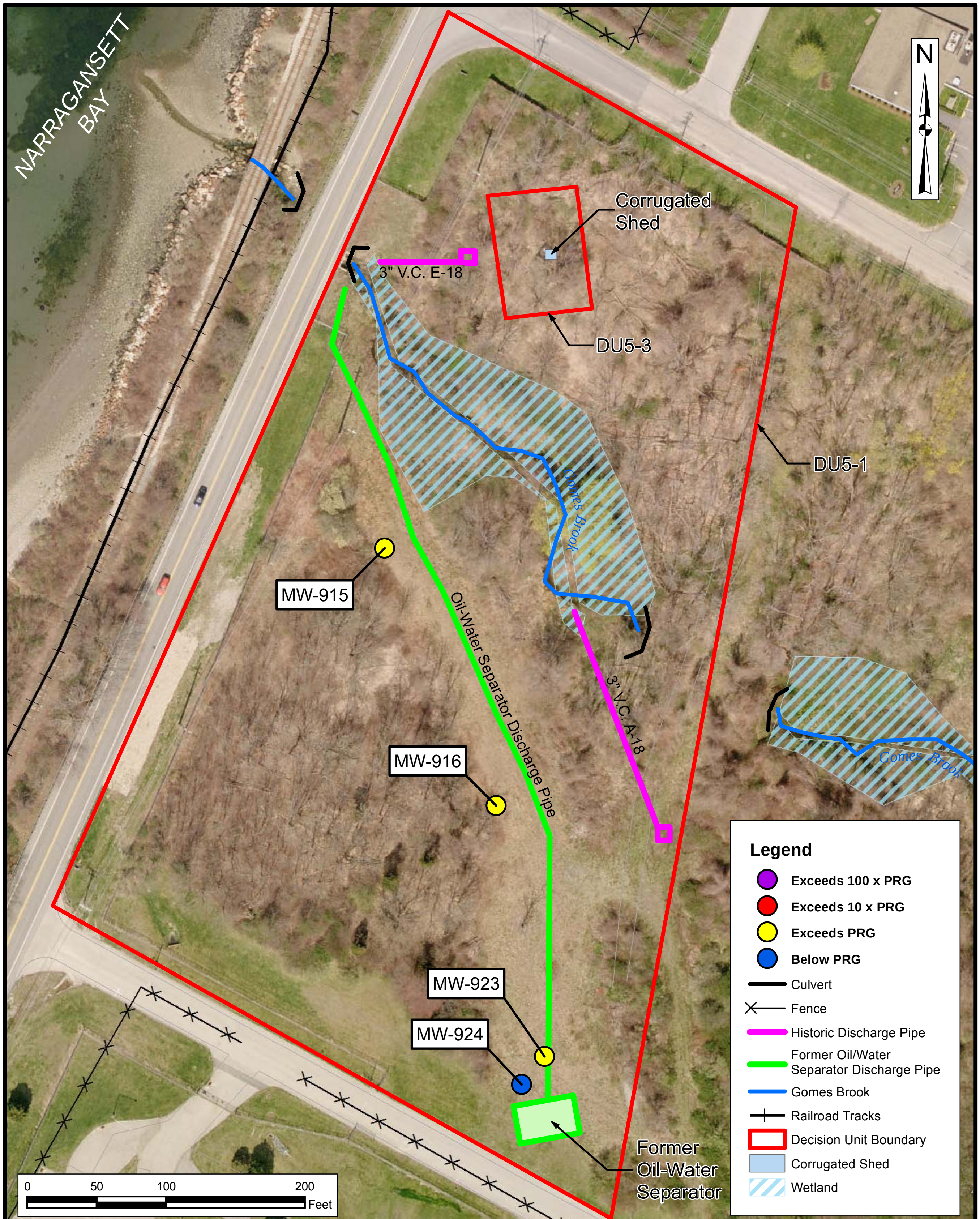
TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER:
DISSOLVED COBALT COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_DISSCOGWRES_FIG2-10.MXD
REV	0
DATE	08/29/12
FIGURE NUMBER	2-10



TETRA TECH

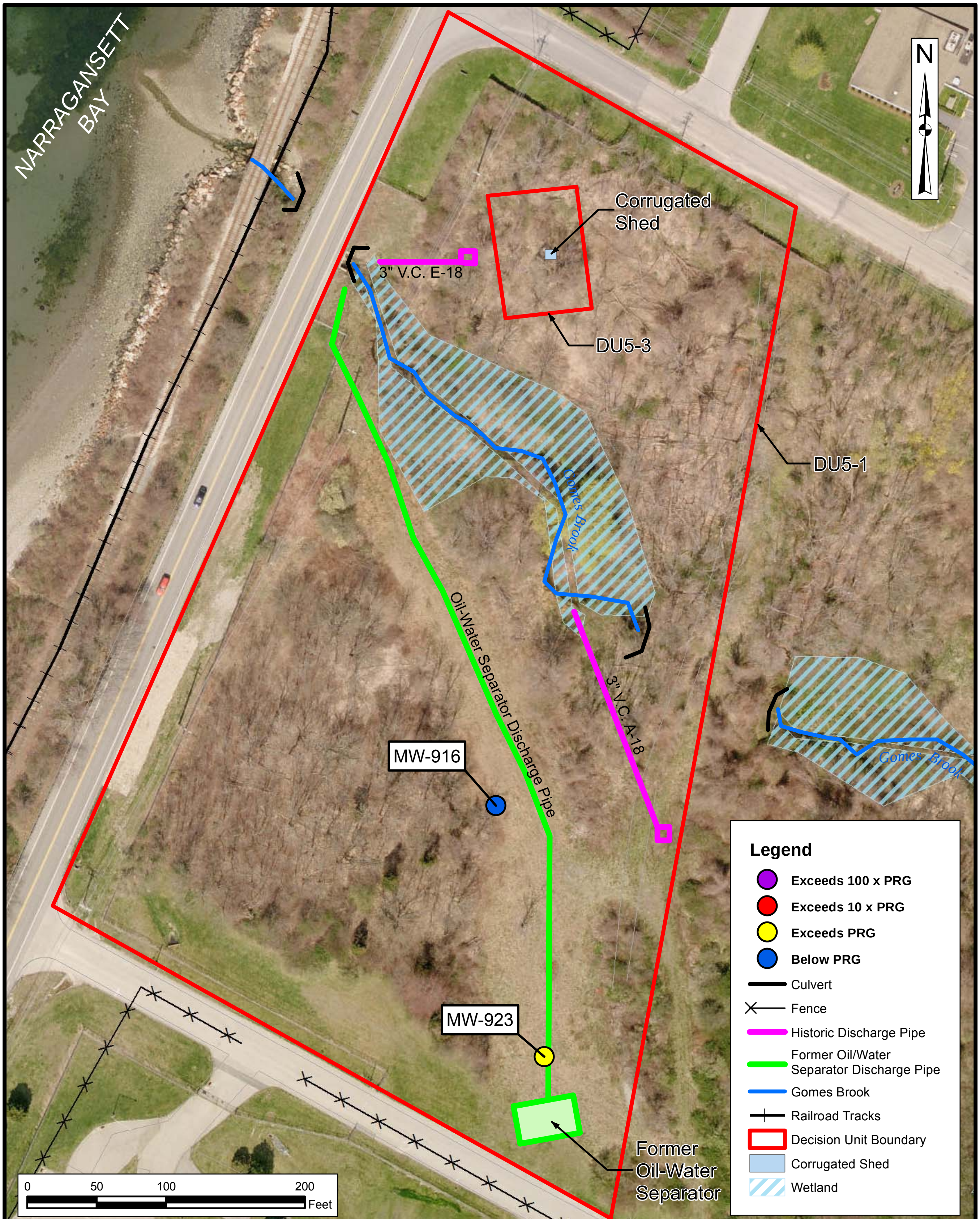
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER:
COBALT COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
I:\...\TF5_FS_COGWRES_FIG2-11.MXD	
REV	DATE
0	08/29/12
FIGURE NUMBER	
2-11	

I:\02698\FS.DR.13\TF5_FS\TF5_FS_DISSFEGWRES_FIG2-12.MXD GJG/NEC 08/28/12



TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER:
DISSOLVED IRON COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
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REV	DATE
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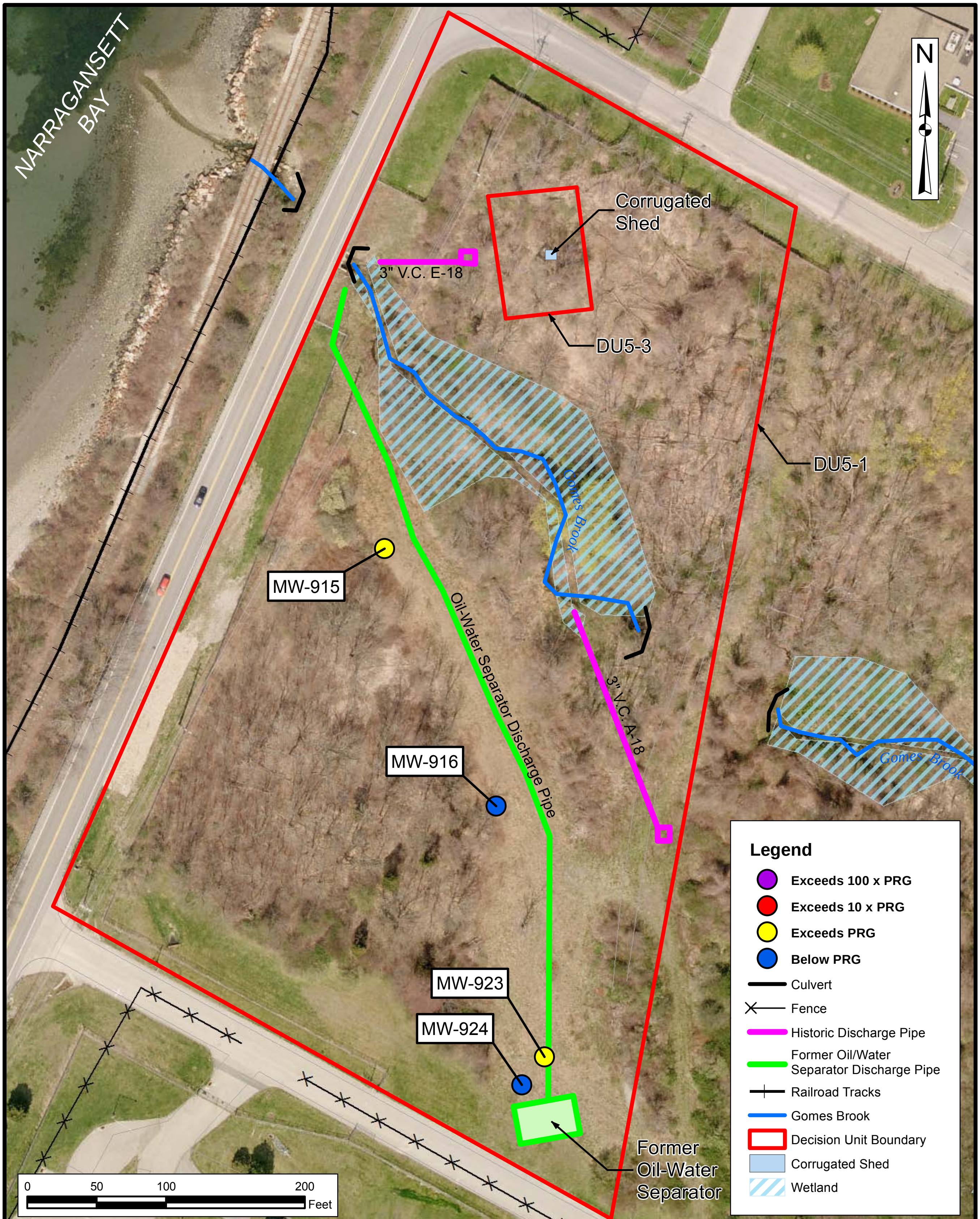
FIGURE NUMBER	
2-12	



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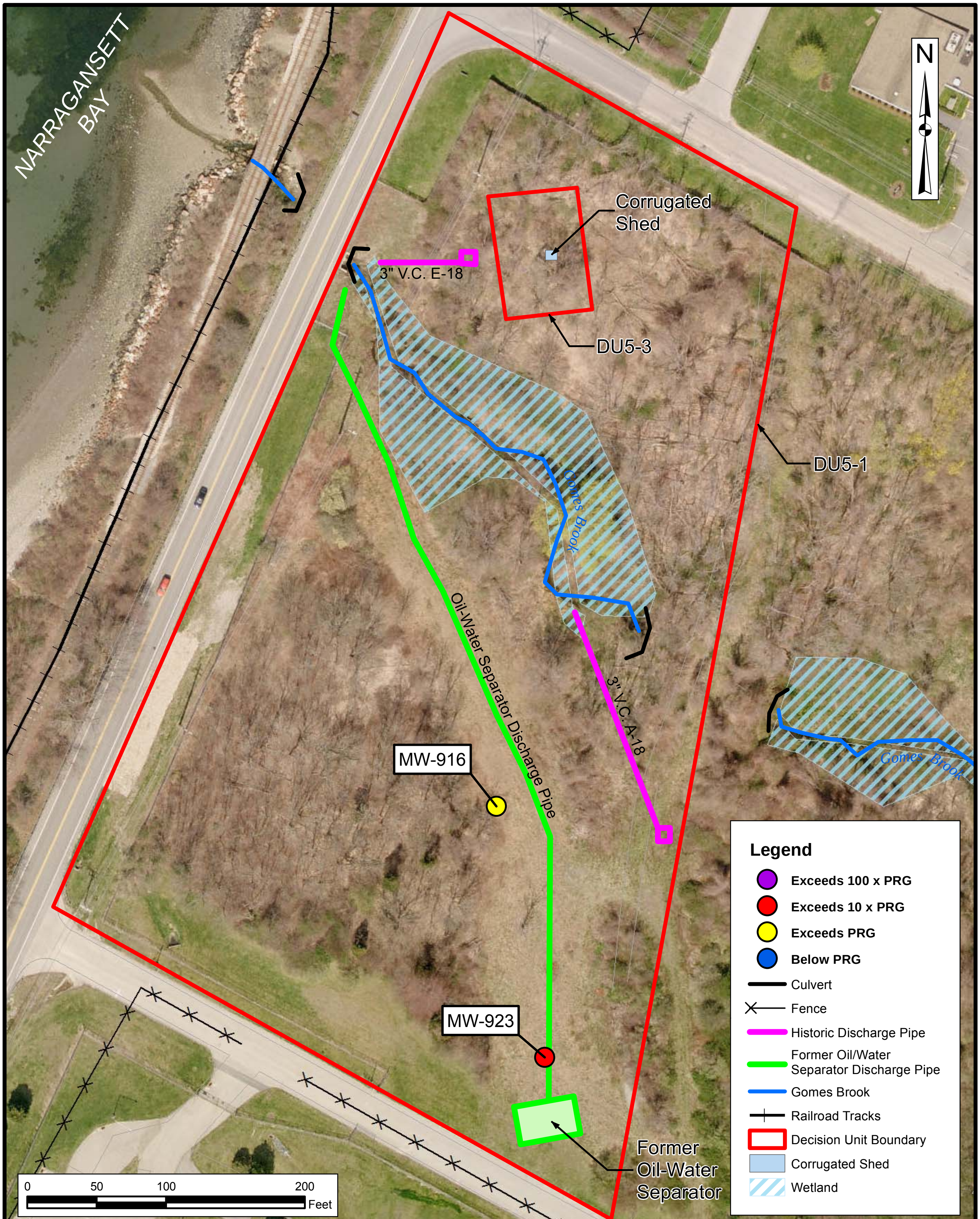
TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER:
IRON COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE I:\...\TF5_FS_FEGWRES _FIG2-13.MXD	
REV	DATE
0	08/29/12
FIGURE NUMBER	
2-13	



TETRA TECH

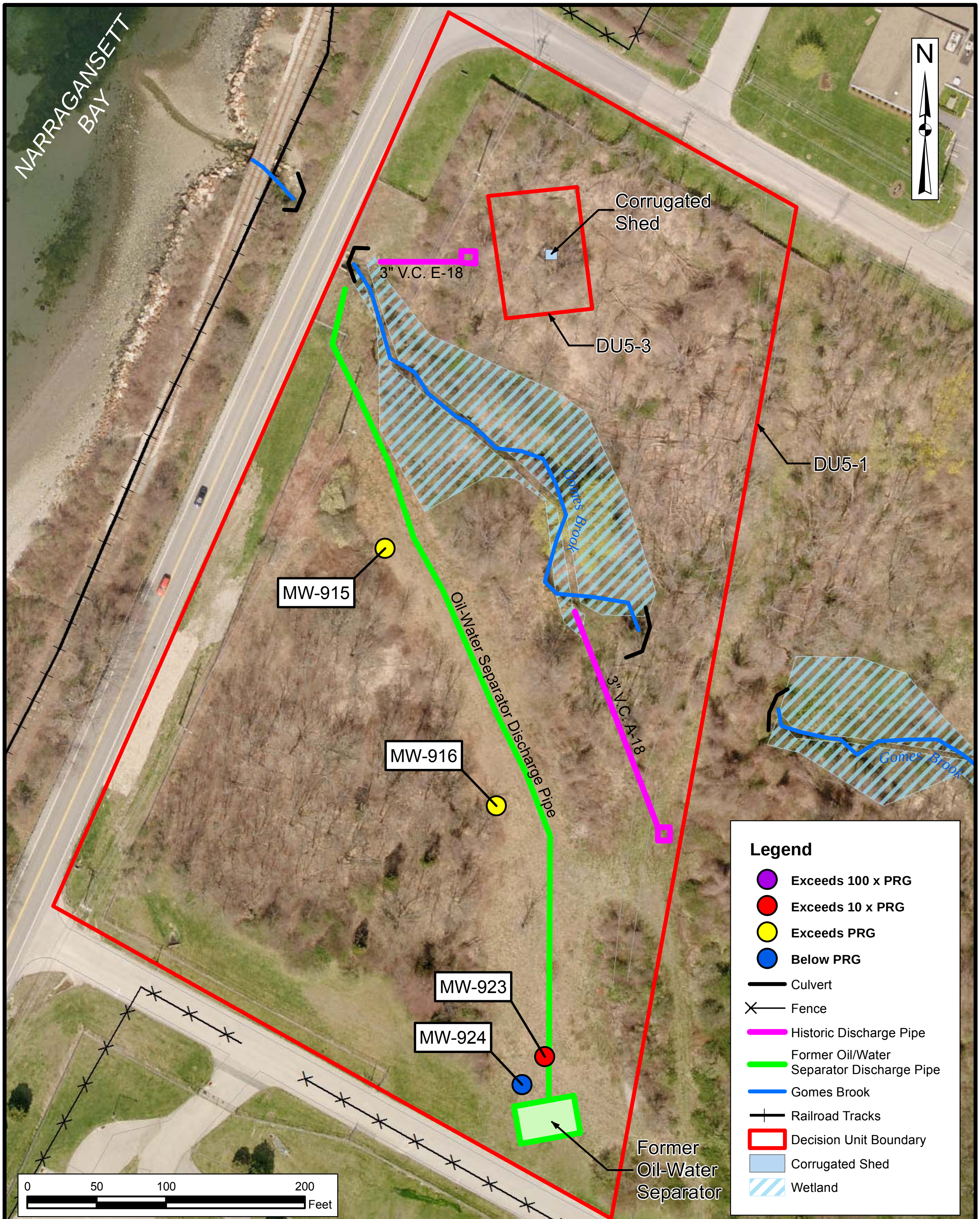
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER: DISSOLVED MANGANESE COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_DISSMNGWRES_FIG2-14.MXD
REV	0
DATE	08/29/12
FIGURE NUMBER	2-14

I:\02698\FS.DR.13\TF5_FS\TF5_FS_MNGWRES_FIG2-15.MXD GJG/NEC 08/29/12



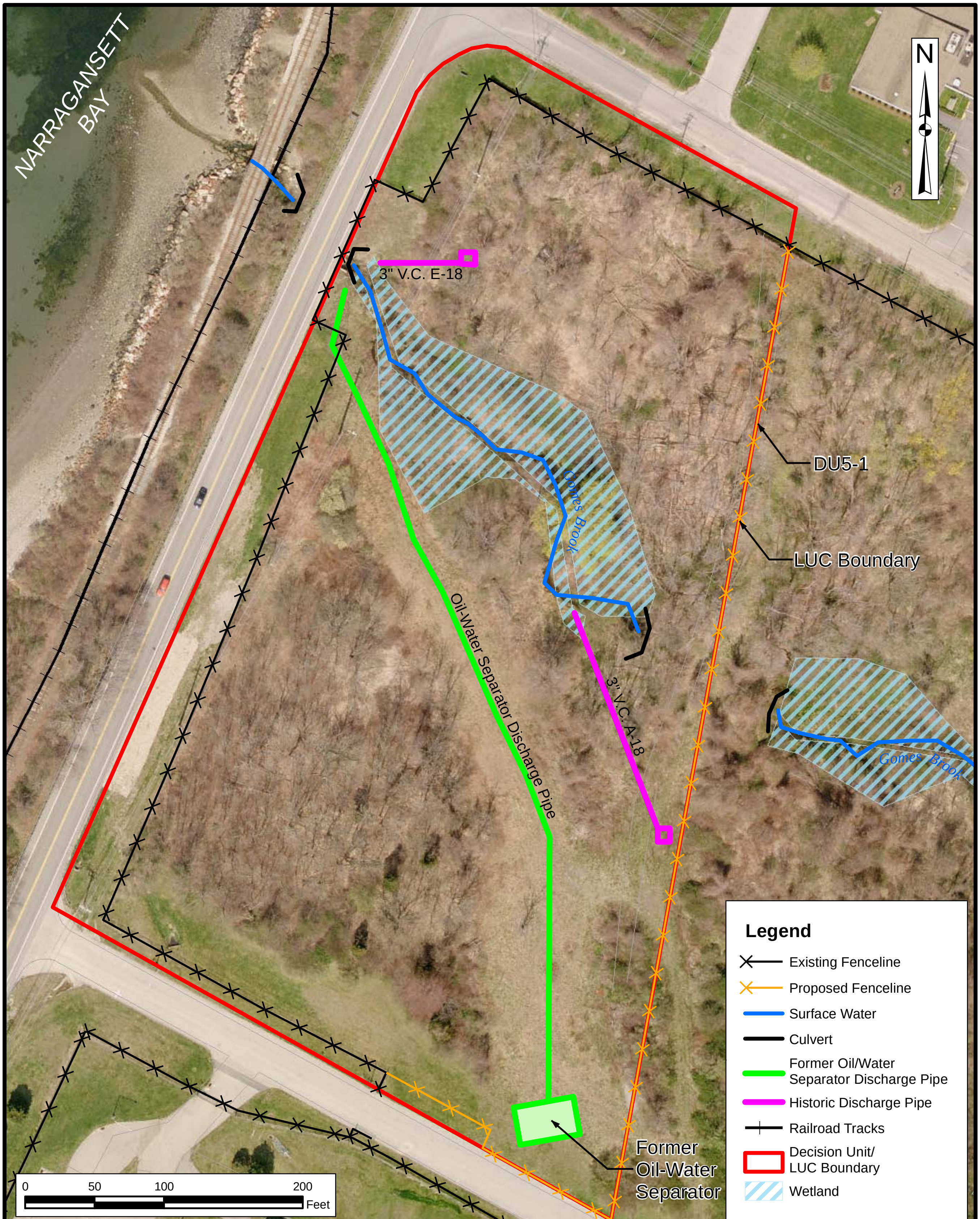
TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

GROUNDWATER:
MANGANESE COMPARISON TO RESIDENTIAL PRG

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_MNGWRES_FIG2-15.MXD
REV 0	DATE 08/29/12
FIGURE NUMBER	2-15



I:\02698\FS.DR.13\TF5_FS\TF5_FS_DU5-1SBMN_FIG4-1.MXD GJG/NEC 05/13/13

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

REMEDIAL ACTION SUMMARY, SOIL ALTERNATIVE SO2

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...TF5_FS_ DU5-1SBMN_FIG4-1.MXD
REV	0
DATE	05/13/13
FIGURE NUMBER	4-1

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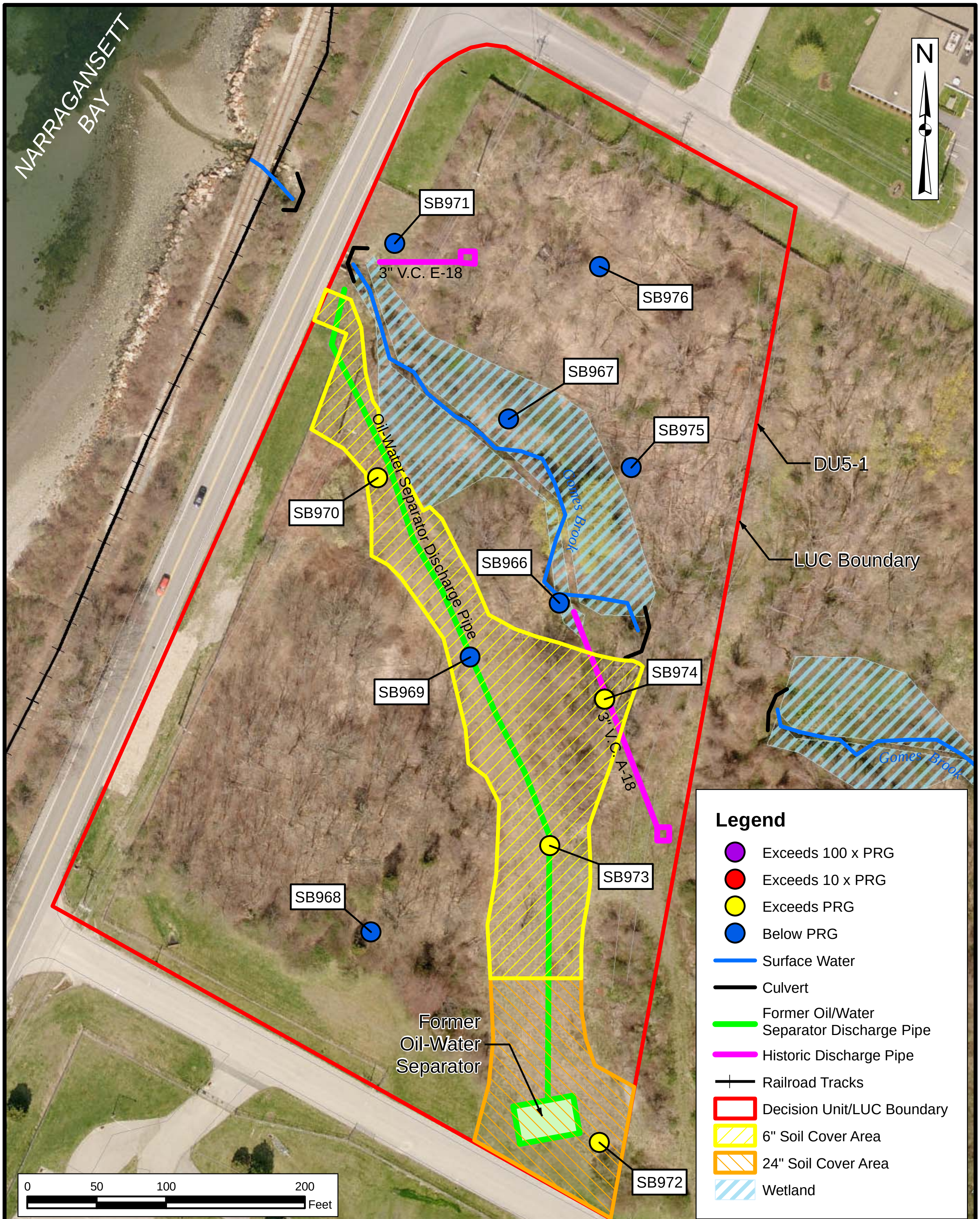

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

REMEDIAL ACTION SUMMARY - SURFACE SOIL
SOIL ALTERNATIVE SO3

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
I:\...\TF5_FS_SU5-1_SOIL EXCEEDANCEPOLY2_FIG4-2.MXD	
REV	DATE
0	11/07/13
FIGURE NUMBER	
4-2	

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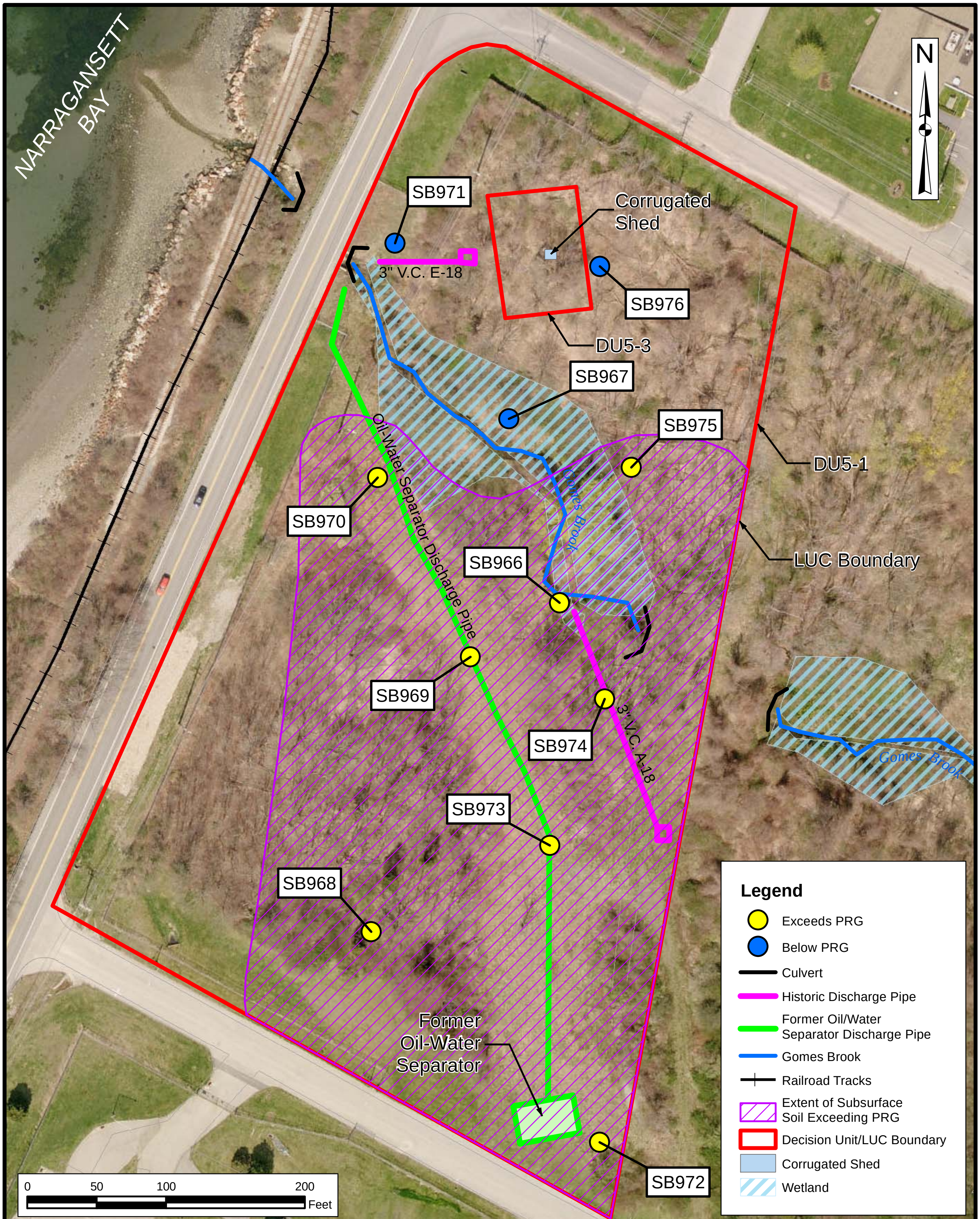

TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

REMEDIAL ACTION SUMMARY - SUBSURFACE SOIL ALTERNATIVE SO3

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	PER SCALE BAR
FILE	I:\...\TF5_FS_TF5_FS_SOILALT3_FIG4-3.MXD
REV	0
DATE	11/07/13
FIGURE NUMBER	4-3

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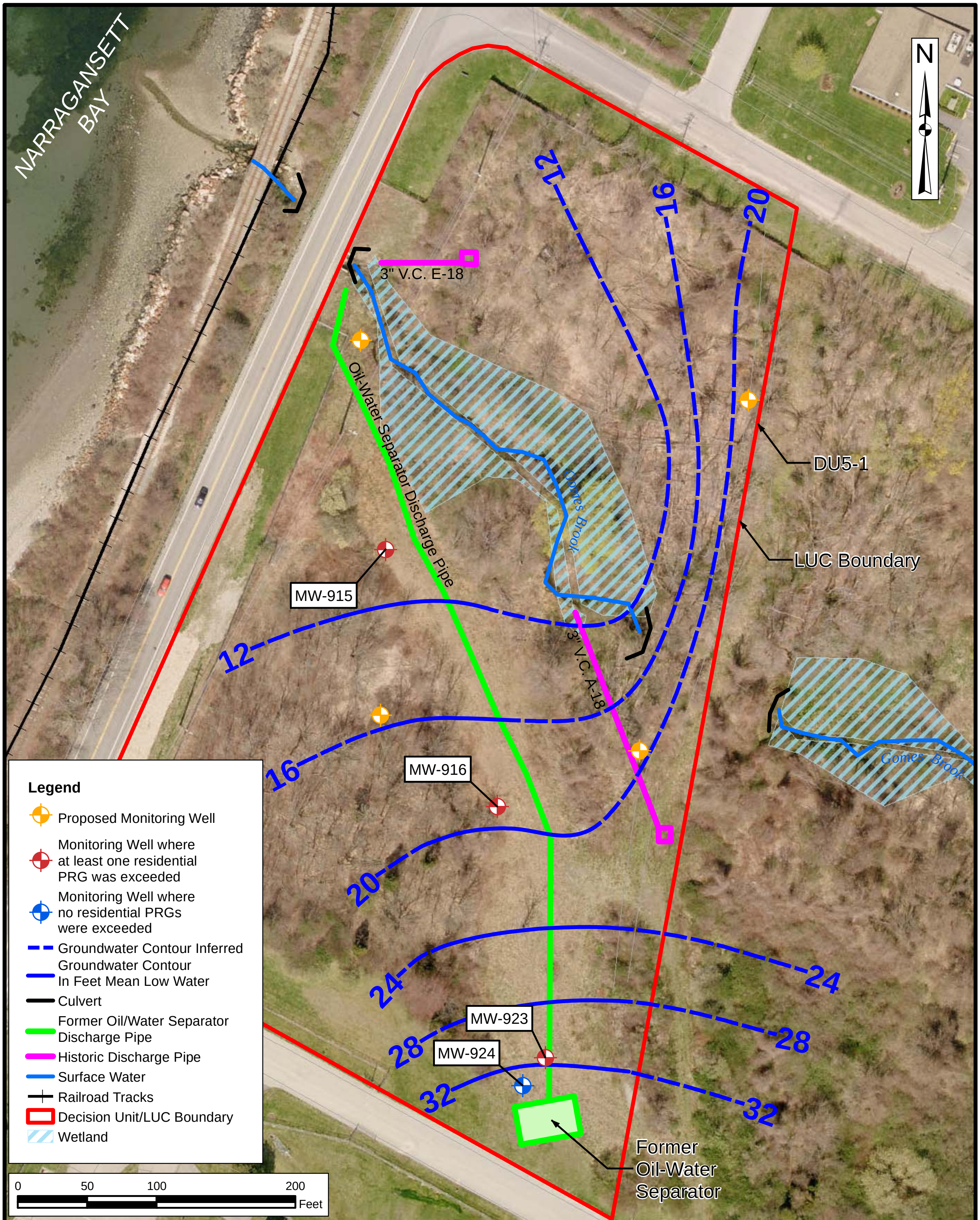


TETRA TECH

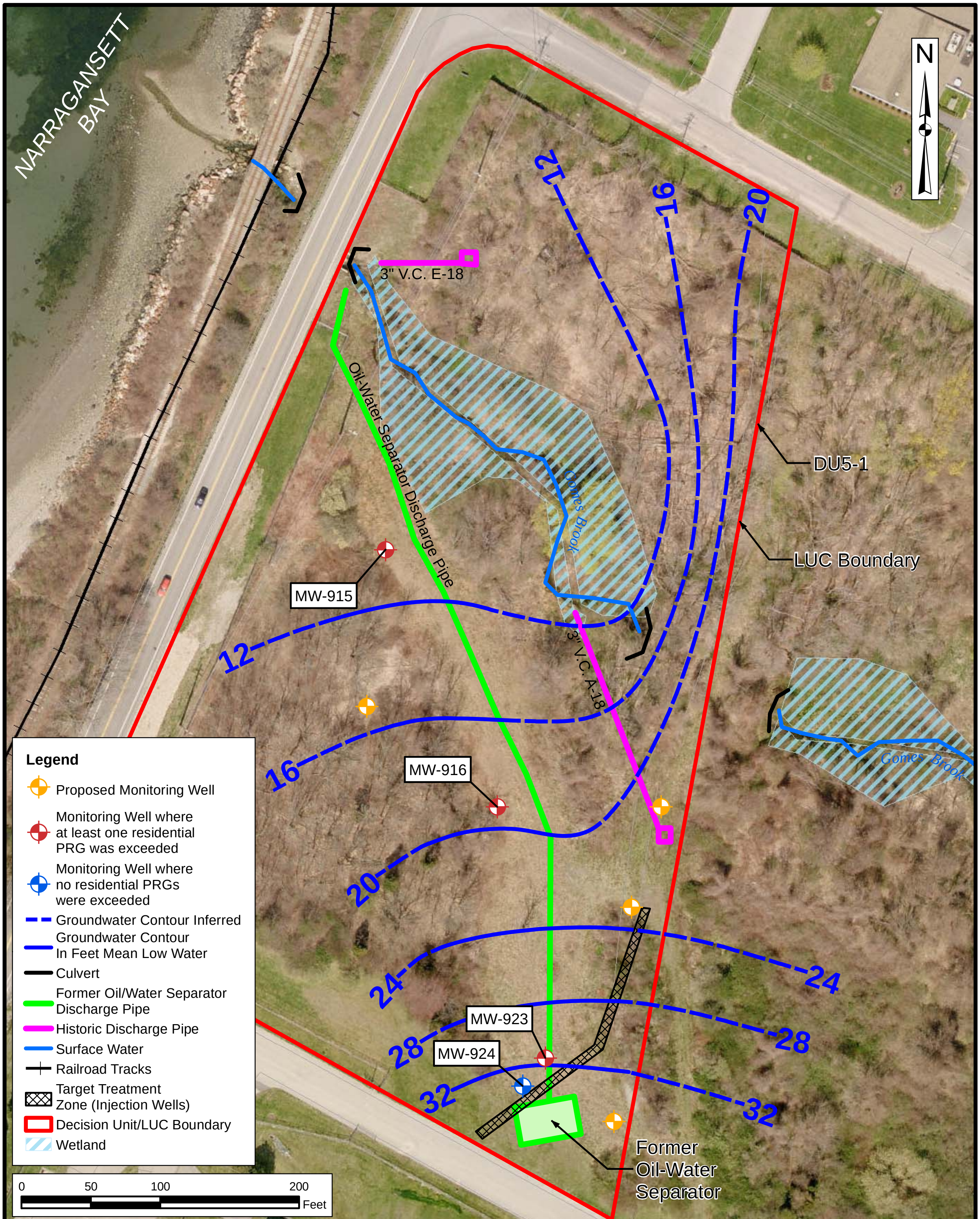
NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

REMEDIAL ACTION SUMMARY, ALTERNATIVE GW2

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE I:\...\TF5_FS_GW2ALT_FIG5-1.MXD	
REV	DATE
0	11/07/13
FIGURE NUMBER	
5-1	

I:\02698\FS.DR.13\TF5_FS\TF5_FS_GW3ALT_FIG5-2.MXD GJG/NEC 11/07/13



TETRA TECH

NAVAL STATION NEWPORT
MIDDLETOWN, RHODE ISLAND

REMEDIAL ACTION SUMMARY, ALTERNATIVE GW3

DU 5-1, SITE 13 - TANK FARM 5
FEASIBILITY STUDY

SCALE	
PER SCALE BAR	
FILE	
I:\...\TF5_FS_ GW3ALT_FIG5-2.MXD	
REV	DATE
0	11/07/13
FIGURE NUMBER	
5-2	

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APPENDIX A

BACKGROUND INFORMATION

A1 - HISTORICAL PHOTOS AND DRAWINGS

Tank Farm 4
During
construction,
ca 1940s.

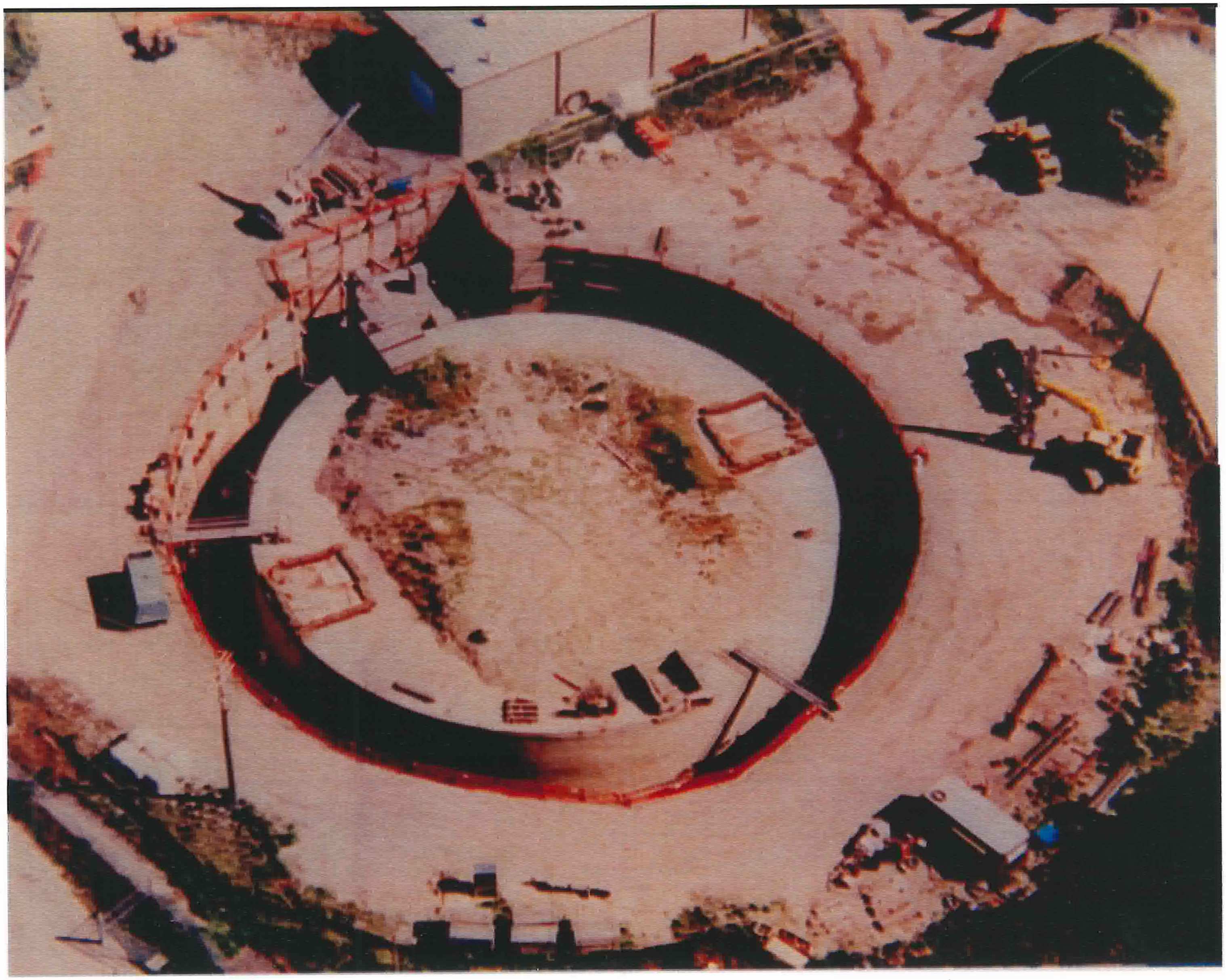
Note
earthworks
and land use
surrounding
the site.

Oblique view
is to the east

Tank Farm 5 during construction, ca 1940s.

Note earthworks and land use surrounding the site.

Oblique view is to the east



Tank 53,
Tank Farm 5
During soil
removal
action, ca
1994.

Note
Treatment
building at
top of frame

Oblique view
is to the
southeast

Interior of tank after cleaning, likely to be Tank 53, ca 1994.

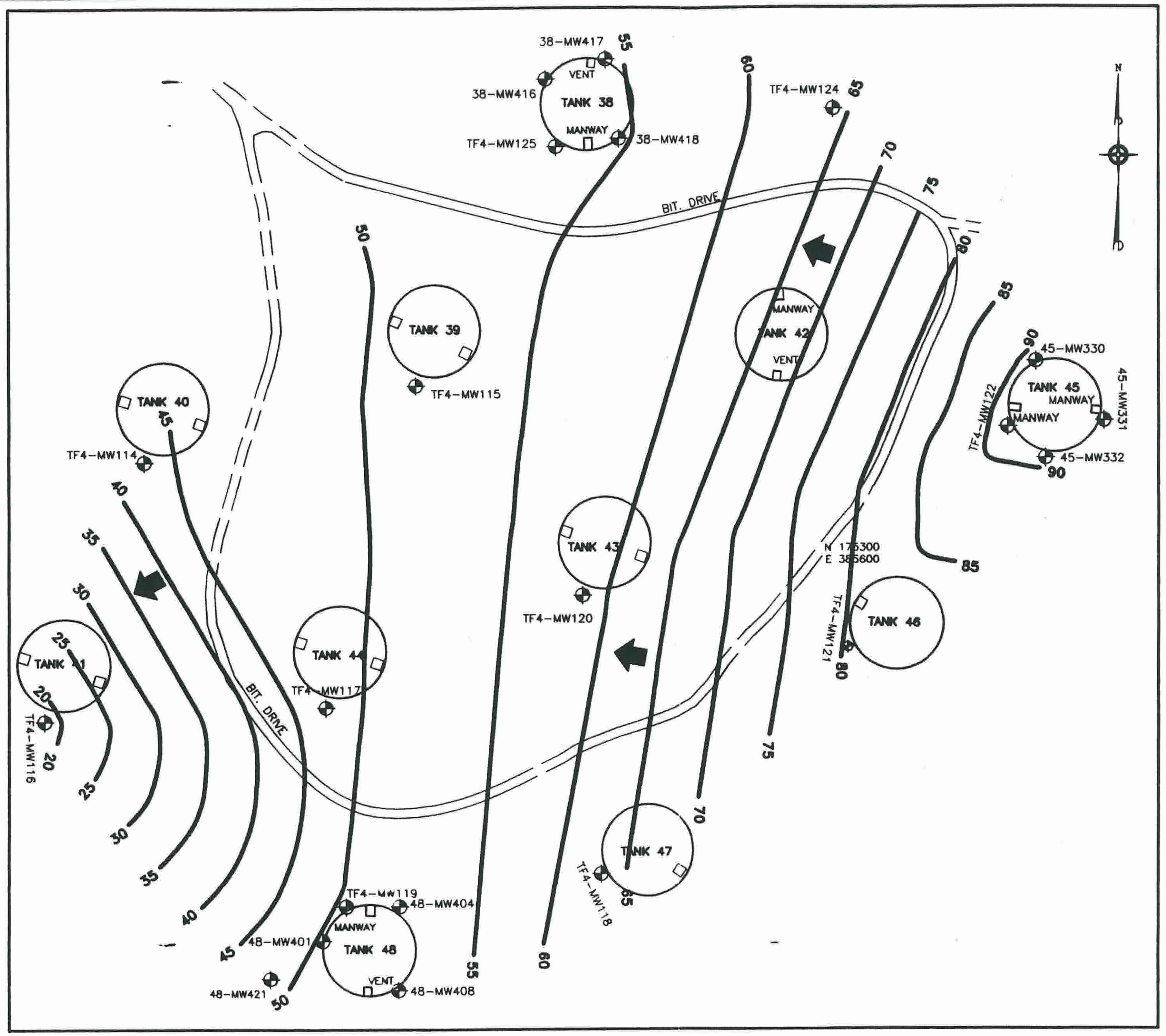
Note scale of size using manway on far side of tank.

LEGEND

48-MW422 MONITORING WELL LOCATION WITH IDENTIFIER

35 INTERPRETED GROUNDWATER CONTOUR LINE

INTERPRETED GROUNDWATER FLOW DIRECTION



ELEVATIONS

I. D.	GW ELEV.
TF4-MW 124	63.54
TF4-MW 125	54.62
38-MW 416	54.63
38-MW 417	54.63
38-MW 418	54.63
TF4-MW 115	51.37
TF4-MW 114	44.28
TF4-MW 116	18.15
TF4-MW 120	57.96
TF4-MW 117	48.60
TF4-MW 122	91.66
45-MW 330	91.70
45-MW 331	91.57
45-MW 332	90.55
TF4-MW 121	80.18
TF4-MW 118	62.90
TF4-MW 119	50.16
48-MW 401	50.17
48-MW 404	50.12
48-MW 408	50.15
48-MW 421	49.13

GRAPHIC SCALE

0' 200' 400'

1 INCH = 200 FEET

NOTES:

1) BASE MAP FROM PLAN BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI & AVAILABLE PLANS.
2) BITUMINOUS DRIVE LOCATION FROM ABOVE PLAN & AVAILABLE PLANS AND IS TO BE CONSIDERED APPROXIMATE.
3) GRID COORDINATES BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
4) GROUNDWATER ELEVATIONS FROM TANK 42 WERE NOT USED FOR THIS MAP DUE TO PUMPING OF THE RING DRAIN AT THE TIME OF GROUNDWATER MEASUREMENTS.
5) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE
6) PLAN NOT TO BE USED FOR DESIGN.

INTERPRETED WATER TABLE MAP – DEC. 18, 1995

NETC–NEWPORT, RI

SUPPLEMENTAL SITE INVESTIGATION REPORT
TANK FARM 4

DRAWN BY:	R.G. DEWSNAP	REV.:	1
CHECKED BY:	R. CLEAVER	DATE:	14 OCT 98
SCALE:	1" = 200'	FILE NO.: G:\DWG\NETC\SSI\GW_CONTR	

FIGURE A-1

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

LEGEND

45-SB333 — SOIL BORING LOCATION WITH IDENTIFIER

45-MW330 — MONITORING WELL LOCATION WITH IDENTIFIER

45-SS02 — SURFACE SOIL SAMPLE LOCATION WITH IDENTIFIER

P1 — SOIL PROBING SAMPLE LOCATION WITH IDENTIFIER

LIMITS OF BEDROCK RAMP

LIMITS OF EXCAVATION

TPH — TOTAL PETROLEUM HYDROCARBONS

ND — NOT DETECTED

SB-801 / MW-801	
SOIL SAMPLE	
TPH (37.5-39.5)	4,400
GROUNDWATER SAMPLE	
TPH (51.0-61.0)	ND
LEAD (51.0-61.0) (Unfiltered)	18.7

CONTAMINANT (DEPTH INTERVAL)

SOIL BORING LOCATION / MONITORING WELL LOCATION

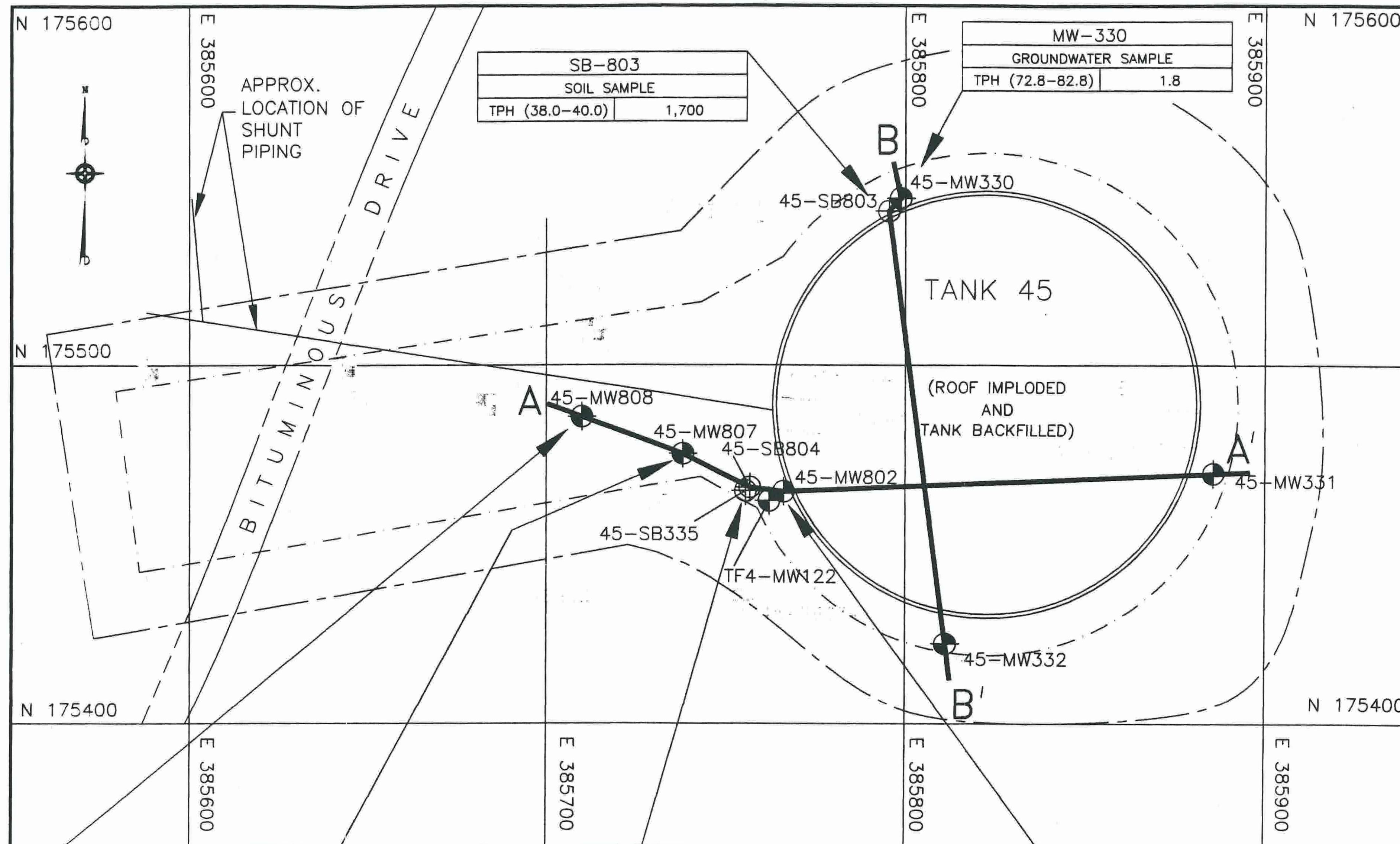
TYPE OF SAMPLE

CONTAMINANT CONCENTRATION

TYPE OF SAMPLE

CONTAMINANT CONCENTRATION

CONTAMINANT CONCENTRATION



SB-803	
SOIL SAMPLE	
TPH (38.0-40.0)	1,700

MW-330	
GROUNDWATER SAMPLE	
TPH (72.8-82.8)	1.8

SB-808 / MW-808	
SOIL SAMPLE	
TPH (19.0-21.0)	3,700
GROUNDWATER SAMPLE	
TPH (88.3-98.3)	ND

SB-807 / MW-807	
SOIL SAMPLE	
TPH (14.0-16.0)	17,000
TPH (24.0-25.0)	21,000
GROUNDWATER SAMPLE	
TPH (89.7-99.7)	ND

SB-804	
SOIL SAMPLE	
TPH (14.0-16.0)	5,700

SB-802 / MW-802	
SOIL SAMPLE	
TPH (36.0-38.0)	17,000
GROUNDWATER SAMPLE	
TPH (71.5-96.5)	3.6
LEAD (71.5-96.5) (Unfiltered)	18.7

GRAPHIC SCALE

0' 40' 80'

1 INCH = 40 FEET

NOTES:

1) THE DATA DEPICTED INCLUDES TPH CONCENTRATIONS FOR SOIL AND GROUNDWATER, AND GROUNDWATER CONTAMINANTS AND CONCENTRATIONS EXCEEDING THE RIDEM GA GROUNDWATER QUALITY STANDARDS (GWQS) AND / OR PREVENTATIVE ACTION LIMITS (PAL).
2) SOIL SAMPLE TPH CONCENTRATION UNITS IN mg / Kg; GROUNDWATER SAMPLE TPH CONCENTRATION UNITS IN mg / L AND ALL OTHER GROUNDWATER CONTAMINANT CONCENTRATION UNITS IN Ug/L.
3) SOIL SAMPLING DEPTH INTERVAL IN FEET BELOW GROUND SURFACE; GROUNDWATER MONITORING WELL SCREENED INTERVAL IN MEAN LOW WATER ELEVATIONS (FEET).
4) PLAN NOT TO BE USED FOR DESIGN.
5) LOCATIONS FROM BASE MAP BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI.
6) GRID COORDINATES BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
7) ABANDONED MONITORING WELLS, FORMER SOIL BORING AND SURFACE SOIL SAMPLE LOCATIONS, AND TANK FEATURES SHOWN IN GRAY.

SOIL & GROUNDWATER CONTAMINANTS (JUNE - JULY, 1998); CROSS-SECTION LOCUS PLAN - TANK 45

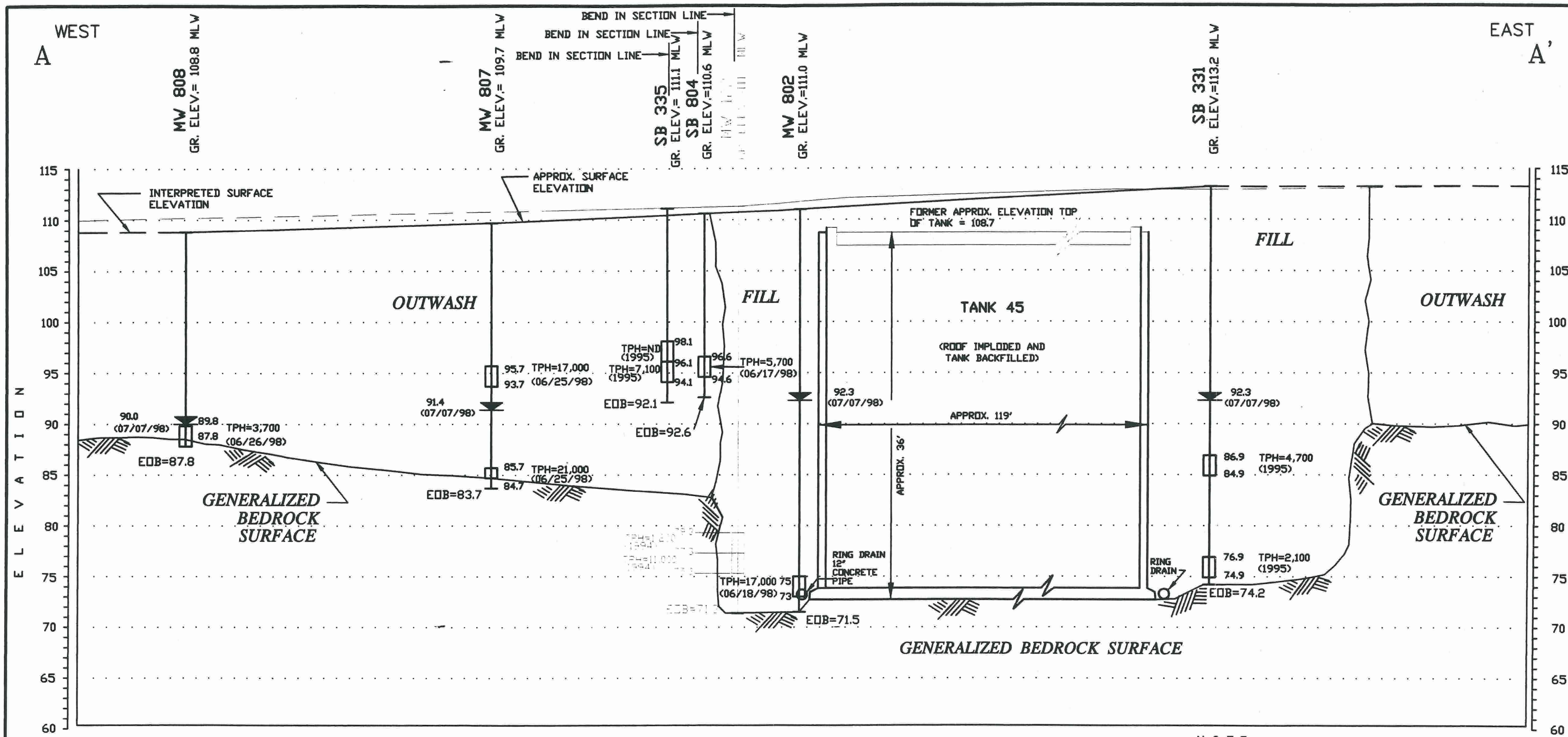
NETC-NEWPORT, RI

SUPPLEMENTAL SITE INVESTIGATION REPORT - TANK FARM 4

DRAWN BY:	R.G. DEWSNAP	REV.:	0
CHECKED BY:	P. SVETAKA	DATE:	JANUARY 29, 1999
SCALE:	1" = 40'	FILE NO.:DWG\NETC\SSI\T45_TPH.DWG	

FIGURE A-2

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(508)658-7899



LEGEND

86.9 / 84.9 — TPH=4,700 (06/25/98) SOIL SAMPLE INTERVAL ANALYZED BY LAB WITH ELEVATION AND TPH CONCENTRATION. (DATE SAMPLED)

91.6 (07/07/98) — WATER TABLE ELEVATION IN FEET (MLW) (DATE MEASURED)

FORMER GROUND ELEVATION

TPH	TOTAL PETROLEUM HYDROCARBON (MG/KG)
MW 103	GROUNDWATER MONITORING WELL NUMBER
SB 205	SOIL BORING NUMBER
ND	NOT DETECTED
EOB	END OF BORING

GRAPHIC SCALE

10 0 10 20

Horizontal & Vertical Scale: 1IN. = 10 FT.

TPH IN SOIL

NOTE:
1) JULY 7, 1998, WATER LEVEL MEASUREMENTS REPORTED ON FIGURE.
2) ALL TPH UNITS IN MILLIGRAMS PER KILOGRAM (MG/KG).
3) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
4) PLAN NOT TO BE USED FOR DESIGN.
5) FORMER SMAPLE LOCATIONS AND TANK FEATURES SHOWN IN GRAY.

CROSS-SECTION A-A' – TANK 45

NETC-NEWPORT, RI

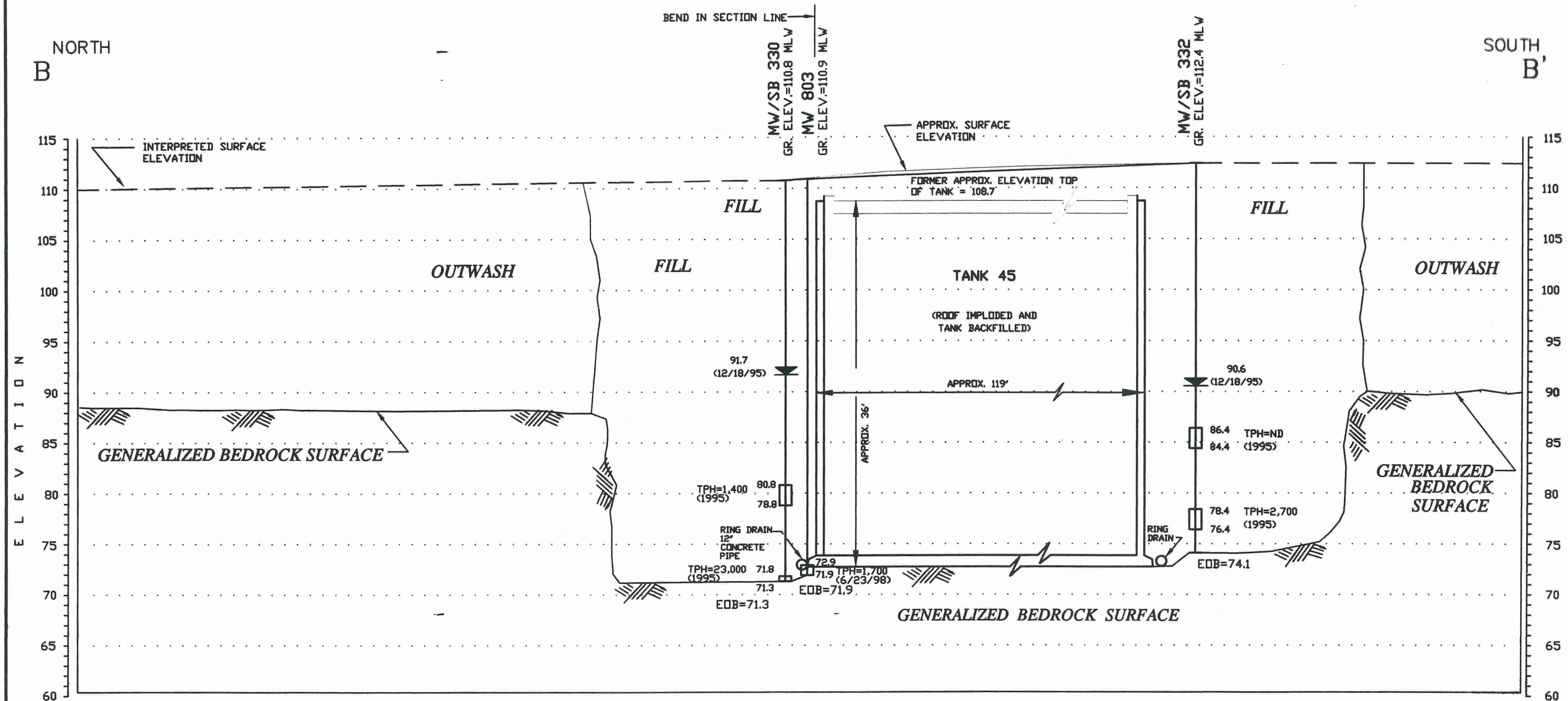
SUPPLEMENTAL SITE INVESTIGATION REPORT – TANK FARM 4

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	R. CLEAVER	DATE:	OCTOBER 20, 1998
SCALE:	1" = 10' (APPROX.)	FILE NO.: DWG\NETC\SSI\XSECT45A.DWG	

FIGURE A-3

TETRA TECH NUS, INC.

55 Jonspin Road Wilmington, MA 01887
(978)658-7899



LEGEND

80.8 TPH=1,400 (1995) 78.8 — SOIL SAMPLE INTERVAL ANALYZED BY LAB WITH ELEVATION AND TPH CONCENTRATION. (DATE SAMPLED)

91.7 (12/18/95) — WATER TABLE ELEVATION IN FEET (MLW) (DATE MEASURED)

——— FORMER GROUND ELEVATION

TPH	TOTAL PETROLEUM HYDROCARBON (MG/KG)
MW 103	GROUNDWATER MONITORING WELL NUMBER
SB 205	SOIL BORING NUMBER
ND	NOT DETECTED
EOB	END OF BORING

GRAPHIC SCALE

10 0 10 20

Horizontal & Vertical Scale: 1 IN. = 10 FT.

N O T E:

1) DEC. 1995, WATER LEVEL MEASUREMENTS REPORTED ON FIGURE.
2) ALL TPH UNITS IN MILLIGRAMS PER KILOGRAM (MG/KG).
3) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
4) PLAN NOT TO BE USED FOR DESIGN.

TPH IN SOIL

CROSS-SECTION B-B' – TANK 45

NETC-NEWPORT, RI

SUPPLEMENTAL SITE INVESTIGATION REPORT – TANK FARM 4

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	R. DEWSNAP	DATE:	OCTOBER 21, 1998
SCALE:	1" = 10' (APPROX.)	FILE NO.:	DWG\NETC\SSI\XSECT45B.DWG

FIGURE A-4

TETRA TECH NUS, INC.

55 Jonspin Road Wilmington, MA 01887
(978)658-7899

LEGEND

55 UNDERGROUND STORAGE TANK

TF5-MW112 MONITORING WELL NUMBER AND LOCATION

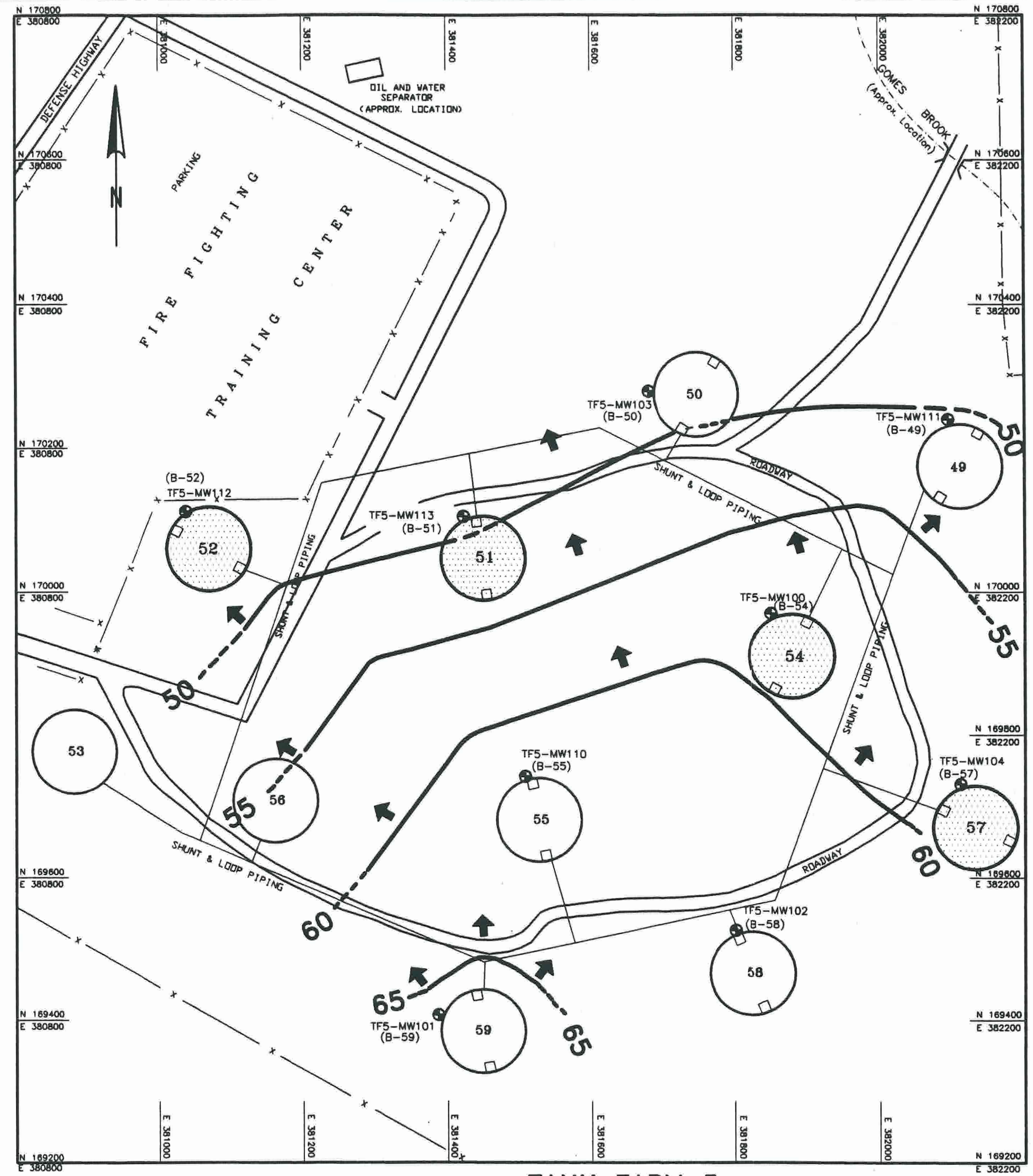
(B-51) BORING NUMBER

APPROXIMATE GROUNDWATER FLOW DIRECTION

30 GROUNDWATER CONTOUR LINE

30 APPROXIMATE GROUNDWATER CONTOUR LINE

—x— FENCE LINE



TANK FARM 5

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)

1 INCH = 200 FT.

NOTES:

1) HORIZONTAL DATUM BASED ON STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).
2) WELL, BORING LOCATIONS FROM MAP BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI.
3) TANKS, ROADWAY, FENCING, CULVERT AND SHUNT & LOOP PIPING LOCATIONS FROM AVAILABLE PLANS AND ARE TO BE CONSIDERED APPROXIMATE.
4) MONITORING WELL, BORING LOCATIONS FROM ACTUAL FIELD SURVEY.
5) GROUNDWATER CONTOUR LINES BASED ON A NOVEMBER 1994 MONITORING EVENT.
6) PLAN NOT TO BE USED FOR DESIGN.

WATER TABLE MAP – NOVEMBER 1994 – TANK FARM 5			
NETC–NEWPORT, RI			
CORRECTIVE ACTION PLAN – TANKS FARM 5			
DRAWN BY:	R.G. DEWSNAP	REV.:	0
CHECKED BY:	D. MACDOUGALL	DATE:	04 AUG 98
SCALE:	1" = 200'	FILE NO.: D:\DWG\NETC\CAP\H2OTAB_A.DWG	

FIGURE A-5

TETRA TECH NUS, INC.

55 Jonspin Road Wilmington, MA 01887
(508)658-7899

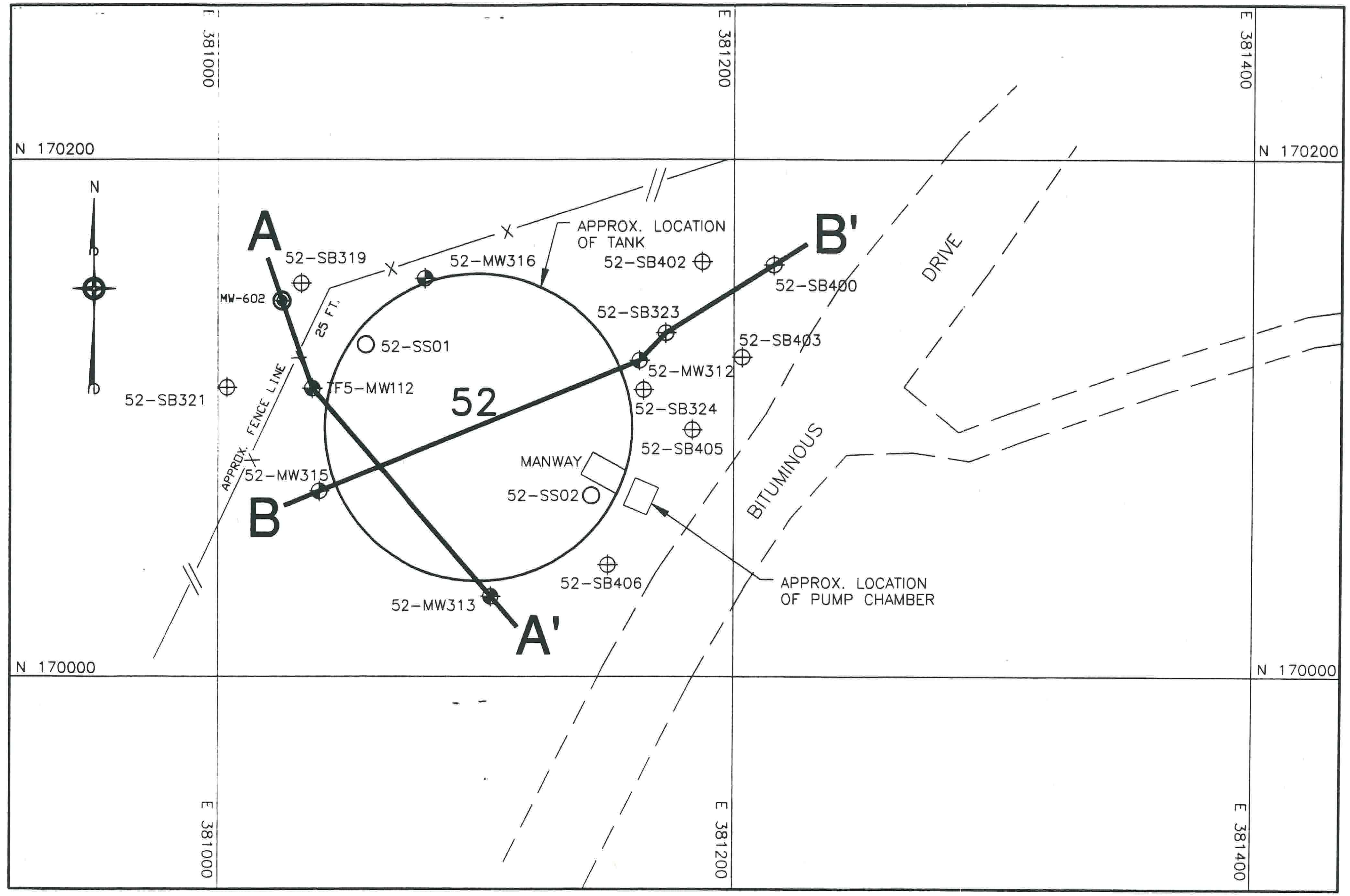
LEGEND

52-SB319 — SOIL BORING LOCATION WITH IDENTIFIER

52-SS01 — SURFACE SOIL SAMPLE LOCATION WITH IDENTIFIER

TF5-MW112 — MONITORING WELL LOCATION WITH IDENTIFIER

MW-602 — LOCATION OF CORRECTIVE ACTION OVERBURDEN MONITORING WELL



GRAPHIC SCALE

25 0 25 50 100

(IN FEET)
1 INCH = 50 FT.

TANK 52 – TANK FARM 5

NOTES:

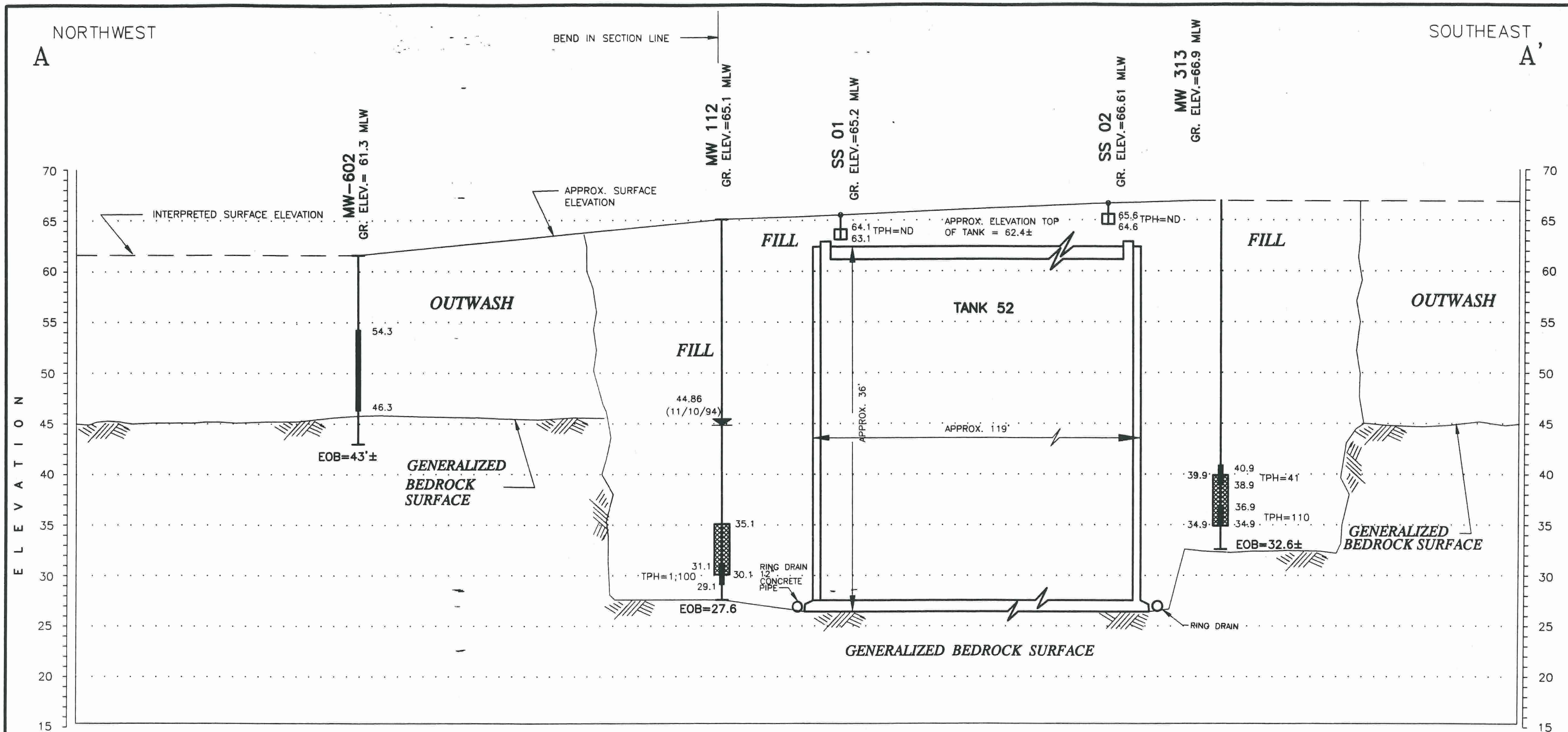
1) PLAN NOT TO BE USED FOR DESIGN.
2) LOCATIONS FROM BASE MAP BY LOUIS FEDERICI & ASSOCIATES, 235 PROMENADE STREET, PROVIDENCE, RI.
3) GRID COORDINATES BASED ON THE STATE OF RHODE ISLAND GRID COORDINATE SYSTEM (NAD 1983).

SAMPLE LOCATIONS AND CROSS-SECTION
LOCUS PLAN – TANK 52 , NETC-NEWPORT, RI
CORRECTIVE ACTION PLAN – TANKS 51, 52, 54 & 57 – TANK FARM 5

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	R. CLEAVER	DATE:	03 AUG 98
SCALE:	1" = 50'	FILE NO.: DWG\NETC\SI-51-57\CAP\FIG_X-4B	

FIGURE A-6

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899



LEGEND

49.3 WATER TABLE ELEVATION IN FEET (MLW)

41.1 / 39.1 TPH=1,600 SOIL SAMPLE INTERVAL ANALYZED BY LAB WITH ELEVATION AND TPH CONCENTRATION.

TPH	TOTAL PETROLEUM HYDROCARBON (MG/KG)
MW 103	GROUNDWATER MONITORING WELL NUMBER
B205	SOIL BORING NUMBER
ND	NOT DETECTED
EOB	END OF BORING
GR. ELEV.	GROUND ELEVATION
SS-01	SURFACE SOIL SAMPLE NUMBER

WELL SCREEN INTERVAL

GRAPHIC SCALE

10 0 10 20

Horizontal & Vertical Scale: 1IN. = 10 FT.

NOTE:

1) NOV. 1994, WATER LEVEL MEASUREMENTS REPORTED ON FIGURE; WATER LEVELS IN OCTOBER, 1995, WERE INFLUENCED BY PUMPING ACTIVITIES.
2) ALL TPH UNITS IN MILLIGRAMS PER KILOGRAM (MG/KG).
3) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
4) PLAN NOT TO BE USED FOR DESIGN.

CROSS-SECTION A-A' - TANK 52

NETC-NEWPORT, RI

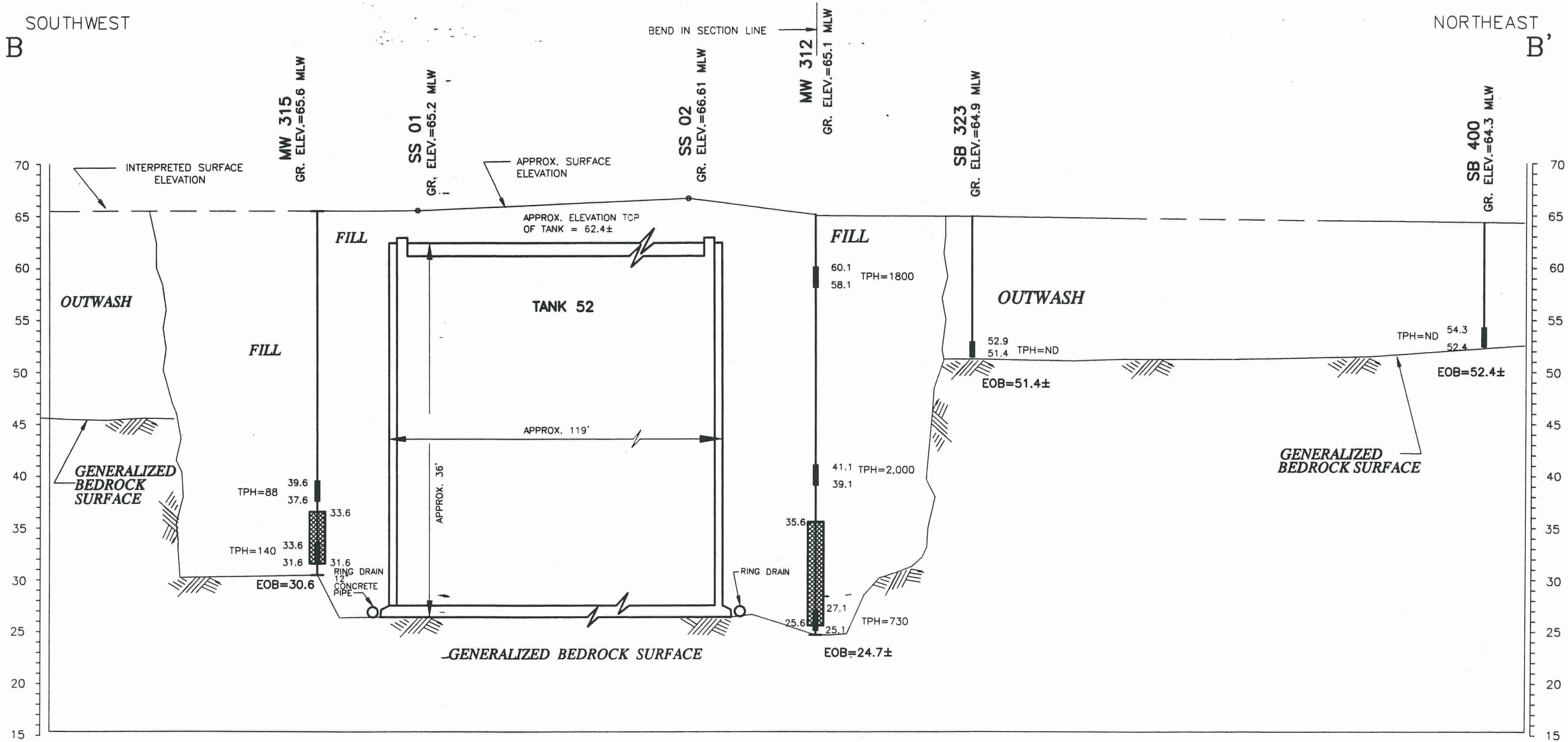
CORRECTIVE ACTION PLAN - TANKS 51, 52, 54 & 57 - TANK FARM 5

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	R. CLEAVER	DATE:	03 AUG 98
SCALE:	1" = 10' (APPROX.)	FILE NO.:	DWG\NETC\SI-51-57\CAP\FIG_X-58

FIGURE A-7

TETRA TECH NUS, INC.

55 Jonspin Road Wilmington, MA 01887
(978)658-7899



LEGEND

49.3 WATER TABLE ELEVATION IN FEET (MLW)

41.1 / 39.1 TPH=1,600 SOIL SAMPLE INTERVAL ANALYZED BY LAB WITH ELEVATION AND TPH CONCENTRATION.

TPH	TOTAL PETROLEUM HYDROCARBON (MG/KG)
MW 103	GROUNDWATER MONITORING WELL NUMBER
B205	SOIL BORING NUMBER
ND	NOT DETECTED
EOB	END OF BORING
GR. ELEV.	GROUND ELEVATION
SS-01	SURFACE SOIL SAMPLE NUMBER

WELL SCREEN INTERVAL

GRAPHIC SCALE

10 0 10 20

Horizontal & Vertical Scale: 1IN. = 10 FT.

NOTE:

1) NOV. 1994, WATER LEVEL MEASUREMENTS REPORTED ON FIGURE; WATER LEVELS IN OCTOBER, 1995, WERE INFLUENCED BY PUMPING ACTIVITIES.
2) ALL TPH UNITS IN MILLIGRAMS PER KILOGRAM (MG/KG).
3) ALL LOCATIONS TO BE CONSIDERED APPROXIMATE.
4) PLAN NOT TO BE USED FOR DESIGN.

CROSS-SECTION B-B' – TANK 52

NETC-NEWPORT, RI

CORRECTIVE ACTION PLAN – TANKS 51, 52, 54, & 57 – TANK FARM 5

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	R. CLEAVER	DATE:	03 AUG 98
SCALE:	1" = 10' (APPROX.)	FILE NO.:	DWG\NETC\SI-51-57\CAP\FIG_X-6B

FIGURE A-8

TETRA TECH NUS, INC.

55 Jonspin Road Wilmington, MA 01887
(978)658-7899

A2 - HISTORICAL CHEMICAL DATA

Table number	Title
5-1	Tank Farm 4 UST Testpitting Petroflag Summary Results
5-2	Tank Farm 5 UST Testpitting Petroflag Summary Results
5-3	Tank Farm 4 UST Testpitting TPH Analytical Data
5-4	Tank Farm 4 UST Testpitting VOC Analytical Data
5-5	Tank Farm 4 UST Testpitting SVOC Analytical Data
5-6	Tank Farm 5 UST Testpitting TPH Analytical Data
5-7	Tank Farm 5 UST Testpitting VOC Analytical Data
5-8	Tank Farm 5 UST Testpitting SVOC Analytical Data
6-1	Tank Farm 4 Main Fuel Transect Petroflag Summary Results
6-2	Tank Farm 5 Main Fuel Transect Line Petroflag Summary Results
6-3	Tank Farm 4 Loop Piping Petroflag Summary Results
6-4	Tank Farm 5 Loop Piping Petroflag Summary Results
6-5	Tank Farm 4 Loop Piping TPH Analytical Data
6-6	Tank Farm 5 Loop Piping TPH Analytical Data
6-7	Tank Farm 4 Loop Piping Removal Action Petroflag Summary Results
6-8	Tank Farm 4 Loop Piping Removal Action Confirmatory Sample TPH Analytical Data
6-9	Tank Farm 4 Loop Piping Removal Action Confirmatory Sample VOC Analytical Data
6-10	Tank Farm 4 Loop Piping Removal Action Confirmatory Sample SVOC Analytical Data
6-11	Tank Farm 5 Oil/Water Separator BSW Piping VOC Analytical Data
6-12	Tank Farm 5 Oil/Water Separator BSW Piping Metals Analytical Data
6-13	Tank Farm 5 Oil/Water Separator BSW Piping PCB Analytical Data
6-14	Tank Farm 5 Oil/Water Separator BSW Piping Wet Chemistry Analytical Data
6-15	Tank Farm 4 Shunt Piping Petroflag Summary Results
6-16	Tank Farm 5 Shunt Piping Petroflag Summary Results
6-17	Tank Farm 4 Shunt Piping TPH Analytical Data
6-18	Tank Farm 4 Shunt Piping VOC Analytical Data
6-19	Tank Farm 4 Shunt Piping SVOC Analytical Data
6-20	Tank Farm 5 Shunt Piping TPH Analytical Data
6-21	Tank Farm 5 Shunt Piping VOC Analytical Data
6-22	Tank Farm 5 Shunt Piping SVOC Analytical Data
6-23	Tank Farm 4 UST 39 Pump Chamber Removal Action Petroflag Summary Results
6-24	Tank Farm 4 UST 39 Pump Chamber Removal Action Confirmatory Sample TPH Analytical Data
6-25	Tank Farm 4 UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data
6-26	Tank Farm 4 UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data
6-27	Tank Farm 5 Exit Piping Petroflag Summary Results
6-28	Tank Farm 5 CT-53 Chamber Removal Action Confirmatory Sample TPH Analytical Data
6-29	Tank Farm 5 CT-53 Chamber Removal Action Confirmatory Sample VOC Analytical Data
6-30	Tank Farm 5 CT-53 Chamber Removal Action Confirmatory Sample SVOC Analytical Data
6-31	Tank Farm 5 CT-53 Chamber Removal Action Confirmatory Sample Metals Analytical Data
6-32	Tank Farm 5 CT-53 Chamber Removal Action Confirmatory Sample PCB Analytical Data
6-33	Tank Farm 5 CT-56 Chamber Removal Action Confirmatory Sample TPH Analytical Data
6-34	Tank Farm 5 CT-56 Chamber Removal Action Confirmatory Sample VOC Analytical Data
6-35	Tank Farm 5 CT-56 Chamber Removal Action Confirmatory Sample SVOC Analytical Data
6-36	Tank Farm 5 CT-56 Chamber Removal Action Confirmatory Sample Metals Analytical Data
6-37	Tank Farm 5 CT-56 Chamber Removal Action Confirmatory Sample PCB Analytical Data
6-38	Tank Farm 5 A-18 Chamber Removal Action Confirmatory Sample TPH Analytical Data
7-1	Tank Farm 4 Transformer Vaults PCB Analytical Data
7-2	Tank Farm 4 Transformer Vaults Chlorinated Benzene Analytical Data
7-3	Tank Farm 5 Transformer Vaults PCB Analytical Data
7-4	Tank Farm 5 Transformer Vaults Chlorinated Benzene Analytical Data
7-5	Tank Farm 4 Substation Lead Analytical Data
7-6	Tank Farm 4 Substation PCB Analytical Data
7-7	Tank Farm 4 Substation Chlorinated Benzene Analytical Data
7-8	Tank Farm 5 Substation Lead Analytical Data
7-9	Tank Farm 5 Substation PCB Analytical Data
7-10	Tank Farm 5 Substation Chlorinated Benzene Analytical Data
7-11	Tank Farm 4 Ruin 1 Demolition TPH Analytical Data
7-12	Tank Farm 4 Ruin 1 Demolition SVOC Analytical Data
7-13	Tank Farm 4 Ruin 1 Demolition Dioxin/Furans Analytical Data

Table number	Title
7-14	Tank Farm 4 Ruin 1 Excavated Backfill TPH Analytical Data
7-15	Tank Farm 4 Ruin 1 Excavated Backfill SVOC Analytical Data
7-16	Tank Farm 4 Ruin 1 Excavated Backfill Dioxin/Furans Analytical Data
7-17	Tank Farm 4 Ruin 2 Demolition TPH Analytical Data
7-18	Tank Farm 4 Ruin 2 Demolition SVOC Analytical Data
7-19	Tank Farm 5 Oil/Water Separator Demolition Petroflag Summary Results
7-20	Tank Farm 5 Oil/Water Separator Demolition VOC Analytical Data
7-21	Tank Farm 5 Oil/Water Separator Demolition SVOC Analytical Data
7-22	Tank Farm 5 Oil/Water Separator Demolition Metals Analytical Data
7-23	Tank Farm 5 Oil/Water Separator Demolition PCB Analytical Data
7-24	Tank Farm 5 Oil/Water Separator Demolition Dioxin/Furans Analytical Data
7-25	Tank Farm 4 Ruin 1 Straight Line Discharge Pipe Sediment TPH Analytical Data
7-26	Tank Farm 4 Ruin 1 Straight Line Discharge Pipe Sediment VOC Analytical Data
7-27	Tank Farm 4 Ruin 1 Straight Line Discharge Pipe Sediment SVOC Analytical Data
7-28	Tank Farm 4 Ruin 1 Straight Line Discharge Pipe Sediment Dioxin/Furans Analytical Data
7-29	Tank Farm 5 Oil/Water Separator Discharge Petroflag Summary Results
7-30	Tank Farm 5 Oil/Water Separator Discharge TPH Analytical Results
7-31	Tank Farm 5 Oil/Water Separator Discharge VOC Analytical Results
7-32	Tank Farm 5 Oil/Water Separator Discharge SVOC Analytical Results
7-33	Tank Farm 5 Oil/Water Separator Discharge Metals Analytical Results
7-34	Tank Farm 5 Oil/Water Separator Discharge PCB Analytical Results
7-35	Tank Farm 5 Oil/Water Separator Discharge Dioxin/Furans Analytical Results
7-36	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Exploratory Petroflag Summary Results
7-37	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Exploratory TPH Analytical Data
7-38	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Exploratory SVOC Analytical Data
7-39	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Exploratory Dioxin/Furans Analytical Data
7-40	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Confirmatory TPH Analytical Data
7-41	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Confirmatory SVOC Analytical Data
7-42	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Confirmatory Dioxin/Furans Analytical Data
7-43	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Re-excavation Confirmatory TPH Analytical Data
7-44	Tank Farm 4 Ruin 1 Straight Discharge Line Outfall Re-excavation Confirmatory SVOC Analytical Data
7-45	Tank Farm 4 Ruin 1 Diagonal Line Discharge TPH Analytical Data
7-46	Tank Farm 4 Ruin 2 Outfall TPH Analytical Data
7-47	Tank Farm 4 Ruin 2 Outfall SVOC Analytical Data
7-48	Tank Farm 4 Ruin 2 Drainage Swale TPH Analytical Data
7-49	Tank Farm 4 Buoy Sheds Lead Analytical Data
7-50	Tank Farm 4 MW-10 TPH Analytical Data
7-51	Tank Farm 4 MW-10 Lead Analytical Data
7-52	Tank Farm 5 Corrugated Shed and Non-Vegetative Area Petroflag Summary Results
7-53	Tank Farm 5 Corrugated Shed and Non-Vegetative Area TPH Analytical Data
7-54	Tank Farm 5 Corrugated Shed and Non-Vegetative Area VOC Analytical Data
7-55	Tank Farm 5 Corrugated Shed and Non-Vegetative Area SVOC Analytical Data
7-56	Tank Farm 5 Corrugated Shed and Non-Vegetative Area Metals Analytical Data
7-57	Tank Farm 5 Corrugated Shed and Non-Vegetative Area PCB Analytical Data
7-58	Tank Farm 5 Corrugated Shed and Non-Vegetative Area Pesticide Analytical Data
7-59	Tank Farm 4 Fenceline Survey TPH Analytical Data
7-60	Tank Farm 4 Fenceline Survey SVOC Analytical Data
7-61	Tank Farm 4 Fenceline Survey Lead Analytical Data
7-62	Tank Farm 4 Fenceline Survey PCB Analytical Data
7-63	Tank Farm 5 Fenceline Survey TPH Analytical Data
7-64	Tank Farm 5 Fenceline Survey SVOC Analytical Data
7-65	Tank Farm 5 Fenceline Survey Lead Analytical Data
7-66	Tank Farm 5 Fenceline Survey PCB Analytical Data

TABLE 5-1
Tank Farm 4 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-40-TP1-B1	Moist	10/27/04	1	75
P-40-TP1-B2	Moist	10/27/04	1	40
P-40-TP1-B2	Saturated	10/27/04	1	30
P-40-TP1-SW1	Dry	10/27/04	1	233
P-40-TP1-SW2	Dry	10/27/04	1	102
P-40-TP2-B1	Sl. Moist	10/27/04	1	27
P-40-TP2-B2	Sl. Moist	10/27/04	1	39
P-40-TP2-SW1	Sl. Moist	10/27/04	1	25
P-40-TP2-SW1	Moist	10/27/04	1	41
P-40-TP2-SW2	Sl. Moist	10/27/04	1	44
P-40-TP3-B1	Dry	10/21/04	1	34
P-40-TP3-B2	Moist	10/21/04	1	30
P-40-TP3-SW1	Dry	10/21/04	1	22
P-40-TP3-SW1	Dry	10/21/04	1	22
P-40-TP3-SW2	Dry	10/21/04	1	20
P-40-TP4-B1	Dry	10/22/04	1	22
P-40-TP4-B2	Dry	10/22/04	1	22
P-40-TP4-B2	Dry	10/22/04	1	28
P-40-TP4-SW1	Dry	10/22/04	1	23
P-40-TP4-SW2	Dry	10/22/04	1	21
P-40-TPA-B1	Dry	10/22/04	1	42
P-40-TPA-B2	Dry	10/22/04	1	89
P-40-TPA-B3	Dry	10/22/04	1	32
P-40-TPA-B4	Dry	10/22/04	1	27
P-40-TPA-SW1	Dry	10/22/04	1	16
P-40-TPA-SW2	Dry	10/22/04	1	20
P-40-TPB-B1	Sl. Moist	10/22/04	1	23
P-40-TPB-B2	Dry	10/22/04	1	27
P-40-TPB-B3	Dry	10/22/04	1	27
P-40-TPB-B4	Dry	10/22/04	1	28
P-40-TPB-SW1	Dry	10/22/04	1	26
P-40-TPB-SW2	Dry	10/22/04	1	37
P-40-TPC-B1	Moist	10/22/04	1	20
P-40-TPC-B2	Dry	10/22/04	1	32
P-40-TPC-B3	Moist	10/22/04	1	37
P-40-TPC-B4	Dry	10/22/04	1	26
P-40-TPC-SW1	Dry	10/22/04	1	28
P-40-TPC-SW2	Moist	10/22/04	1	33
P-40-TPC-SW3	Dry	10/22/04	1	30
P-40-TPD-B1	Sl. Moist	10/22/04	1	14
P-40-TPD-B2	Dry	10/22/04	1	18
P-40-TPD-B3	Dry	10/22/04	1	184
P-40-TPD-B4	Dry	10/22/04	1	18
P-40-TPD-SW1	Dry	10/22/04	1	22
P-40-TPD-SW2	Moist	10/22/04	1	14
P-42-TP1-B1	Dry	10/22/04	1	82
P-42-TP1-B1	Dry	10/22/04	1	90
P-42-TP1-B1	Moist	10/22/04	1	37

TABLE 5-1
Tank Farm 4 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-42-TP1-B2	Sl. Moist	10/22/04	1	84
P-42-TP1-SW1	Dry	10/22/04	1	61
P-42-TP1-SW2	Dry	10/22/04	1	36
P-42-TP2-B1	Dry	10/22/04	1	54
P-42-TP2-B2	Dry	10/22/04	1	8
P-42-TP2-SW1	Dry	10/22/04	1	26
P-42-TP2-SW1	Dry	10/22/04	1	18
P-42-TP2-SW1	Moist	10/22/04	1	12
P-42-TP2-SW2	Dry	10/22/04	1	16
P-42-TP3-B1	Dry	10/22/04	1	20
P-42-TP3-B2	Dry	10/22/04	1	26
P-42-TP3-SW1	Dry	10/22/04	1	263
P-42-TP3-SW1	Dry	10/22/04	1	28
P-42-TP3-SW2	Dry	10/22/04	1	44
P-42-TP4-B1	Dry	10/25/04	1	28
P-42-TP4-B2	Dry	10/25/04	1	23
P-42-TP4-SW1	Dry	10/25/04	1	25
P-42-TP4-SW1	Dry	10/25/04	1	27
P-42-TP4-SW1	Dry	10/25/04	1	20
P-42-TP4-SW2	Dry	10/25/04	1	23
P-42-TPA-B1	Dry	10/25/04	1	27
P-42-TPA-B2	Dry	10/25/04	1	22
P-42-TPA-B3	Dry	10/25/04	1	27
P-42-TPA-B4	Dry	10/25/04	1	32
P-42-TPA-SW1	Dry	10/25/04	1	27
P-42-TPA-SW2	Dry	10/25/04	1	22
P-42-TPB-B1	Dry	10/25/04	1	9
P-42-TPB-B2	Dry	10/25/04	1	14
P-42-TPB-B3	Dry	10/25/04	1	25
P-42-TPB-B4	Dry	10/25/04	1	9
P-42-TPB-SW1	Dry	10/25/04	1	19
P-42-TPB-SW2	Sl. Moist	10/25/04	1	92
P-42-TPC-B1	Sl. Moist	10/25/04	1	9
P-42-TPC-B2	Dry	10/25/04	1	9
P-42-TPC-B3	Dry	10/25/04	1	16
P-42-TPC-B4	Dry	10/25/04	1	25
P-42-TPC-SW1	Dry	10/25/04	1	29
P-42-TPC-SW2	Dry	10/25/04	1	16
P-42-TPD-B1	Sl. Moist	10/25/04	1	21
P-42-TPD-B2	Dry	10/25/04	1	25
P-42-TPD-B3	Dry	10/25/04	1	26
P-42-TPD-B4	Dry	10/25/04	1	20
P-42-TPD-SW1	Dry	10/25/04	1	14
P-42-TPD-SW2	Dry	10/25/04	1	22
P-44-TP1-B1	Dry	11/3/04	1	168
P-44-TP1-B1	Dry	11/3/04	1.2	136
P-44-TP1-B1	Slightly Moist	10/29/04	1	83
P-44-TP1-B2	Dry	10/29/04	1	28

TABLE 5-1
Tank Farm 4 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-44-TP1-SW1	Dry	10/29/04	1	21
P-44-TP1-SW2	Dry	10/29/04	1	50
P-44-TP1-SW2	Dry	10/29/04	1.1	102
P-44-TP1-SW2	Dry	10/29/04	1	249
P-44-TP2-B1	Dry	10/29/04	1	35
P-44-TP2-B2	Dry	10/29/04	1	20
P-44-TP2-SW1	Dry	10/29/04	1	22
P-44-TP2-SW2	Moist	10/29/04	1	19
P-44-TP3-B1	Dry	10/29/04	1	50
P-44-TP3-B2	Dry	10/29/04	1	28
P-44-TP3-SW1	Dry	10/29/04	1	30
P-44-TP3-SW2	Moist	10/29/04	1	11
P-44-TP3-SW2	Dry	10/29/04	1.3	12
P-44-TP3-SW2	Saturated	10/29/04	1	40
P-44-TP4-B1	Dry	10/29/04	1	35
P-44-TP4-B2	Dry	10/29/04	1	29
P-44-TP4-SW1	Dry	10/29/04	1	28
P-44-TP4-SW2	Dry	10/29/04	1	41
P-44-TPA-B1	Dry	10/29/04	1	26
P-44-TPA-B2	Dry	10/29/04	1	25
P-44-TPA-B3	Dry	10/29/04	1	19
P-44-TPA-B4	Dry	10/29/04	1	26
P-44-TPA-SW1	Slightly Moist	10/29/04	1	28
P-44-TPA-SW2	Dry	10/29/04	1	29
P-44-TPB-B1	Dry	10/29/04	1	51
P-44-TPB-B2	Dry	10/29/04	1	41
P-44-TPB-B3	Dry	10/29/04	1	22
P-44-TPB-B4	Dry	10/29/04	1	61
P-44-TPB-SW1	Dry	10/29/04	1	42
P-44-TPB-SW2	Dry	10/29/04	1	22
P-44-TPC-B1	Dry	10/29/04	1	35
P-44-TPC-B2	Slightly Moist	10/29/04	1	47
P-44-TPC-B3	Dry	10/29/04	1	33
P-44-TPC-B4	Dry	10/29/04	1	34
P-44-TPC-SW1	Slightly Moist	10/29/04	1	39
P-44-TPC-SW2	Dry	10/29/04	1	34
P-44-TPD-B1	Dry	10/29/04	1	40
P-44-TPD-B2	Dry	10/29/04	1	32
P-44-TPD-B3	Dry	10/29/04	1	28
P-44-TPD-B4	Slightly Moist	10/29/04	1	27
P-44-TPD-SW1	Dry	10/29/04	1	9
P-44-TPD-SW1	Dry	10/29/04	1.2	23
P-44-TPD-SW1	Moist	10/29/04	1	28
P-44-TPD-SW2	Dry	10/29/04	1	40
P-45-TP1-B1	Dry	10/29/04	1	30
P-45-TP1-B2	Dry	10/29/04	1	44
P-45-TP1-SW1	Dry	10/29/04	1	83
P-45-TP1-SW2	Dry	10/29/04	1	70

TABLE 5-1
Tank Farm 4 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-45-TP1-SW2	Dry	10/29/04	1	70
P-45-TP1-SW2	Dry	10/29/04	1	25
P-45-TP2-B1	Dry	10/29/04	1	34
P-45-TP2-B2	Moist	10/29/04	1	26
P-45-TP2-SW1	Dry	10/29/04	1	28
P-45-TP2-SW1	Moist	10/29/04	1	29
P-45-TP2-SW2	Dry	10/29/04	1	37
P-45-TP3-B1	Dry	10/23/04	1	42
P-45-TP3-B2	Dry	10/23/04	1	58
P-45-TP3-B2	Moist	10/23/04	1	23
P-45-TP3-B2	Dry	10/23/04	1	23
P-45-TP3-SW1	Dry	10/23/04	1	19
P-45-TP3-SW2	Dry	10/23/04	1	15
P-45-TP4-B1	Dry	10/23/04	1	27
P-45-TP4-B2	Dry	10/23/04	1	36
P-45-TP4-SW1	Dry	10/23/04	1	23
P-45-TP4-SW2	Saturated	10/23/04	1	22
P-45-TP4-SW2	Dry	10/23/04	1	15
P-45-TP4-SW2	Dry	10/23/04	1	103
P-45-TPA-B1	Dry	10/23/04	1	27
P-45-TPA-B2	Dry	10/23/04	1	23
P-45-TPA-B3	Dry	10/23/04	1	28
P-45-TPA-B4	Dry	10/23/04	1	36
P-45-TPA-SW1	Dry	10/23/04	1	41
P-45-TPA-SW2	Dry	10/23/04	1	29
P-45-TPB-B1	Dry	10/23/04	1	33
P-45-TPB-B2	Dry	10/23/04	1	37
P-45-TPB-B3	Dry	10/23/04	1	28
P-45-TPB-B4	Dry	10/23/04	1	29
P-45-TPB-SW1	Dry	10/23/04	1	47
P-45-TPB-SW2	Dry	10/23/04	1	28
P-45-TPC-B1	Dry	10/23/04	1	27
P-45-TPC-B2	Dry	10/23/04	1	34
P-45-TPC-B3	Dry	10/23/04	1	33
P-45-TPC-B4	Dry	10/23/04	1	16
P-45-TPC-SW1	Dry	10/23/04	1	21
P-45-TPC-SW2	Dry	10/23/04	1	34
P-45-TPD-B1	Dry	10/23/04	1	29
P-45-TPD-B2	Dry	10/23/04	1	27
P-45-TPD-B3	Dry	10/23/04	1	33
P-45-TPD-B4	Dry	10/23/04	1	22
P-45-TPD-SW1	Dry	10/23/04	1	28
P-45-TPD-SW2	Dry	10/23/04	1	29
P-48-TP1-B1	Dry	10/23/04	1	43
P-48-TP1-B2	Dry	10/23/04	1	60
P-48-TP1-SW1	Dry	10/23/04	1	83
P-48-TP1-SW2	Dry	10/23/04	1	18
P-48-TP1-SW2	Dry	10/23/04	1	188

TABLE 5-1
Tank Farm 4 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-48-TP2-B1	Dry	10/23/04	1	23
P-48-TP2-B2	Dry	10/23/04	1	16
P-48-TP2-B2	Dry	10/23/04	1	32
P-48-TP2-B2	Dry	10/23/04	1	28
P-48-TP2-SW1	Dry	10/23/04	1	23
P-48-TP2-SW2	Dry	10/23/04	1	13
P-48-TP3-B1	Dry	10/23/04	1	19
P-48-TP3-B2	Dry	10/23/04	1	19
P-48-TP3-SW1	Dry	10/23/04	1	14
P-48-TP3-SW1	Moist	10/23/04	1	23
P-48-TP3-SW2	Moist	10/23/04	1	28
P-48-TP4-B1	Dry	10/23/04	1	18
P-48-TP4-B2	Dry	10/23/04	1	71
P-48-TP4-SW1	Dry	10/23/04	1	12
P-48-TP4-SW2	Dry	10/23/04	1	22
P-48-TP4-SW2	Dry	10/23/04	1	13
P-48-TP4-SW2	Dry	10/23/04	1	46
P-48-TPA-B1	Dry	10/23/04	1	23
P-48-TPA-B2	Dry	10/23/04	1	18
P-48-TPA-B3	Dry	10/23/04	1	21
P-48-TPA-B4	Slightly Moist	10/23/04	1	23
P-48-TPA-SW1	Dry	10/28/04	1	27
P-48-TPA-SW2	Dry	10/28/04	1	19
P-48-TPB-B1	Dry	10/28/04	1	26
P-48-TPB-B2	Dry	10/28/04	1	23
P-48-TPB-B3	Dry	10/28/04	1	27
P-48-TPB-B4	Moist	10/28/04	1	23
P-48-TPB-SW1	Dry	10/28/04	1	18
P-48-TPB-SW2	Dry	10/28/04	1	20
P-48-TPC-B1	Dry	10/28/04	1	35
P-48-TPC-B2	Dry	10/28/04	1	30
P-48-TPC-B3	Dry	10/28/04	1	36
P-48-TPC-B4	Dry	10/28/04	1	23
P-48-TPC-SW1	Dry	10/28/04	1	23
P-48-TPC-SW2	Dry	10/28/04	1	21
P-48-TPD-B1	Dry	10/28/04	1	35
P-48-TPD-B2	Dry	10/28/04	1	28
P-48-TPD-B3	Dry	10/28/04	1	26
P-48-TPD-B4	Dry	10/28/04	1	27
P-48-TPD-SW1	Dry	10/28/04	1	25
P-48-TPD-SW2	Dry	10/28/04	1	22

TABLE 5-2
Tank Farm 5 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-49-TP1-B1	Dry	10/22/04	1	134
P-49-TP1-B2	Moist	11/12/04	1	59
P-49-TP1-B2	Moist	11/12/04	1.2	53
P-49-TP1-B2	Dry	11/12/04	1	67
P-49-TP1-SW1	Dry	11/12/04	1	36
P-49-TP1-SW2	Dry	11/12/04	1	139
P-49-TP2-B1	Dry	10/22/04	1	42
P-49-TP2-B2	Dry	10/22/04	1	36
P-49-TP2-SW1	Dry	10/22/04	1	30
P-49-TP2-SW2	Dry	10/22/04	1	41
P-49-TP3-B1	Dry	10/22/04	1	35
P-49-TP3-B2	Dry	10/22/04	1	29
P-49-TP3-SW1	Dry	10/22/04	1	30
P-49-TP3-SW2	Dry	10/22/04	1	11
P-49-TP4-B1	Dry	10/22/04	1	33
P-49-TP4-B2	Moist	10/22/04	1	41
P-49-TP4-SW1	Dry	10/22/04	1	32
P-49-TP4-SW2	Dry	10/22/04	1	22
P-49-TPA-B1	Dry	10/22/04	1	41
P-49-TPA-B2	Dry	10/22/04	1	26
P-49-TPA-B3	Dry	10/22/04	1	36
P-49-TPA-B4	Dry	10/22/04	1	29
P-49-TPA-SW1	Dry	10/22/04	1	22
P-49-TPA-SW2	Dry	10/22/04	1	35
P-49-TPB-B1	Dry	10/22/04	1	29
P-49-TPB-B2	Moist	10/22/04	1	28
P-49-TPB-B3	Dry	10/22/04	1	30
P-49-TPB-B4	Dry	10/22/04	1	27
P-49-TPB-SW1	Dry	10/22/04	1	32
P-49-TPB-SW2	Dry	10/22/04	1	27
P-49-TPC-B1	Dry	10/22/04	1	36
P-49-TPC-B2	Dry	10/22/04	1	27
P-49-TPC-B3	Dry	10/22/04	1	22
P-49-TPC-B4	Dry	10/22/04	1	5
P-49-TPC-SW1	Dry	10/22/04	1	37
P-49-TPC-SW2	Dry	10/22/04	1	25
P-49-TPD-B1	Dry	10/22/04	1	43
P-49-TPD-B2	Dry	10/22/04	1	37
P-49-TPD-B3	Dry	10/22/04	1	37
P-49-TPD-B4	Dry	10/22/04	1	21
P-49-TPD-SW1	Dry	10/22/04	1	29
P-49-TPD-SW2	Dry	10/22/04	1	50
P-50-TP1-B1	Dry	10/22/04	1	253
P-50-TP1-B2	Dry	10/22/04	1	252
P-50-TP1-SW1	Dry	10/22/04	1	155
P-50-TP1-SW2	Dry	10/22/04	1	82
P-50-TP1-SW2	Dry	10/22/04	1	62
P-50-TP1-SW2	Moist	10/22/04	1.1	220

TABLE 5-2
Tank Farm 5 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-50-TP2-B1	Dry	10/22/04	1	48
P-50-TP2-B2	Dry	10/22/04	1	43
P-50-TP2-SW1	Dry	10/22/04	1	562
P-50-TP2-SW2	Dry	10/22/04	1	183
P-50-TP3-B1	Dry	11/8/04	1	51
P-50-TP3-B1	Dry	11/8/04	1	10
P-50-TP3-B1	Dry	11/8/04	1.1	31
P-50-TP3-B2	Moist	11/8/04	1	72
P-50-TP3-B2	Dry	11/8/04	1	1293
P-50-TP3-B2	Dry	11/8/04	1.3	EEEE
P-50-TP3-SW1	Dry	11/8/04	1	30
P-50-TP3-SW2	Dry	11/8/04	1	28
P-50-TP4-B1	Moist	11/8/04	1	1869
P-50-TP4-B2	Saturated	11/8/04	1	EEEE
P-50-TP4-SW1	Dry	11/8/04	1	20
P-50-TP4-SW2	Dry	11/8/04	1	EEEE
P-50-TPA-B1	Moist	11/5/04	1	565
P-50-TPA-B2	Moist	11/5/04	1	6
P-50-TPA-B3	Dry	11/5/04	1	EEEE
P-50-TPA-B4	Moist	11/5/04	1	258
P-50-TPA-SW1	Dry	11/5/04	1	20
P-50-TPA-SW2	Dry	11/5/04	1	18
P-50-TPB-B1	Dry	11/5/04	1	29
P-50-TPB-B2	Dry	11/5/04	1	18
P-50-TPB-B3	Dry	11/5/04	1	36
P-50-TPB-B4	Dry	11/5/04	1	103
P-50-TPB-SW1	Dry	11/5/04	1	1477
P-50-TPB-SW2	Dry	11/5/04	1	343
P-50-TPC-B1	Slightly Moist	11/5/04	1	25
P-50-TPC-B2	Slightly Moist	11/5/04	1	11
P-50-TPC-B3	Slightly Moist	11/5/04	1	25
P-50-TPC-B4	Dry	11/5/04	1	26
P-50-TPC-SW1	Dry	11/5/04	1	26
P-50-TPC-SW2	Dry	11/5/04	1	22
P-50-TPD-B1	Moist	11/5/04	1	40
P-50-TPD-B2	Moist	11/5/04	1	1248
P-50-TPD-B3	Dry	11/5/04	1	EEEE
P-50-TPD-B4	Dry	11/5/04	1	EEEE
P-50-TPD-SW1	Dry	11/5/04	1	25
P-50-TPD-SW2	Moist	11/5/04	1	44
P-51-TP2-B1	Dry	11/5/04	1	36
P-51-TP2-B2	Dry	11/5/04	1	40
P-51-TP2-SW1	Dry	11/5/04	1	32
P-51-TP2-SW2	Dry	11/5/04	1	27
P-51-TP3-B1	Dry	11/5/04	1	35
P-51-TP3-B2	Dry	11/5/04	1	34
P-51-TP3-SW1	Dry	11/5/04	1	37
P-51-TP3-SW2	Dry	11/5/04	1	48

TABLE 5-2
Tank Farm 5 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-51-TP4-B1	Dry	11/3/04	1	34
P-51-TP4-B2	Dry	11/3/04	1	40
P-51-TP4-SW1	Dry	11/3/04	1	40
P-51-TP4-SW2	Dry	11/3/04	1	34
P-51-TPB-B1	Dry	11/3/04	1	459
P-51-TPB-B2	Dry	11/3/04	1	34
P-51-TPB-B3	Dry	11/3/04	1	30
P-51-TPB-B4	Slightly Moist	11/3/04	1	26
P-51-TPB-SW1	Dry	11/3/04	1	26
P-51-TPB-SW2	Dry	11/3/04	1	29
P-51-TPC-B1	Dry	11/3/04	1	46
P-51-TPC-B2	Dry	11/3/04	1	37
P-51-TPC-B3	Dry	11/3/04	1	48
P-51-TPC-B4	Dry	11/3/04	1	39
P-51-TPC-SW1	Dry	11/3/04	1	33
P-51-TPC-SW2	Dry	11/3/04	1	41
P-51-TPD-B1	Dry	11/3/04	1	39
P-51-TPD-B2	Dry	11/3/04	1	30
P-51-TPD-B3	Dry	11/3/04	1	35
P-51-TPD-B4	Dry	11/3/04	1	32
P-51-TPD-SW1	Dry	11/3/04	1	33
P-51-TPD-SW2	Dry	11/3/04	1	33
P-54-TP1-B1	Dry	11/3/04	1	11
P-54-TP1-B2	Dry	11/3/04	1	46
P-54-TP1-SW1	Dry	11/3/04	1	29
P-54-TP1-SW2	Dry	11/3/04	1	41
P-54-TP2-B1	Dry	11/3/04	1	7
P-54-TP2-B2	Dry	11/3/04	1	4
P-54-TP2-SW1	Dry	11/3/04	1	0
P-54-TP2-SW2	Dry	11/3/04	1	9
P-54-TP3-B1	Saturated	11/3/04	1	18
P-54-TP3-B2	Dry	11/3/04	1	0
P-54-TP3-SW1	Dry	11/3/04	1	20
P-54-TP3-SW2	Dry	11/3/04	1	43
P-54-TP4-B1	Moist	11/3/04	1	0
P-54-TP4-B2	Saturated	11/3/04	1	0
P-54-TP4-SW1	Moist	11/3/04	1	0
P-54-TP4-SW2	Dry	11/3/04	1	18
P-54-TPA-B1	Dry	11/3/04	1	28
P-54-TPA-B2	Dry	11/3/04	1	29
P-54-TPA-B3	Dry	11/3/04	1	34
P-54-TPA-B4	Dry	11/3/04	1	33
P-54-TPA-SW1	Dry	11/3/04	1	57
P-54-TPA-SW1	Dry	11/3/04	1	1
P-54-TPA-SW1	Dry	11/3/04	1.1	6
P-54-TPA-SW2	Dry	11/3/04	1	22
P-54-TPB-B1	Dry	10/30/04	1	11
P-54-TPB-B2	Dry	10/30/04	1	20

TABLE 5-2
Tank Farm 5 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-54-TPB-B3	Dry	10/30/04	1	12
P-54-TPB-B4	Dry	10/30/04	1	19
P-54-TPB-SW1	Dry	10/30/04	1	6
P-54-TPB-SW2	Dry	10/30/04	1	5
P-54-TPC-B1	Moist	10/30/04	1	13
P-54-TPC-B2	Moist	10/30/04	1	63
P-54-TPC-B2	Dry	10/30/04	1	9
P-54-TPC-B2	Dry	10/30/04	1.2	12
P-54-TPC-B3	Dry	10/30/04	1	18
P-54-TPC-B4	Dry	10/30/04	1	21
P-54-TPC-SW1	Dry	10/30/04	1	0
P-54-TPC-SW2	Dry	10/30/04	1	55
P-54-TPC-SW2	Dry	10/30/04	1	12
P-54-TPC-SW2	Dry	10/30/04	1.2	23
P-54-TPD-B1	Dry	10/30/04	1	0
P-54-TPD-B2	Dry	10/30/04	1	22
P-54-TPD-B3	Dry	10/30/04	1	0
P-54-TPD-B4	Saturated	10/30/04	1	0
P-54-TPD-SW1	Dry	10/30/04	1	18
P-54-TPD-SW2	Dry	10/30/04	1	16
P-58-TP1-B1	Dry	10/30/04	1	84
P-58-TP1-B1	Dry	10/30/04	1	25
P-58-TP1-B1	Dry	10/30/04	1.3	216
P-58-TP1-B2	Dry	10/30/04	1	20
P-58-TP1-SW1	Dry	10/30/04	1	8
P-58-TP1-SW2	Dry	10/30/04	1	130
P-58-TP2-B1	Dry	10/30/04	1	0
P-58-TP2-B1	Dry	10/30/04	1.3	25
P-58-TP2-B1	Dry	10/30/04	1	62
P-58-TP2-B2	Dry	10/30/04	1	0
P-58-TP2-B2	Dry	10/30/04	1.2	0
P-58-TP2-B2	Dry	10/30/04	1	56
P-58-TP2-SW1	Dry	10/30/04	1	32
P-58-TP2-SW2	Dry	10/30/04	1	29
P-58-TP3-B1	Dry	10/30/04	1	190
P-58-TP3-B2	Dry	10/30/04	1	19
P-58-TP3-SW1	Dry	10/30/04	1	36
P-58-TP3-SW2	Dry	10/30/04	1	27
P-58-TP4-B1	Dry	11/1/04	1	32
P-58-TP4-B2	Moist	11/1/04	1	13
P-58-TP4-SW1	Dry	11/1/04	1	44
P-58-TP4-SW2	Dry	11/1/04	1	21
P-58-TPA-B1	Dry	11/1/04	1	47
P-58-TPA-B2	Dry	11/1/04	1	0
P-58-TPA-B3	Saturated	11/1/04	1	1
P-58-TPA-B4	Saturated	11/1/04	1	0
P-58-TPA-SW1	Dry	11/1/04	1	769
P-58-TPA-SW2	Dry	11/1/04	1	7

TABLE 5-2
Tank Farm 5 UST Testpitting
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-58-TPB-B1	Dry	11/1/04	1	25
P-58-TPB-B2	Dry	11/1/04	1	36
P-58-TPB-B3	Dry	11/1/04	1	22
P-58-TPB-B4	Dry	11/1/04	1	28
P-58-TPB-SW1	Dry	11/1/04	1	39
P-58-TPB-SW2	Slightly Moist	11/1/04	1	25
P-58-TPC-B1	Dry	11/1/04	1	25
P-58-TPC-B2	Dry	11/1/04	1	26
P-58-TPC-B3	Dry	11/1/04	1	18
P-58-TPC-B4	Dry	11/1/04	1	23
P-58-TPC-SW1	Dry	11/1/04	1	19
P-58-TPC-SW2	Dry	11/1/04	1	33
P-58-TPD-B1	Slightly Moist	11/1/04	1	22
P-58-TPD-B2	Moist	11/1/04	1	46
P-58-TPD-B3	Moist	11/1/04	1	21
P-58-TPD-B4	Moist	11/1/04	1	26
P-58-TPD-SW1	Dry	11/1/04	1	48
P-58-TPD-SW2	Dry	11/1/04	1	19

TABLE 5-3
Tank Farm 4 UST Testpitting
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-42-TP3-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		69	500	N	N	10/26/04	SW8015	52882-1	
L-40-TPD-B3	Soil	Total Petroleum Hydrocarbons (TPH)		24	500	N	N	10/26/04	SW8015	52882-2	
L-40-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		133	500	N	N	10/26/04	SW8015	52882-3	
L-44-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/10/04	SW8015	52957-1	
TF4-L-40-TP4-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	10/26/04	SW8015	52882-4	
TF4-L-40-TP3-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		19	500	N	N	10/26/04	SW8015	52882-5	
TF4-L-40-TP2-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		16	500	N	N	10/26/04	SW8015	52882-6	
TF4-L-40-TP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	18	500	N	N	10/27/04	SW8015	52882-7	
TF4-L-42-TP3-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		18	500	N	N	10/27/04	SW8015	52882-8	
TF4-L-48-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	10/27/04	SW8015	52894-1	
TF4-L-48-TP4-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	18	500	N	N	10/27/04	SW8015	52894-2	
TF4-L-48-TP3-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	10/27/04	SW8015	52894-3	
TF4-L-48-TP2-B2	Soil	Total Petroleum Hydrocarbons (TPH)		18	500	N	N	10/27/04	SW8015	52894-4	
TF4-L-45-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		37	500	N	N	10/27/04	SW8015	52894-5	
TF4-L-45-TP4-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	10/27/04	SW8015	52894-6	
TF4-L-45-TP3-B2	Soil	Total Petroleum Hydrocarbons (TPH)		24	500	N	N	10/27/04	SW8015	52894-7	
TF4-L-45-TP2-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	18	500	N	N	10/28/04	SW8015	52894-8	
TF4-L-42-TP4-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	15	500	N	N	10/28/04	SW8015	52894-9	
TF4-L-42-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		44	500	N	N	10/28/04	SW8015	52894-10	
TF4-L-42-TP2-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	10/28/04	SW8015	52894-11	
TF4-L-44-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		67	500	N	N	11/09/04	SW8015	52957-2	
TF4-L-44-TP3-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	19	500	N	N	11/09/04	SW8015	52957-3	
TF4-L-44-TPD-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		31	500	N	N	11/09/04	SW8015	52957-4	
L-48-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		35	500	N	N	11/06/04	SW8015	52915-1	
L-40-TPA-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	20	500	N	N	11/06/04	SW8015	52966-1	
L-44-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		188	500	N	N	11/06/04	SW8015	52966-2	
L-44-TPB-B4	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	11/06/04	SW8015	52966-3	
L-48-TP4-B2	Soil	Total Petroleum Hydrocarbons (TPH)		16	500	N	N	11/06/04	SW8015	52966-4	
L-48-TP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)		46	500	N	N	11/06/04	SW8015	52966-5	
L-48-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		20	500	N	N	11/06/04	SW8015	52966-6	
L-42-TP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)		24	500	N	N	11/06/04	SW8015	52966-7	
L-42-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		16	500	N	N	11/06/04	SW8015	52966-8	
L-42-TPB-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	11/06/04	SW8015	52966-9	
L-42-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		31	500	N	N	11/06/04	SW8015	52966-10	
L-45-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		18	500	N	N	11/06/04	SW8015	52966-11	
L-45-TP4-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	16	500	N	N	11/06/04	SW8015	52966-12	
L-44-TP1-B1D	Soil	Total Petroleum Hydrocarbons (TPH)		156	500	N	N	11/06/04	SW8016	52966-13	
L-40-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		31	500	N	N	1/4/2005	SW8015	53346-1	
L-40-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		74	500	N	N	1/4/2005	SW8015	53346-2	
L-40-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/4/2005	SW8015	53346-3	

TABLE 5-4
Tank Farm 4 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-40-TP1-SW1	Soil	Acetone		0.095	7800	N	N	11/08/2004	SW8260B	596828	67-64-1
		Benzene	U	0.0048	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0048	10	N	N				75-27-4
		Bromoform	U	0.0048	81	N	N				75-25-2
		Bromomethane	U	0.0048	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0048	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0048	210	N	N				108-90-7
		Chloroform	U	0.0048	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0048	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0048	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0048	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0048	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0048	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0048	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0048	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0048	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0048	71	N	N				100-41-4
		Ethylene dibromode	U	0.0048	0.01	N	N				
		Isopropyl benzene	U	0.0048	27	N	N				98-82-8
		Methyl ethyl ketone		0.01	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0048	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0048	390	N	N				1634-04-4
		Methylene chloride	U	0.0048	45	N	N				75-09-2
		Styrene	U	0.0048	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0048	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0048	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0048	12	N	N				127-18-4
		Toluene	U	0.0048	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0048	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0048	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0048	13	N	N				79-01-6
		Vinyl chloride	U	0.0048	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0048	110	N	N				1330-20-7

TABLE 5-4
Tank Farm 4 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-44-TP1-B1	Soil	Acetone		0.044	7800	N	N	11/16/2004	SW8260B	598082	67-64-1
		Benzene	U	0.0045	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0045	10	N	N				75-27-4
		Bromoform	U	0.0045	81	N	N				75-25-2
		Bromomethane	U	0.0045	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0045	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0045	210	N	N				108-90-7
		Chloroform	U	0.0045	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0045	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0045	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0045	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0045	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0045	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0045	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0045	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0045	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0045	71	N	N				100-41-4
		Ethylene dibromode	U	0.0045	0.01	N	N				
		Isopropyl benzene	U	0.0045	27	N	N				98-82-8
		Methyl ethyl ketone		0.0049	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0045	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0045	390	N	N				1634-04-4
		Methylene chloride	J	0.00088	45	N	N				75-09-2
		Styrene	U	0.0045	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0045	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0045	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0045	12	N	N				127-18-4
		Toluene	U	0.0045	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0045	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0045	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0045	13	N	N				79-01-6
		Vinyl chloride	U	0.0045	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0045	110	N	N				1330-20-7

TABLE 5-4
Tank Farm 4 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-44-TP1-B1D	Soil	Acetone		0.071	7800	N	N	11/16/2004	SW8260B	598082	67-64-1
		Benzene	U	0.0041	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0041	10	N	N				75-27-4
		Bromoform	U	0.0041	81	N	N				75-25-2
		Bromomethane	U	0.0041	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0041	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0041	210	N	N				108-90-7
		Chloroform	U	0.0041	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0041	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0041	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0041	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0041	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0041	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0041	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0041	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0041	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0041	71	N	N				100-41-4
		Ethylene dibromode	U	0.0041	0.01	N	N				
		Isopropyl benzene	U	0.0041	27	N	N				98-82-8
		Methyl ethyl ketone		0.011	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0041	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0041	390	N	N				1634-04-4
		Methylene chloride	J	0.00076	45	N	N				75-09-2
		Styrene	U	0.0041	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0041	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0041	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0041	12	N	N				127-18-4
		Toluene	U	0.0041	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0041	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0041	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0041	13	N	N				79-01-6
		Vinyl chloride	U	0.0041	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0041	110	N	N				1330-20-7

TABLE 5-5
Tank Farm 4 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-40-TP1-SW1	Soil	Acenaphthene	U	0.32	43	N	N	11/10/2004	SW8270	52968-3	83-32-9
		Acenaphthylene	U	0.32	23	N	N				208-96-8
		Anthracene	U	0.32	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.32	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.32	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.32	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.32	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.32	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.32	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.32	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.32	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.32	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.32	310	N	N				106-47-8
		2-Chlorophenol	U	0.32	50	N	N				95-57-8
		Chrysene	U	0.32	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.32	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.32	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.32	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.32	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.32	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.32	30	N	N				120-83-2
		Diethyl phthalate	U	0.32	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.32	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.32	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.32	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.32	0.9	N	N				121-14-2
		Fluoranthene	U	0.32	20	N	N				206-44-0
		Fluorene	U	0.32	28	N	N				86-73-7
		Hexachlorobenzene	U	0.32	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.32	8.2	N	N				87-68-3
		Hexachloroethane	U	0.32	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.32	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.32	123	N	N				91-57-6
		Naphthalene	U	0.32	54	N	N				91-20-3
		Pentachlorophenol	U	0.32	5.3	N	N				87-86-5
		Phenanthrene	U	0.32	40	N	N				85-01-8
		Phenol	U	0.32	6000	N	N				108-95-2
		Pyrene	U	0.32	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.32	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.32	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.32	58	N	N				88-06-2

TABLE 5-5
Tank Farm 4 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-44-TP1-B1	Soil	Acenaphthene	U	0.29	43	N	N	11/13/2000	SW8270	53013-1	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 5-5
Tank Farm 4 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-44-TP1-B1D	Soil	Acenaphthene	U	0.28	43	N	N	11/13/2000	SW8270	53013-2	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 5-6
Tank Farm 5 UST Testpitting
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-49-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		207	500	N	N	11/10/04	SW8015	52938-1	
L-49-TP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	11/12/04	SW8015	53016-4	
L-49-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		33	500	N	N	11/10/04	SW8015	52938-2	
L-58-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		45	500	N	N	11/10/04	SW8015	52938-3	
L-58-TP3-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/10/04	SW8015	52938-4	
L-58-TPA-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		64	500	N	N	11/04/04	SW8015	52957-1	
L-58-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		36	500	N	N	11/12/04	SW8015	53016-8	
L-58-TP2-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/12/04	SW8015	53016-9	
L-58-TP2-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	11/12/04	SW8015	53016-10	
L-54-TPA-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/12/04	SW8015	53016-5	
L-54-TPC-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	11/12/04	SW8015	53016-6	
L-54-TPC-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/12/04	SW8015	53016-7	
L-51-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		228	500	N	N	11/12/04	SW8015	53016-1	
L-51-TP1-SW1D	Soil	Total Petroleum Hydrocarbons (TPH)		142	500	N	N	11/13/04	SW8015	53016-2	
L-51-TPA-B1	Soil	Total Petroleum Hydrocarbons (TPH)		92	500	N	N	11/11/04	SW8015	53002-15	
L-51-TPB-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/11/04	SW8015	53016-3	
L-50-TP1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		59	500	N	N	11/13/04	SW8015	53016-11	
L-50-TPB-B4	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	11/11/04	SW8015	53002-7	
L-50-TPA-B1	Soil	Total Petroleum Hydrocarbons (TPH)		373	500	N	N	11/10/04	SW8015	53002-1	
L-50-TPA-B3	Soil	Total Petroleum Hydrocarbons (TPH)		2460	500	Y	N	11/12/04	SW8015	53002-2	
L-50-TPA-B4	Soil	Total Petroleum Hydrocarbons (TPH)		3610	500	Y	N	11/12/04	SW8015	53002-3	
L-50-TPA-B4D	Soil	Total Petroleum Hydrocarbons (TPH)		4780	500	Y	N	11/12/04	SW8015	53002-16	
L-50-TP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		73	500	N	N	11/11/04	SW8015	53002-4	
L-50-TP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)		935	500	Y	N	11/12/04	SW8015	53002-5	
L-50-TP1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)		45	500	N	N	11/11/04	SW8015	53002-6	
L-50-TPB-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		553	500	Y	N	11/11/04	SW8015	53002-8	
L-50-TP2-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		71	500	N	N	11/11/04	SW8015	53002-9	
L-50-TPD-B2	Soil	Total Petroleum Hydrocarbons (TPH)		554	500	Y	N	11/11/04	SW8015	53002-10	
L-50-TP4-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/11/04	SW8015	53002-13	
L-50-TPD-B3	Soil	Total Petroleum Hydrocarbons (TPH)		6400	500	Y	N	11/12/04	SW8015	53002-11	
L-50-TPD-B4	Soil	Total Petroleum Hydrocarbons (TPH)		8720	500	Y	N	11/12/04	SW8015	53002-12	
L-50-TP4-B2	Soil	Total Petroleum Hydrocarbons (TPH)		21800	500	Y	N	11/12/04	SW8015	53002-14	
L-50-TP3-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/12/04	SW8015	53016-12	
L-50-TP3-B2	Soil	Total Petroleum Hydrocarbons (TPH)		1700	500	Y	N	11/13/04	SW8015	53016-13	
L-50-TP3-B1D	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/15/04	SW8015	53016-14	
L-50-TPD-B3	Soil	Total Petroleum Hydrocarbons (TPH)		6400	500	Y	N	11/12/2004	SW8015		
L-50-TPD-B4	Soil	Total Petroleum Hydrocarbons (TPH)		8720	500	Y	N	11/12/2004	SW8015		
L-50-TP4-B2	Soil	Total Petroleum Hydrocarbons (TPH)		21800	500	Y	N	11/12/2004	SW8015		
L-50-TP3-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	11/12/2004	SW8015		
L-50-TP3-B2	Soil	Total Petroleum Hydrocarbons (TPH)		1700	500	Y	N	11/13/2004	SW8015		
TF5-L-51-TPC-SWB	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/6/2005	SW8015	53360-1	
TF5-L-51-TPC-BA	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/6/2005	SW8015	53360-2	
TF5-L-51-TPC-SWA	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/6/2005	SW8015	53360-3	

TABLE 5-6
Tank Farm 5 UST Testpitting
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-58-TPD-SWC	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-4	
TF5-L-58-TPD-SWA	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-5	
TF5-L-58-TPD-SWB	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-6	
TF5-L-58-TP3-SWB	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-7	
TF5-L-58-TP3-SWA	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-8	
TF5-L-58-TP3-SWC	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-9	
TF5-L-49-TPB-SWA	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-10	
TF5-L-49-TPB-SWB	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/6/2005	SW8015	53360-11	
TF5-L-49-TPB-SWB-D	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-12	
TF5-L-49-TPB-SWC	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-13	
TF5-L-54-TPD-SWC	Soil	Total Petroleum Hydrocarbons (TPH)		52	500	N	N	1/6/2005	SW8015	53360-14	
TF5-L-54-TPD-SWB	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/6/2005	SW8015	53360-15	
TF5-L-54-TPD-SWA	Soil	Total Petroleum Hydrocarbons (TPH)		38	500	N	N	1/6/2005	SW8015	53360-16	

TABLE 5-7
Tank Farm 5 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-49-TP1-B1	Soil	Acetone		0.043	7800	N	N	11/15/2004	SW8260B	598075	67-64-1
		Benzene	U	0.0044	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0044	10	N	N				75-27-4
		Bromoform	U	0.0044	81	N	N				75-25-2
		Bromomethane	U	0.0044	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0044	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0044	210	N	N				108-90-7
		Chloroform	U	0.0044	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0044	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0044	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0044	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0044	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0044	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0044	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0044	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0044	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0044	71	N	N				100-41-4
		Ethylene dibromode	U	0.0044	0.01	N	N				
		Isopropyl benzene	U	0.0044	27	N	N				98-82-8
		Methyl ethyl ketone		0.0058	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0044	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0044	390	N	N				1634-04-4
		Methylene chloride	U	0.0044	45	N	N				75-09-2
		Styrene	U	0.0044	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0044	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0044	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0044	12	N	N				127-18-4
		Toluene	U	0.0044	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0044	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0044	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0044	13	N	N				79-01-6
		Vinyl chloride	U	0.0044	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0044	110	N	N				1330-20-7

TABLE 5-7
Tank Farm 5 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-50-TPA-B1	Soil	Acetone	U	0.51	7800	N	N	11/22/2004	SW8260B	599186	67-64-1
		Benzene	U	0.51	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.51	10	N	N				75-27-4
		Bromoform	U	0.51	81	N	N				75-25-2
		Bromomethane	U	0.51	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.51	1.5	N	N				56-23-5
		Chlorobenzene	U	0.51	210	N	N				108-90-7
		Chloroform	U	0.51	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.51	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.51	0.5	Y	Y				96-12-8
		1,1-Dichloroethane	U	0.51	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.51	0.2	Y	Y				75-35-4
		1,2-Dichloroethane	U	0.51	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.51	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.51	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.51	1.9	N	N				78-87-5
		Ethyl benzene	U	0.51	71	N	N				100-41-4
		Ethylene dibromode	U	0.51	0.01	Y	Y				
		Isopropyl benzene	U	0.51	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.51	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.51	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.51	390	N	N				1634-04-4
		Methylene chloride	U	0.51	45	N	N				75-09-2
		Styrene	U	0.51	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.51	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.51	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.51	12	N	N				127-18-4
		Toluene	U	0.51	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.51	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.51	3.6	N	N				79-00-5
		Trichloroethylene	U	0.51	13	N	N				79-01-6
		Vinyl chloride	U	0.51	0.02	Y	Y				75-01-4
		Xylenes (total)	U	0.51	110	N	N				1330-20-7

TABLE 5-7
Tank Farm 5 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-51-TP1-SW1	Soil	Acetone		0.043	7800	N	N	11/22/2004	SW8260B	599188	67-64-1
		Benzene	U	0.0046	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0046	10	N	N				75-27-4
		Bromoform	U	0.0046	81	N	N				75-25-2
		Bromomethane	U	0.0046	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0046	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0046	210	N	N				108-90-7
		Chloroform	U	0.0046	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0046	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0046	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0046	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0046	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0046	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0046	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0046	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0046	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0046	71	N	N				100-41-4
		Ethylene dibromode	U	0.0046	0.01	N	N				
		Isopropyl benzene	U	0.0046	27	N	N				98-82-8
		Methyl ethyl ketone		0.0092	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0046	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0046	390	N	N				1634-04-4
		Methylene chloride	U	0.0046	45	N	N				75-09-2
		Styrene	U	0.0046	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0046	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0046	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0046	12	N	N				127-18-4
		Toluene	U	0.0046	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0046	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0046	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0046	13	N	N				79-01-6
		Vinyl chloride	U	0.0046	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0046	110	N	N				1330-20-7

TABLE 5-7
Tank Farm 5 UST Testpitting
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-51-TP1-SW1D	Soil	Acetone		0.023	7800	N	N	11/22/2004	SW8260B	599188	67-64-1
		Benzene	U	0.0041	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0041	10	N	N				75-27-4
		Bromoform	U	0.0041	81	N	N				75-25-2
		Bromomethane	U	0.0041	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0041	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0041	210	N	N				108-90-7
		Chloroform	U	0.0041	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0041	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0041	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0041	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0041	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0041	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0041	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0041	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0041	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0041	71	N	N				100-41-4
		Ethylene dibromode	U	0.0041	0.01	N	N				
		Isopropyl benzene	U	0.0041	27	N	N				98-82-8
		Methyl ethyl ketone		0.0053	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0041	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0041	390	N	N				1634-04-4
		Methylene chloride	U	0.0041	45	N	N				75-09-2
		Styrene	U	0.0041	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0041	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0041	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0041	12	N	N				127-18-4
		Toluene	U	0.0041	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0041	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0041	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0041	13	N	N				79-01-6
		Vinyl chloride	U	0.0041	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0041	110	N	N				1330-20-7

TABLE 5-8
Tank Farm 5 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-49-TP1-B1	Soil	Acenaphthene	U	0.28	43	N	N	11/13/2000	SW8270	53012-1	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	J	0.18	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	J	0.234	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	J	0.19	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	J	0.179	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	J	0.181	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 5-8
Tank Farm 5 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-50-TPA-B1	Soil	Acenaphthene	U	0.28	43	N	N	11/23/2000	SW8270	53038-1	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 5-8
Tank Farm 5 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-51-TP1-SW1	Soil	Acenaphthene	U	0.27	43	N	N	11/23/2000	SW8270	53038-3	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.27	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.27	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.27	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.27	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	U	0.27	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene	U	0.27	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	U	0.27	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene	J	0.145	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 5-8
Tank Farm 5 UST Testpitting
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-51-TP1-SW1D	Soil	Acenaphthene	U	0.27	43	N	N	11/23/2000	SW8270	53038-4	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.27	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.27	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.27	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.27	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	U	0.27	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene	J	0.166	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	U	0.27	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene	J	0.195	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 6-1
Tank Farm 4 Main Fuel Transect
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-CC-01-6-8	Moist	11/17/04	1	23
TF4-P-CC-02-6-8	Dry	11/17/04	1	18
TF4-P-CC-03-8-10	Dry	11/17/04	1	75
TF4-P-CC-04-9-11	Dry	11/17/04	1	16
TF4-P-CC-05-9-11	Slightly Moist	11/17/04	1	16
TF4-P-CC-06-6-8	Slightly Moist	11/17/04	1	15
TF4-P-CC-07-6-8	Dry	11/17/04	1	13
TF4-P-CC-08-8-10	Slightly Moist	11/17/04	1	18
TF4-P-CC-09-8-10	Dry	11/17/04	1	7
TF4-P-CC-10-8-10	Slightly Moist	11/17/04	1	12
TF4-P-CC-11-8-10	Slightly Moist	11/18/04	1	24
TF4-P-CC-12-7-9	Dry	11/18/04	1	28
TF4-P-CC-13-5-7	Slightly Moist	11/18/04	1	23
TF4-P-CC-14-9-11	Dry	11/18/04	1	37
TF4-P-CC-15-6-8	Dry	11/18/04	1	25
TF4-P-CC-16-9-11	Dry	11/18/04	1	28
TF4-P-CC-17-9-11	Dry	11/18/04	1	41
TF4-P-CC-18-9-11	Dry	11/18/04	1	27
TF4-P-CC-19-8.5-10.5	Dry	12/30/04	1	10
TF4-P-CC-20-8.5-10.5	Dry	12/30/04	1	16

TABLE 6-2
Tank Farm 5 Main Fuel Transect
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-CC-10-5-7	Moist	Date Analyzed	1	2
TF5-P-CC-11-5-7	Dry	Date Analyzed	1	9
TF5-P-CC-12-5-7	Dry	Date Analyzed	1	16
TF5-P-CC-13-5-7	Moist	Date Analyzed	1	5
TF5-P-CC-14-4.5-6.5	Moist	Date Analyzed	1	9
TF5-P-CC-15-4.5-6.5	Dry	12/15/04	1	17
TF5-P-CC-15-4.5-6.5	Dry	12/15/04	1	15
TF5-P-CC-1-5-7	Moist	12/15/04	1	0
TF5-P-CC-1-5-7	Moist	12/13/04	1	45
TF5-P-CC-16-5-7	Dry	12/15/04	1	0
TF5-P-CC-16-5-7	Dry	12/15/04	1	5
TF5-P-CC-17-5-7	Dry	12/15/04	1	2
TF5-P-CC-18-4-6	Moist	12/15/04	1	0
TF5-P-CC-19-4-6	Moist	12/15/04	1	17
TF5-P-CC-20-4-6	Moist	12/15/04	1	0
TF5-P-CC-21-4-6	Dry	12/15/04	1	1
TF5-P-CC-21-4-6	Moist	12/15/04	1	0
TF5-P-CC-2-4.5-6.5	Moist	12/15/04	1	14
TF5-P-CC-2-4-6	Dry	12/15/04	1	13
TF5-P-CC-3-4-6	Moist	12/15/04	1	0
TF5-P-CC-4-5-7	Saturated	12/15/04	1	0
TF5-P-CC-4-5-7	Moist	12/15/04	1	0
TF5-P-CC-5-5-7	Saturated	12/15/04	1	0
TF5-P-CC-5-5-7	Saturated	12/30/04	1	14
TF5-P-CC-5-5-7	Moist	12/30/04	1	0
TF5-P-CC-6-5.5-7.5	Moist	12/30/04	1	5
TF5-P-CC-8-5.5-7.5	Dry	12/15/04	1	9
TF5-P-CC-8-5.5-7.5	Dry	12/15/04	1	5
TF5-P-CC-9-5.5-7.5	Dry	12/15/04	1	21

TABLE 6-3
Tank Farm 4 Loop Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-BSW-1-4-6	Saturated	12/21/04	1	37
TF4-P-BSW-2-4-6	Dry	12/21/04	1	38
TF4-P-BSW-5-4-6	Dry	12/21/04	1	31
TF4-P-BSW-6-4-6	Dry	12/21/04	1	25
TF4-P-BSW-7-4-6	Dry	12/21/04	1	25
TF4-P-BSW-8-4-6	Dry	12/23/04	1	10
TF4-P-BSW-9-4-6	Dry	12/23/04	1	32
TF4-P-BSW-10-4-6	Dry	12/23/04	1	10
TF4-P-BSW-11-4-6	Dry	12/23/04	1	0
TF4-P-BSW-12-4-6	Dry	12/23/04	1	3
TF4-P-BSW-13-4-6	Dry	12/23/04	1	4
TF4-P-BSW-14-4-6	Dry	12/23/04	1	22
TF4-P-BSW-15-4.5-6.5	Dry	12/23/04	1	834
TF4-P-BSW-16-4-6	Dry	12/23/04	1	4
TF4-P-BSW-17-4.5-6.5	Moist	12/23/04	1	2
TF4-P-BSW-18-4.5-6.5	Moist	12/23/04	1	1926
TF4-P-BSW-19-4.5-6.5	Dry	12/23/04	1	0
TF4-P-BSW-20-4-6	Dry	12/23/04	1	6
TF4-P-BSW-21-4-6	Dry	12/23/04	1	9
TF4-P-BSW-22-4-6	Dry	12/23/04	1	0
TF4-P-BSW-23-4-6	Dry	12/23/04	1	542
TF4-P-BSW-24-4-6	Dry	12/23/04	1	1
TF4-P-BSW-25-4-6	Dry	12/23/04	1	0
TF4-P-BSW-26-4-6	Dry	12/23/04	1	0
TF4-P-BSW-27-4.5-6.5	Dry	12/23/04	1	13
TF4-P-BSW-28-4-6	Dry	12/23/04	1	0
TF4-P-BSW-29-4.5-6.5	Dry	12/23/04	1	3
TF4-P-BSW-29-7-9	Dry	12/30/04	1	28
TF4-P-BSW-30-4.5-6.5	Dry	12/23/04	1	20
TF4-P-BSW-30-7-9	Dry	12/30/04	1	11
TF4-P-BSW-31-5-7	Dry	12/23/04	1	0
TF4-P-BSW-32-5-7	Dry	12/23/04	1	53
TF4-P-BSW-33-5-7	Dry	12/23/04	1	9
TF4-P-BSW-34-5-7	Dry	12/23/04	1	0
TF4-P-BSW-3-4-6	Moist	12/21/04	1	29
TF4-P-BSW-35-5-7	Dry	12/23/04	1	0
TF4-P-BSW-36-5-7	Dry	12/30/04	1	451
TF4-P-BSW-37-5.5-7.5	Saturated	12/30/04	1	2
TF4-P-BSW-38-6-8	Dry	12/30/04	1	8
TF4-P-BSW-39-5-7	Moist	12/30/04	1	0
TF4-P-BSW-40-4-6	Moist	12/30/04	1	12
TF4-P-BSW-41-4-6	Moist	12/30/04	1	23
TF4-P-BSW-42-4-6	Moist	12/30/04	1	27
TF4-P-BSW-43-4-6	Moist	12/30/04	1	5
TF4-P-BSW-44-4.5-6.5	Dry	12/30/04	1	10
TF4-P-BSW-4-4-6	Dry	12/21/04	1	32
TF4-P-BSW-45-4.5-6.5	Moist	12/30/04	1	57
TF4-P-BSW-46-5-7	Dry	12/30/04	1	28

TABLE 6-3
Tank Farm 4 Loop Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-BSW-47-5-7	Moist	12/30/04	1	61
TF4-P-BSW-48-5-7	Saturated	12/30/04	1	39
TF4-P-BSW-49-5.5-7.5	Dry	12/30/04	1	32
TF4-P-BSW-50-5-7	Dry	12/30/04	1	157
TF4-P-BSW-51-5.5-7.5	Dry	12/30/04	1	25
TF4-P-BSW-52-5.5-7.5	Moist	12/30/04	1	29
TF4-P-BSW-53-6-8	Dry	12/30/04	1	16
TF4-P-BSW-54-6-8	Dry	12/30/04	1	6
TF4-P-FL-1-5.5-7.5	Moist	12/17/04	1	0
TF4-P-FL-2-6-8	Moist	12/17/04	1	77
TF4-P-FL-4-6.5-8.5	Dry	12/17/04	1	45
TF4-P-FL-5-6.5-8.5	Dry	12/17/04	1	0
TF4-P-FL-7-6.5-8.5	Dry	12/17/04	1	0
TF4-P-FL-8-6.5-8.5	Dry	12/17/04	1	0
TF4-P-FL-9-6.5-8.5	Dry	12/17/04	1	0
TF4-P-FL-10-6.5-8.5	Dry	12/17/04	1	0
TF4-P-FL-11-6-8	Dry	12/17/04	1	7
TF4-P-FL-13-5.5-7.5	Dry	12/17/04	1	12
TF4-P-FL-14-5.5-7.5	Dry	12/17/04	1	0
TF4-P-FL-16-5.5-7.5	Dry	12/17/04	1	34
TF4-P-FL-17-5.5-7.5	Dry	12/17/04	1	0
TF4-P-FL-18-5.5-7.5	Dry	12/17/04	1	0
TF4-P-FL-19-6-8	Dry	12/17/04	1	0
TF4-P-FL-20-6-8	Dry	12/17/04	1	0
TF4-P-FL-21-6-8	Dry	12/17/04	1	0
TF4-P-FL-22-6-8	Dry	12/17/04	1	0
TF4-P-FL-23-6-8	Dry	12/17/04	1	0
TF4-P-FL-24-6-8	Dry	12/21/04	1	28
TF4-P-FL-25-5.5-7.5	Moist	12/21/04	1	22
TF4-P-FL-26-5.5-7.5	Moist	12/21/04	1	16
TF4-P-FL-27-5.5-7.5	Dry	12/21/04	1	38
TF4-P-FL-28-5.5-7.5	Dry	12/21/04	1	34
TF4-P-FL-29-5.5-7.5	Dry	12/21/04	1	12
TF4-P-FL-30-5.5-7.5	Dry	12/21/04	1	37
TF4-P-FL-31-5.5-7.5	Dry	12/21/04	1	22
TF4-P-FL-32-5.5-7.5	Dry	12/21/04	1	19
TF4-P-FL-33-5-7	Dry	12/21/04	1	208
TF4-P-FL-34-4-6	Dry	12/21/04	1	92
TF4-P-FL-35-3-5	Dry	12/21/04	1	44
TF4-P-FL-36-2.5-4.5	Dry	12/21/04	1	47
TF4-P-FL-37-2.5-4.5	Dry	12/21/04	1	172
TF4-P-FL-38-4-6	Dry	12/21/04	1	31
TF4-P-FL-39-5-7	Dry	12/21/04	1	52
TF4-P-FL-40-5-7	Dry	12/21/04	1	288
TF4-P-FL-41-6.5-8.5	Dry	12/21/04	1	98
TF4-P-FL-42-6-8	Dry	12/21/04	1	27
TF4-P-FL-43-5-7	Dry	12/21/04	1	8
TF4-P-FL-44-5-7	Dry	12/21/04	1	109

TABLE 6-3
Tank Farm 4 Loop Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-FL-45-5-7	Dry	12/21/04	1	23
TF4-P-FL-46-5-7	Dry	12/21/04	1	45
TF4-P-FL-47-4.5-6.5	Dry	12/21/04	1	24
TF4-P-FL-48-4.5-6.5	Dry	12/21/04	1	130
TF4-P-FL-49-4.5-6.5	Dry	12/21/04	1	23
TF4-P-FL-50-4.5-6.5	Dry	12/21/04	1	9
TF4-P-FL-51-4.5-6.5	Dry	12/21/04	1	16
TF4-P-FL-52-4.5-6.5	Dry	12/21/04	1	19
TF4-P-FL-53-4.5-6.5	Dry	12/21/04	1	20
TF4-P-FL-54-4.5-6.5	Dry	12/21/04	1	50
TF4-P-FL-55-4.5-6.5	Dry	12/21/04	1	88
TF4-P-FL-56-4.5-6.5	Dry	12/21/04	1	48
TF4-P-FL-57-4.5-6.5	Moist	12/21/04	1	70
TF4-P-FL-58-5-7	Dry	12/21/04	1	89
TF4-P-FL-59-5.5-7.5	Dry	12/21/04	1	71
TF4-P-FL-60-5.5-7.5	Moist	12/21/04	1	31

TABLE 6-4
Tank Farm 4 Loop Piping Testpitting
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-FL-33-5-7	Soil	Total Petroleum Hydrocarbons (TPH)	U	20	500	N	N	1/3/2005	EPA8015	53330-4	
TF4-L-FL-37-2.5-4.5	Soil	Total Petroleum Hydrocarbons (TPH)		31	500	N	N	1/3/2005	EPA8015	53330-5	
TF4-L-FL-40-6.5-8.5	Soil	Total Petroleum Hydrocarbons (TPH)		100	500	N	N	1/3/2005	EPA8015	53330-6	
TF4-L-FL-44-5-7	Soil	Total Petroleum Hydrocarbons (TPH)	U	20	500	N	N	1/3/2005	EPA8015	53330-7	
TF4-L-FL-48-4.5-6.5	Soil	Total Petroleum Hydrocarbons (TPH)		36	500	N	N	1/3/2005	EPA8015	53330-8	
TF4-L-BSW-23-4-6	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/3/2005	EPA8015	53330-10	
TF4-L-BSW-36-5-7	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/4/2005	EPA8015	53346-4	
TF4-L-BSW-50-5-7	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/4/2005	EPA8015	53346-5	

TABLE 6-5
Tank Farm 5 Loop Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-BSW-1-6-8	Slightly Moist	11/18/04	1	30
TF5-P-BSW-2-6-8	Dry	11/18/04	1	27
TF5-P-BSW-3-6-8	Slightly Moist	11/18/04	1	33
TF5-P-BSW-4-6-8	Moist	11/18/04	1	38
TF5-P-BSW-5-6-8	Slightly Moist	11/18/04	1	28
TF5-P-BSW-6-4-6	Dry	12/15/04	1	0
TF5-P-BSW-7-4-6	Dry	12/15/04	1	0
TF5-P-BSW-8-4-6	Dry	12/15/04	1	27
TF5-P-BSW-9-4-6	Dry	12/15/04	1	29
TF5-P-BSW-10-4-6	Dry	12/15/04	1	0
TF5-P-BSW-11-5-7	Dry	12/30/04	1	22
TF5-P-BSW-12-4.5-6.5	Dry	12/30/04	1	5
TF5-P-BSW-13-4-6	Dry	12/30/04	1	22
TF5-P-BSW-14-3-5	Dry	12/15/04	1	0
TF5-P-BSW-15-6-8	Dry	12/15/04	1	14
TF5-P-BSW-16-6-8	Saturated	12/15/04	1	0
TF5-P-BSW-16-6-8	Dry	12/30/04	1	39
TF5-P-BSW-17-6-8	Moist	12/15/04	1	2043
TF5-P-BSW-18-6-8	Saturated	12/15/04	1	0
TF5-P-BSW-19-6-8	Dry	12/15/04	1	114
TF5-P-BSW-20-6-8	Dry	12/15/04	1	0
TF5-P-BSW-21-6-8	Dry	12/15/04	1	0
TF5-P-BSW-22-6-8	Dry	12/15/04	1	0
TF5-P-BSW-23-6.5-8.5	Moist	12/15/04	1	0
TF5-P-BSW-24-6.5-8.5	Dry	12/15/04	1	24
TF5-P-BSW-25-7-9	Dry	12/15/04	1	1
TF5-P-BSW-26-6.5-8.5	Moist	12/15/04	1	0
TF5-P-BSW-27-6-8	Moist	12/15/04	1	0
TF5-P-BSW-28-6-8	Dry	12/15/04	1	12
TF5-P-BSW-31-6.5-8.5	Dry	12/30/04	1	37
TF5-P-BSW-32-6.5-8.5	Dry	12/30/04	1	28
TF5-P-BSW-33-6.5-8.5	Dry	12/30/04	1	59
TF5-P-BSW-34-6-8	Dry	12/30/04	1	16
TF5-P-BSW-35-6-8	Dry	12/30/04	1	12
TF5-P-BSW-36-6-8	Dry	12/30/04	1	17
TF5-P-BSW-37-5.5-7.5	Dry	12/30/04	1	12
TF5-P-BSW-38-8.5-10.5	Dry	12/30/04	1	11
TF5-P-BSW-39-6-8	Dry	12/30/04	1	29
TF5-P-BSW-40-5.5-7.5	Dry	12/30/04	1	18
TF5-P-BSW-41-6.5-8.5	Dry	12/30/04	1	6
TF5-P-BSW-42-6-8	Dry	12/30/04	1	18
TF5-P-BSW-43-5.5-7.5	Dry	12/30/04	1	32
TF5-P-FL-1	Slightly Moist	11/18/04	1	25
TF5-P-FL-2-7-9	Slightly Moist	11/18/04	1	32
TF5-P-FL-3-6.5-8.5	Saturated	12/17/04	1	0
TF5-P-FL-3-7-9	Slightly Moist	11/18/04	1	161
TF5-P-FL-4-7-9	Slightly Moist	11/18/04	1	31
TF5-P-FL-5-7-9	Slightly Moist	11/18/04	1	29

TABLE 6-5
Tank Farm 5 Loop Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-FL-6-6.5-8.5	Moist	12/17/04	1	0
TF5-P-FL-6-9-11	Slightly Moist	11/18/04	1	41
TF5-P-FL-7-6-8	Dry	11/18/04	1	31
TF5-P-FL-8-7-9	Dry	11/18/04	1	22
TF5-P-FL-9-7-9	Moist	11/18/04	1	25
TF5-P-FL-10-7-9	Slightly Moist	11/18/04	1	39
TF5-P-FL-11-7-9	Slightly Moist	11/18/04	1	37
TF5-P-FL-12-5.5-7.5	Dry	12/17/04	1	0
TF5-P-FL-13-5-7	Moist	12/15/04	1	15
TF5-P-FL-13-5-7	Moist	12/15/04	1	28
TF5-P-FL-14-5-7	Moist	12/15/04	1	9
TF5-P-FL-14-5-7	Moist	12/15/04	1	0
TF5-P-FL-15-5.5-7.5	Dry	12/17/04	1	0
TF5-P-FL-15-6-8	Dry	12/15/04	1	0
TF5-P-FL-16-6-8	Dry	12/15/04	1	47
TF5-P-FL-17-5.5-7.5	Dry	12/15/04	1	29
TF5-P-FL-18-7-9	Dry	12/17/04	1	0

TABLE 6-6
Tank Farm 5 Loop Piping Testpitting
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-BSW-19-6-8	Soil	Total Petroleum Hydrocarbons (TPH)		45	500	N	N	12/30/2004	EPA8015	53329-3	
TF5-L-BSW-19-6-8D	Soil	Total Petroleum Hydrocarbons (TPH)		66	500	N	N	12/30/2004	EPA8015	53329-4	

TABLE 6-7
Tank Farm 4 Loop Piping Removal Action
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-BSW-15-SW1-6.5	Moist	1/5/05	1	22
TF4-P-BSW-15-SW2-6.5	Slightly Moist	1/5/05	1	29
TF4-P-BSW-15-SW3-6.5	Moist	1/5/05	1	22
TF4-P-BSW-15-SW4-6.5	Slightly Moist	1/5/05	1	33
TF4-P-BSW-15-B1-7.0	Dry	1/5/05	1	0
TF4-P-BSW-15-B2-7.0	Dry	1/5/05	1	21
TF4-P-BSW-15-SW1-2.0	Dry	1/6/05	1	29
TF4-P-BSW-15-SW2-2.0	Slightly Moist	1/6/05	1	33
TF4-P-BSW-15-SW3-2.0	Dry	1/6/05	1	26
TF4-P-BSW-15-SW4-2.0	Slightly Moist	1/6/05	1	20

TABLE 6-8
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	3/28/2005	EPA8015	53715-4	
TF4-L-BSW18-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	3/28/2005	EPA8015	53715-5	
TF4-L-BSW18-B3	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	3/28/2005	EPA8015	53715-6	
TF4-L-BSW18-B4	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	4/4/2005	EPA8015	53736-1	
TF4-L-BSW18-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	3/28/2005	EPA8015	53715-7	
TF4-L-BSW18-SW2	Soil	Total Petroleum Hydrocarbons (TPH)		**58**	500	N	N	3/29/2005	EPA8015	53715-8	
TF4-L-BSW18-SW3	Soil	Total Petroleum Hydrocarbons (TPH)		**37**	500	N	N	3/29/2005	EPA8015	53715-9	
TF4-L-BSW18-SW4	Soil	Total Petroleum Hydrocarbons (TPH)		**101**	500	N	N	3/29/2005	EPA8015	53715-10	
TF4-L-BSW18-SW5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	3/29/2005	EPA8015	53715-11	
TF4-L-BSW18-SW6	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	3/29/2005	EPA8015	53715-12	
C-TF4-BSW15-B1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-12	
C-TF4-BSW15-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/20/2005	SW8015	53400-13	
C-TF4-BSW15-SW4-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/20/2005	SW8015	53400-14	
C-TF4-BSW15-SW4-2	Soil	Total Petroleum Hydrocarbons (TPH)		27	500	N	N	1/20/2005	SW8015	53400-15	
C-TF4-BSW15-SW1-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-16	
C-TF4-BSW15-SW1-2	Soil	Total Petroleum Hydrocarbons (TPH)		29	500	N	N	1/20/2005	SW8015	53400-17	
C-TF4-BSW15-SW2-2	Soil	Total Petroleum Hydrocarbons (TPH)	U	26	500	N	N	1/20/2005	SW8015	53400-18	
C-TF4-BSW15-SW2-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-19	
C-TF4-BSW15-SW3-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-20	
C-TF4-BSW15-SW3-2	Soil	Total Petroleum Hydrocarbons (TPH)	U	26	500	N	N	1/20/2005	SW8015	53400-21	

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B1	Soil	Acetone	B	**0.0066**	7800	N	N	3/30/2005	SW8260B	612333	67-64-1
		Benzene	U	0.0035	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0035	10	N	N				75-27-4
		Bromoform	U	0.0035	81	N	N				75-25-2
		Bromomethane	U	0.0035	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0035	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0035	210	N	N				108-90-7
		Chloroform	U	0.0035	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0035	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0035	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0035	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0035	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0035	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0035	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0035	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0035	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0035	71	N	N				100-41-4
		Ethylene dibromide	U	0.0035	0.01	N	N				
		Isopropyl benzene	U	0.0035	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0035	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0035	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0035	390	N	N				1634-04-4
		Methylene chloride	J	**0.001**	45	N	N				75-09-2
		Styrene	U	0.0035	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0035	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0035	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0035	12	N	N				127-18-4
		Toluene	U	0.0035	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0035	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0035	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0035	13	N	N				79-01-6
		Vinyl chloride	U	0.0035	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0035	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B2	Soil	Acetone	B	**0.0048**	7800	N	N	3/30/2005	SW8260B	612334	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.003	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	J	**0.00084**	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B3	Soil	Acetone	B	**0.0044**	7800	N	N	3/30/2005	SW8260B	612335	67-64-1
		Benzene	U	0.0033	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0033	10	N	N				75-27-4
		Bromoform	U	0.0033	81	N	N				75-25-2
		Bromomethane	U	0.0033	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0033	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0033	210	N	N				108-90-7
		Chloroform	U	0.0033	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0033	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0033	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0033	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0033	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0033	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0033	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0033	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0033	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0033	71	N	N				100-41-4
		Ethylene dibromide	U	0.0033	0.01	N	N				
		Isopropyl benzene	U	0.0033	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0033	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0033	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0033	390	N	N				1634-04-4
		Methylene chloride	J	**0.00081**	45	N	N				75-09-2
		Styrene	U	0.0033	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0033	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0033	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0033	12	N	N				127-18-4
		Toluene	U	0.0033	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0033	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0033	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0033	13	N	N				79-01-6
		Vinyl chloride	U	0.0033	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0033	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B4	Soil	Acetone		**0.012**	7800	N	N	4/1/2005	SW8260B	612605	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0026	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	J	**0.0012**	390	N	N				1634-04-4
		Methylene chloride	J	**0.0012**	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW1	Soil	Acetone	B	**0.092**	7800	N	N	3/30/2005	SW8260B	612336	67-64-1
		Benzene	U	0.0041	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0041	10	N	N				75-27-4
		Bromoform	U	0.0041	81	N	N				75-25-2
		Bromomethane	U	0.0041	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0041	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0041	210	N	N				108-90-7
		Chloroform	U	0.0041	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0041	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0041	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0041	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0041	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0041	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0041	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0041	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0041	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0041	71	N	N				100-41-4
		Ethylene dibromide	U	0.0041	0.01	N	N				
		Isopropyl benzene	U	0.0041	27	N	N				98-82-8
		Methyl ethyl ketone		**0.012**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0041	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0041	390	N	N				1634-04-4
		Methylene chloride	J	**0.0011**	45	N	N				75-09-2
		Styrene	U	0.0041	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0041	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0041	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0041	12	N	N				127-18-4
		Toluene	U	0.0041	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0041	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0041	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0041	13	N	N				79-01-6
		Vinyl chloride	U	0.0041	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0041	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW2	Soil	Acetone		**0.17**	7800	N	N	3/30/2005	SW8260B	612337	67-64-1
		Benzene	U	0.005	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.005	10	N	N				75-27-4
		Bromoform	U	0.005	81	N	N				75-25-2
		Bromomethane	U	0.005	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.005	1.5	N	N				56-23-5
		Chlorobenzene	U	0.005	210	N	N				108-90-7
		Chloroform	U	0.005	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.005	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.005	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.005	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.005	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.005	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.005	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.005	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.005	1.9	N	N				78-87-5
		Ethyl benzene	U	0.005	71	N	N				100-41-4
		Ethylene dibromide	U	0.005	0.01	N	N				
		Isopropyl benzene	U	0.005	27	N	N				98-82-8
		Methyl ethyl ketone		**0.017**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.005	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.005	390	N	N				1634-04-4
		Methylene chloride	J	**0.0012**	45	N	N				75-09-2
		Styrene	U	0.005	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.005	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.005	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.005	12	N	N				127-18-4
		Toluene	U	0.005	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.005	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.005	3.6	N	N				79-00-5
		Trichloroethylene	U	0.005	13	N	N				79-01-6
		Vinyl chloride	U	0.005	0.02	N	N				75-01-4
		Xylenes (total)	U	0.005	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW3	Soil	Acetone		**0.18**	7800	N	N	3/31/2005	SW8260B	612338	67-64-1
		Benzene	U	0.005	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.005	10	N	N				75-27-4
		Bromoform	U	0.005	81	N	N				75-25-2
		Bromomethane	U	0.005	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.005	1.5	N	N				56-23-5
		Chlorobenzene	U	0.005	210	N	N				108-90-7
		Chloroform	U	0.005	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.005	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.005	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.005	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.005	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.005	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.005	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.005	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.005	1.9	N	N				78-87-5
		Ethyl benzene	U	0.005	71	N	N				100-41-4
		Ethylene dibromide	U	0.005	0.01	N	N				
		Isopropyl benzene	U	0.005	27	N	N				98-82-8
		Methyl ethyl ketone		**0.02**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.005	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.005	390	N	N				1634-04-4
		Methylene chloride	J	**0.0014**	45	N	N				75-09-2
		Styrene	U	0.005	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.005	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.005	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.005	12	N	N				127-18-4
		Toluene	U	0.005	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.005	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.005	3.6	N	N				79-00-5
		Trichloroethylene	U	0.005	13	N	N				79-01-6
		Vinyl chloride	U	0.005	0.02	N	N				75-01-4
		Xylenes (total)	U	0.005	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW4	Soil	Acetone		**0.1**	7800	N	N	3/31/2005	SW8260B	612339	67-64-1
		Benzene	U	0.005	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.005	10	N	N				75-27-4
		Bromoform	U	0.005	81	N	N				75-25-2
		Bromomethane	U	0.005	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.005	1.5	N	N				56-23-5
		Chlorobenzene	U	0.005	210	N	N				108-90-7
		Chloroform	U	0.005	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.005	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.005	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.005	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.005	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.005	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.005	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.005	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.005	1.9	N	N				78-87-5
		Ethyl benzene	U	0.005	71	N	N				100-41-4
		Ethylene dibromide	U	0.005	0.01	N	N				
		Isopropyl benzene	U	0.005	27	N	N				98-82-8
		Methyl ethyl ketone		**0.0096**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.005	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.005	390	N	N				1634-04-4
		Methylene chloride	J	**0.0013**	45	N	N				75-09-2
		Styrene	U	0.005	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.005	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.005	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.005	12	N	N				127-18-4
		Toluene	U	0.005	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.005	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.005	3.6	N	N				79-00-5
		Trichloroethylene	U	0.005	13	N	N				79-01-6
		Vinyl chloride	U	0.005	0.02	N	N				75-01-4
		Xylenes (total)	U	0.005	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW5	Soil	Acetone		**0.07**	7800	N	N	3/31/2005	SW8260B	612340	67-64-1
		Benzene	U	0.0034	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0034	10	N	N				75-27-4
		Bromoform	U	0.0034	81	N	N				75-25-2
		Bromomethane	U	0.0034	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0034	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0034	210	N	N				108-90-7
		Chloroform	U	0.0034	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0034	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0034	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0034	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0034	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0034	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0034	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0034	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0034	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0034	71	N	N				100-41-4
		Ethylene dibromide	U	0.0034	0.01	N	N				
		Isopropyl benzene	U	0.0034	27	N	N				98-82-8
		Methyl ethyl ketone		**0.0096**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0034	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0034	390	N	N				1634-04-4
		Methylene chloride	J	**0.001**	45	N	N				75-09-2
		Styrene	U	0.0034	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0034	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0034	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0034	12	N	N				127-18-4
		Toluene	U	0.0034	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0034	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0034	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0034	13	N	N				79-01-6
		Vinyl chloride	U	0.0034	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0034	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW6	Soil	Acetone		**0.18**	7800	N	N	3/31/2005	SW8260B	612341	67-64-1
		Benzene	U	0.005	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.005	10	N	N				75-27-4
		Bromoform	U	0.005	81	N	N				75-25-2
		Bromomethane	U	0.005	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.005	1.5	N	N				56-23-5
		Chlorobenzene	U	0.005	210	N	N				108-90-7
		Chloroform	U	0.005	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.005	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.005	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.005	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.005	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.005	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.005	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.005	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.005	1.9	N	N				78-87-5
		Ethyl benzene	U	0.005	71	N	N				100-41-4
		Ethylene dibromide	U	0.005	0.01	N	N				
		Isopropyl benzene	U	0.005	27	N	N				98-82-8
		Methyl ethyl ketone		**0.02**	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.005	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.005	390	N	N				1634-04-4
		Methylene chloride	J	**0.0012**	45	N	N				75-09-2
		Styrene	U	0.005	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.005	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.005	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.005	12	N	N				127-18-4
		Toluene	U	0.005	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.005	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.005	3.6	N	N				79-00-5
		Trichloroethylene	U	0.005	13	N	N				79-01-6
		Vinyl chloride	U	0.005	0.02	N	N				75-01-4
		Xylenes (total)	U	0.005	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW4-2	Soil	Acetone		0.1	7800	N	N	1/20/2005	SW8260B	605015	67-64-1
		Benzene	U	0.0033	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0033	10	N	N				75-27-4
		Bromoform	U	0.0033	81	N	N				75-25-2
		Bromomethane	U	0.0033	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0033	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0033	210	N	N				108-90-7
		Chloroform	U	0.0033	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0033	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0033	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0033	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0033	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0033	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0033	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0033	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0033	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0033	71	N	N				100-41-4
		Ethylene dibromide	U	0.0033	0.01	N	N				
		Isopropyl benzene	U	0.0033	27	N	N				98-82-8
		Methyl ethyl ketone		0.01	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0033	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0033	390	N	N				1634-04-4
		Methylene chloride	U	0.0033	45	N	N				75-09-2
		Styrene	U	0.0033	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0033	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0033	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0033	12	N	N				127-18-4
		Toluene	J	0.00074	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0033	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0033	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0033	13	N	N				79-01-6
		Vinyl chloride	U	0.0033	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0033	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-B1	Soil	Acetone		0.027	7800	N	N	1/20/2005	SW8260B	605012	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	J	0.00086	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone		0.0039	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	U	0.003	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	J	0.00064	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)			110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-B2	Soil	Acetone	B	0.019	7800	N	N	1/20/2005	SW8260B	605013	67-64-1
		Benzene	U	0.0033	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0033	10	N	N				75-27-4
		Bromoform	U	0.0033	81	N	N				75-25-2
		Bromomethane	U	0.0033	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0033	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0033	210	N	N				108-90-7
		Chloroform	U	0.0033	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0033	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0033	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0033	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0033	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0033	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0033	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0033	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0033	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0033	71	N	N				100-41-4
		Ethylene dibromide	U	0.0033	0.01	N	N				
		Isopropyl benzene	U	0.0033	27	N	N				98-82-8
		Methyl ethyl ketone		0.0036	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0033	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0033	390	N	N				1634-04-4
		Methylene chloride	U	0.0033	45	N	N				75-09-2
		Styrene	U	0.0033	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0033	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0033	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0033	12	N	N				127-18-4
		Toluene	J	0.00067	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0033	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0033	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0033	13	N	N				79-01-6
		Vinyl chloride	U	0.0033	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0033	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW1-6.5	Soil	Acetone	B	0.014	7800	N	N	1/20/2005	SW8260B	605016	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW2-6.5	Soil	Acetone		0.018	7800	N	N	1/20/2005	SW8260B	605019	67-64-1
		Benzene	U	0.0027	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0027	10	N	N				75-27-4
		Bromoform	U	0.0027	81	N	N				75-25-2
		Bromomethane	U	0.0027	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0027	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0027	210	N	N				108-90-7
		Chloroform	U	0.0027	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0027	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0027	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0027	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0027	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0027	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0027	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0027	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0027	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0027	71	N	N				100-41-4
		Ethylene dibromide	U	0.0027	0.01	N	N				
		Isopropyl benzene	U	0.0027	27	N	N				98-82-8
		Methyl ethyl ketone		0.003	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0027	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0027	390	N	N				1634-04-4
		Methylene chloride	U	0.0027	45	N	N				75-09-2
		Styrene	U	0.0027	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0027	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0027	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0027	12	N	N				127-18-4
		Toluene	U	0.0027	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0027	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0027	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0027	13	N	N				79-01-6
		Vinyl chloride	U	0.0027	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0027	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW3-6.5	Soil	Acetone		0.019	7800	N	N	1/20/2005	SW8260B	605020	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone		0.0039	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	U	0.003	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW4-6.5	Soil	Acetone		0.08	7800	N	N	1/20/2005	SW8260B	605014	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone		0.0088	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW1-2	Soil	Acetone	B	0.048	7800	N	N	1/20/2005	SW8260B	605017	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone		0.0077	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0026	390	N	N				1634-04-4
		Methylene chloride	U	0.0026	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW2-2	Soil	Acetone	B	0.078	7800	N	N	1/20/2005	SW8260B	605018	67-64-1
		Benzene	U	0.0035	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0035	10	N	N				75-27-4
		Bromoform	U	0.0035	81	N	N				75-25-2
		Bromomethane	U	0.0035	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0035	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0035	210	N	N				108-90-7
		Chloroform	U	0.0035	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0035	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0035	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0035	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0035	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0035	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0035	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0035	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0035	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0035	71	N	N				100-41-4
		Ethylene dibromide	U	0.0035	0.01	N	N				
		Isopropyl benzene	U	0.0035	27	N	N				98-82-8
		Methyl ethyl ketone		0.0072	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0035	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0035	390	N	N				1634-04-4
		Methylene chloride	U	0.0035	45	N	N				75-09-2
		Styrene	U	0.0035	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0035	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0035	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0035	12	N	N				127-18-4
		Toluene	U	0.0035	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0035	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0035	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0035	13	N	N				79-01-6
		Vinyl chloride	U	0.0035	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0035	110	N	N				1330-20-7

TABLE 6-9
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW3-2	Soil	Acetone		0.04	7800	N	N	1/20/2005	SW8260B	605021	67-64-1
		Benzene	U	0.0029	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0029	10	N	N				75-27-4
		Bromoform	U	0.0029	81	N	N				75-25-2
		Bromomethane	U	0.0029	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0029	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0029	210	N	N				108-90-7
		Chloroform	U	0.0029	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0029	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0029	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0029	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0029	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0029	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0029	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0029	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0029	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0029	71	N	N				100-41-4
		Ethylene dibromide	U	0.0029	0.01	N	N				
		Isopropyl benzene	U	0.0029	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0029	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0029	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0029	390	N	N				1634-04-4
		Methylene chloride	U	0.0029	45	N	N				75-09-2
		Styrene	U	0.0029	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0029	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0029	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0029	12	N	N				127-18-4
		Toluene	U	0.0029	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0029	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0029	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0029	13	N	N				79-01-6
		Vinyl chloride	U	0.0029	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0029	110	N	N				1330-20-7

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B1	Soil	Acenaphthene	U	0.31	43	N	N	3/31/2005	SW8270	53715-4	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B2	Soil	Acenaphthene	U	0.31	43	N	N	3/31/2005	SW8270	53715-5	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B3	Soil	Acenaphthene	U	0.3	43	N	N	3/31/2005	SW8270	53715-6	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-B4	Soil	Acenaphthene	U	0.28	43	N	N	4/6/2005	SW8270	53736-1RX	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW1	Soil	Acenaphthene	U	0.29	43	N	N	3/31/2005	SW8270	53715-7	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW2	Soil	Acenaphthene	U	0.31	43	N	N	3/31/2005	SW8270	53715-8	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW3	Soil	Acenaphthene	U	0.28	43	N	N	3/31/2005	SW8270	53715-9	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW4	Soil	Acenaphthene	U	0.3	43	N	N	3/31/2005	SW8270	53715-10	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW5	Soil	Acenaphthene	U	0.28	43	N	N	3/31/2005	SW8270	53715-11	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-BSW18-SW6	Soil	Acenaphthene	U	0.3	43	N	N	3/31/2005	SW8270	53715-12	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-B1	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-12	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol			58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-B2	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-13	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW4-6.5	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-14	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW4-2	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-15	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW1-6.5	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-16	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW1-2	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-17	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW2-2	Soil	Acenaphthene	U	0.33	43	N	N	1/19/2005	SW8270C	53400-18	83-32-9
		Acenaphthylene	U	0.33	23	N	N				208-96-8
		Anthracene	U	0.33	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.33	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.33	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.33	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.33	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.33	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.33	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.33	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.33	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.33	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.33	310	N	N				106-47-8
		2-Chlorophenol	U	0.33	50	N	N				95-57-8
		Chrysene	U	0.33	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.33	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.33	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.33	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.33	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.33	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.33	30	N	N				120-83-2
		Diethyl phthalate	U	0.33	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.33	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.33	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.33	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.33	0.9	N	N				121-14-2
		Fluoranthene	U	0.33	20	N	N				206-44-0
		Fluorene	U	0.33	28	N	N				86-73-7
		Hexachlorobenzene	U	0.33	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.33	8.2	N	N				87-68-3
		Hexachloroethane	U	0.33	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.33	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.33	123	N	N				91-57-6
		Naphthalene	U	0.33	54	N	N				91-20-3
		Pentachlorophenol	U	0.33	5.3	N	N				87-86-5
		Phenanthrene	U	0.33	40	N	N				85-01-8
		Phenol	U	0.33	6000	N	N				108-95-2
		Pyrene	U	0.33	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.33	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.33	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.33	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW2-6.5	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-19	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW3-6.5	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-20	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-10
Tank Farm 4 Loop Piping Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-BSW15-SW3-2	Soil	Acenaphthene	U	0.32	43	N	N	1/19/2005	SW8270C	53400-21	83-32-9
		Acenaphthylene	U	0.32	23	N	N				208-96-8
		Anthracene	U	0.32	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.32	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.32	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.32	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.32	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.32	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.32	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.32	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.32	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.32	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.32	310	N	N				106-47-8
		2-Chlorophenol	U	0.32	50	N	N				95-57-8
		Chrysene	U	0.32	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.32	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.32	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.32	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.32	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.32	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.32	30	N	N				120-83-2
		Diethyl phthalate	U	0.32	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.32	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.32	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.32	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.32	0.9	N	N				121-14-2
		Fluoranthene	U	0.32	20	N	N				206-44-0
		Fluorene	U	0.32	28	N	N				86-73-7
		Hexachlorobenzene	U	0.32	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.32	8.2	N	N				87-68-3
		Hexachloroethane	U	0.32	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.32	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.32	123	N	N				91-57-6
		Naphthalene	U	0.32	54	N	N				91-20-3
		Pentachlorophenol	U	0.32	5.3	N	N				87-86-5
		Phenanthrene	U	0.32	40	N	N				85-01-8
		Phenol	U	0.32	6000	N	N				108-95-2
		Pyrene	U	0.32	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.32	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.32	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.32	58	N	N				88-06-2

TABLE 6-11
Tank Farm 5 Oil/Water Separator BSW Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/L)	GA Groundwater Objectives (mg/L)	Exceed GA Groundwater Objectives? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-O/W SEP-BSW	Water	Acetone	U	0.005	NA	NA	N	11/22/2004	SW8260B	599229	67-64-1
		Benzene	U	0.005	0.005	N	N				71-43-2
		Bromodichloromethane	U	0.005	NA	NA	N				75-27-4
		Bromoform	U	0.005	NA	NA	N				75-25-2
		Bromomethane	U	0.005	NA	NA	N				74-83-9
		Carbon tetrachloride	U	0.005	0.005	N	N				56-23-5
		Chlorobenzene	U	0.005	0.1	N	N				108-90-7
		Chloroform	U	0.005	NA	NA	N				67-66-3
		Dibromochloromethane	U	0.005	NA	NA	N				124-48-1
		Dibromochloropropane	U	0.005	0.0002	**Y**	**Y**				96-12-8
		1,1-Dichloroethane	U	0.005	NA	NA	N				75-34-3
		1,1-Dichloroethene	U	0.005	0.007	N	N				75-35-4
		1,2-Dichloroethane	U	0.005	0.005	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.005	0.07	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.005	0.1	N	N				156-60-5
		1,2-Dichloropropane	U	0.005	0.005	N	N				78-87-5
		Ethyl benzene	U	0.005	0.7	N	N				100-41-4
		Ethylene dibromode	U	0.005	0.00005	**Y**	**Y**				
		Isopropyl benzene	U	0.005	NA	NA	N				98-82-8
		Methyl ethyl ketone	U	0.005	NA	NA	N				78-93-3
		Methyl isobutyl ketone	U	0.005	NA	NA	N				108-10-1
		Methyl-tert-butyl-ether	U	0.005	0.04	N	N				1634-04-4
		Methylene chloride	U	0.005	0.005	N	N				75-09-2
		Styrene	U	0.005	0.1	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.005	NA	NA	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.005	NA	NA	N				79-34-5
		Tetrachloroethylene	U	0.005	0.005	N	N				127-18-4
		Toluene	U	0.005	1	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.005	0.2	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.005	0.005	N	N				79-00-5
		Trichloroethylene	U	0.005	0.005	N	N				79-01-6
		Vinyl chloride	U	0.005	0.002	**Y**	**Y**				75-01-4
		Xylenes (total)	U	0.005	10	N	N				1330-20-7

TABLE 6-12
Tank Farm 5 Oil/Water Separator BSW Piping
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/L)	GA Groundwater Objectives (mg/L)	Exceed GA Groundwater Objectives? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-O/W SEP-BSW	Water	Antimony	U	0.0042	0.006	N	N	11/22/2004		599229	7440-36-0
		Arsenic	U	0.0031	NA	NA	N				7440-38-2
		Barium	B	0.0988	2	N	N				7440-39-3
		Beryllium	U	0.0003	0.004	N	N				7440-41-7
		Cadmium	U	0.0005	0.005	N	N				7440-43-9
		Chromium (total)	U	0.0011	0.1	N	N				7440-47-3
		Cobalt	U	0.0031	NA	NA	N				7440-48-4
		Lead		0.0047	0.015	N	N				7439-92-1
		Mercury	U	0.0001	0.002	N	N				7439-97-6
		Molybdenum	B	0.0041	NA	NA	N				7439-98-7
		Selenium	U	0.0031	0.05	N	N				7782-49-2
		Silver	U	0.0015	NA	NA	N				7440-22-4
		Tin	U	0.003	NA	NA	N				7440-31-5
		Vanadium	U	0.003	NA	NA	N				7440-62-2
		Zinc		0.0397	NA	NA	N				7440-66-6

TABLE 6-13
Tank Farm 5 Oil/Water Separator BSW Piping
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/L)	GA Groundwater Objectives (mg/L)	Exceed GA Groundwater Objectives? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-O/W SEP-BSW	Water	PCB-1016	U	0.0002				11/22/2004	EPA 8082	53084-1	
		PCB-1221	U	0.0002							
		PCB-1232	U	0.0002							
		PCB-1242	U	0.0002							
		PCB-1248	U	0.0002							
		PCB-1254	U	0.0002							
		PCB-1260	U	0.0002							
		Total PCBs	U	0.0002	0.0005	N	N				

TABLE 6-14
Tank Farm 5 Oil/Water Separator BSW Piping
Wet Chemistry Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/L)	GA Groundwater Objectives (mg/L)	Exceed GA Groundwater Objectives? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-O/W SEP-BSW	Water	pH		8.4 pH unit	NA	NA	N	11/22/2004		53084-1	
		Total Dissolved Solids		81.0	NA	NA	N				
		Total Suspended Solids		19.2	NA	NA	N				

TABLE 6-15
Tank Farm 4 Shunt Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-37SP-1-5-7	Dry	12/23/04	1	25
TF4-P-37SP-2-5.5-7.5	Dry	12/23/04	1	0
TF4-P-37SP-3-6-8	Dry	12/23/04	1	0
TF4-P-37SP-4-6.5-8.5	Moist	12/23/04	1	12
TF4-P-38SP-1-4.5-6.5	Dry	12/23/04	1	52
TF4-P-38SP-2-4.5-6.5	Dry	12/23/04	1	2
TF4-P-39SP-2-4.5-6.5	Moist	12/23/04	1	0
TF4-P-40SP-2-6.5-8.5	Moist	12/23/04	1	0
TF4-P-41SP-1-6.5-8.5	Dry	12/23/04	1	33
TF4-P-41SP-2-6-8	Dry	12/23/04	1	0
TF4-P-41SP-3-6-8	Dry	12/23/04	1	0
TF4-P-41SP-4-5.5-7.5	Dry	12/23/04	1	0
TF4-P-42SP-1-5.5-7.5	Dry	12/23/04	1	18
TF4-P-42SP-2-5-7	Dry	12/23/04	1	0
TF4-P-43SP-1-4.5-6.5	Dry	12/23/04	1	88
TF4-P-43SP-2-5-7	Dry	12/23/04	1	0
TF4-P-43SP-3-5.5-7.5	Dry	12/23/04	1	0
TF4-P-44SP-1-5-7	Dry	12/23/04	1	3
TF4-P-44SP-2-6.5-8.5	Moist	12/23/04	1	8
TF4-P-45SP-1-5.5-7.5	Dry	12/23/04	1	1
TF4-P-45SP-2-4.5-6.5	Dry	12/23/04	1	8
TF4-P-45SP-3-3.5-5.5	Moist	12/23/04	1	495
TF4-P-45SP-4-2.5-4.5	Dry	12/23/04	1	9
TF4-P-46SP-1-3.5-5.5	Dry	12/23/04	1	13
TF4-P-46SP-2-5.5-7.5	Dry	12/23/04	1	0
TF4-P-47SP-1-3.5-5.5	Dry	12/23/04	1	0
TF4-P-47SP-2-6-8	Dry	12/23/04	1	0
TF4-P-48SP-1-6.5-8.5	Moist	12/23/04	1	40
TF4-P-48SP-2-6-8	Dry	12/23/04	1	0
TF4-P-48SP-3-6-8	Dry	12/23/04	1	0
TF4-P-48SP-4-5.5-7.5	Dry	12/23/04	1	0
TF4-P-NS-38-7-9	Slightly Moist	2/7/05	1	27
TF4-P-NS-39-7-9	Slightly Moist	2/7/05	1	7
TF4-P-NS-42-7-9	Moist	2/7/05	1	66

TABLE 6-16
Tank Farm 4 Shunt Piping
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-45SP-3-3.5-5.5	Soil	Total Petroleum Hydrocarbons (TPH)		597	500	Y	N	1/3/2005	EPA8015	53330-9	

TABLE 6-17
Tank Farm 4 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-45SP-3-3.5-5.5	Soil	Acetone	B	0.032	7800	N	N	1/6/2005	SW8260B	603814	67-64-1
		Benzene	U	0.0038	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0038	10	N	N				75-27-4
		Bromoform	U	0.0038	81	N	N				75-25-2
		Bromomethane	U	0.0038	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0038	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0038	210	N	N				108-90-7
		Chloroform	U	0.0038	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0038	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0038	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0038	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0038	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0038	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0038	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0038	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0038	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0038	71	N	N				100-41-4
		Ethylene dibromide	U	0.0038	0.01	N	N				
		Isopropyl benzene	U	0.0038	27	N	N				98-82-8
		Methyl ethyl ketone		0.0055	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0038	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0038	390	N	N				1634-04-4
		Methylene chloride	U	0.0038	45	N	N				75-09-2
		Styrene	U	0.0038	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0038	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0038	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0038	12	N	N				127-18-4
		Toluene	U	0.0038	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0038	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0038	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0038	13	N	N				79-01-6
		Vinyl chloride	U	0.0038	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0038	110	N	N				1330-20-7

TABLE 6-18
Tank Farm 4 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-45SP-3-3.5-5.5	Soil	Acenaphthene	U	0.27	43	N	N	1/6/2005	SW8270	53345-2	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	J	0.152	0.9	N	N				56-55-3
		Benzo(a)pyrene	J	0.209	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	J	0.242	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	J	0.208	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	J	0.255	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene		0.295	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	J	0.235	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene		0.407	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 6-19
Tank Farm 4 UST 39 Pump Chamber Removal Action
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-39-TP1-SW1-6.5	Moist	1/5/05	1	25
P-39-TP1-SW1-2.0	Dry	1/5/05	1	65
P-39-TP1-SW2-6.5	Dry	1/5/05	1	0
P-39-TP1-SW2-2.0	Dry	1/5/05	1	21
P-39-TP1-SW3-6.5	Dry	1/5/05	1	0
P-39-TP1-SW3-2.0	Dry	1/5/05	1	44
P-39-TP1-B1	Slightly Moist	1/5/05	1	51
P-39-TP1-B2	Slightly Moist	1/5/05	1	98
TF4-UST39-T39	Moist	12/2/04	1	866

TABLE 6-20
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#
C-TF4-39-B1	Soil	Total Petroleum Hydrocarbons (TPH)		42	500	N	N	1/19/2005	SW8015	53400-5
C-TF4-39-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/19/2005	SW8015	53400-3
C-TF4-39-B2-D	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/19/2005	SW8015	53400-4
C-TF4-39-SW2-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-6
C-TF4-39-SW2-2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/19/2005	SW8015	53400-7
C-TF4-39-SW1-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	1/19/2005	SW8015	53400-8
C-TF4-39-SW1-2	Soil	Total Petroleum Hydrocarbons (TPH)		26	500	N	N	1/19/2005	SW8015	53400-9
C-TF4-39-SW3-6.5	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/19/2005	SW8015	53400-10
C-TF4-39-SW3-2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	1/20/2005	SW8015	53400-11

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B1	Soil	Acetone		0.052	7800	N	N	1/20/2005	SW8260B	605005	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone		0.0074	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	U	0.003	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B2	Soil	Acetone	B	0.0098	7800	N	N	1/20/2005	SW8260B	605003	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0026	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0026	390	N	N				1634-04-4
		Methylene chloride	U	0.0026	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B2D	Soil	Acetone	B	0.014	7800	N	N	1/20/2005	SW8260B	605004	67-64-1
		Benzene	U	0.0037	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0037	10	N	N				75-27-4
		Bromoform	U	0.0037	81	N	N				75-25-2
		Bromomethane	U	0.0037	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0037	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0037	210	N	N				108-90-7
		Chloroform	U	0.0037	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0037	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0037	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0037	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0037	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0037	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0037	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0037	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0037	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0037	71	N	N				100-41-4
		Ethylene dibromide	U	0.0037	0.01	N	N				
		Isopropyl benzene	U	0.0037	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0037	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0037	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0037	390	N	N				1634-04-4
		Methylene chloride	U	0.0037	45	N	N				75-09-2
		Styrene	U	0.0037	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0037	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0037	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0037	12	N	N				127-18-4
		Toluene	U	0.0037	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0037	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0037	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0037	13	N	N				79-01-6
		Vinyl chloride	U	0.0037	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0037	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW1-2	Soil	Acetone		0.073	7800	N	N	1/20/2005	SW8260B	605009	67-64-1
		Benzene	U	0.0038	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0038	10	N	N				75-27-4
		Bromoform	U	0.0038	81	N	N				75-25-2
		Bromomethane	U	0.0038	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0038	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0038	210	N	N				108-90-7
		Chloroform	U	0.0038	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0038	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0038	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0038	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0038	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0038	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0038	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0038	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0038	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0038	71	N	N				100-41-4
		Ethylene dibromide	U	0.0038	0.01	N	N				
		Isopropyl benzene	U	0.0038	27	N	N				98-82-8
		Methyl ethyl ketone		0.0084	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0038	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0038	390	N	N				1634-04-4
		Methylene chloride	U	0.0038	45	N	N				75-09-2
		Styrene	U	0.0038	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0038	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0038	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0038	12	N	N				127-18-4
		Toluene	U	0.0038	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0038	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0038	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0038	13	N	N				79-01-6
		Vinyl chloride	U	0.0038	0.02	N	N				75-01-4
		Xylenes (total)			110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW2-2	Soil	Acetone		0.022	7800	N	N	1/20/2005	SW8260B	605007	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0026	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0026	390	N	N				1634-04-4
		Methylene chloride	U	0.0026	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4039-SW3-2	Soil	Acetone		0.036	7800	N	N	1/20/2005	SW8260B	605011	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW1-6.5	Soil	Acetone		0.027	7800	N	N	1/20/2005	SW8260B	605008	67-64-1
		Benzene	U	0.0027	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0027	10	N	N				75-27-4
		Bromoform	U	0.0027	81	N	N				75-25-2
		Bromomethane	U	0.0027	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0027	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0027	210	N	N				108-90-7
		Chloroform	U	0.0027	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0027	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0027	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0027	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0027	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0027	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0027	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0027	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0027	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0027	71	N	N				100-41-4
		Ethylene dibromide	U	0.0027	0.01	N	N				
		Isopropyl benzene	U	0.0027	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0027	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0027	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0027	390	N	N				1634-04-4
		Methylene chloride	U	0.0027	45	N	N				75-09-2
		Styrene	U	0.0027	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0027	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0027	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0027	12	N	N				127-18-4
		Toluene	U	0.0027	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0027	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0027	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0027	13	N	N				79-01-6
		Vinyl chloride	U	0.0027	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0027	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW2-6.5	Soil	Acetone	B	0.02	7800	N	N	1/20/2005	SW8260B	605006	67-64-1
		Benzene	U	0.0034	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0034	10	N	N				75-27-4
		Bromoform	U	0.0034	81	N	N				75-25-2
		Bromomethane	U	0.0034	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0034	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0034	210	N	N				108-90-7
		Chloroform	U	0.0034	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0034	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0034	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0034	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0034	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0034	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0034	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0034	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0034	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0034	71	N	N				100-41-4
		Ethylene dibromide	U	0.0034	0.01	N	N				
		Isopropyl benzene	U	0.0034	27	N	N				98-82-8
		Methyl ethyl ketone		0.0042	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0034	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0034	390	N	N				1634-04-4
		Methylene chloride	U	0.0034	45	N	N				75-09-2
		Styrene	U	0.0034	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0034	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0034	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0034	12	N	N				127-18-4
		Toluene	U	0.0034	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0034	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0034	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0034	13	N	N				79-01-6
		Vinyl chloride	U	0.0034	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0034	110	N	N				1330-20-7

TABLE 6-21
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW3-6.5	Soil	Acetone		0.035	7800	N	N	1/20/2005	SW8260B	605010	67-64-1
		Benzene	U	0.0024	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0024	10	N	N				75-27-4
		Bromoform	U	0.0024	81	N	N				75-25-2
		Bromomethane	U	0.0024	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0024	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0024	210	N	N				108-90-7
		Chloroform	U	0.0024	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0024	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0024	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0024	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0024	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0024	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0024	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0024	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0024	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0024	71	N	N				100-41-4
		Ethylene dibromide	U	0.0024	0.01	N	N				
		Isopropyl benzene	U	0.0024	27	N	N				98-82-8
		Methyl ethyl ketone		0.0037	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0024	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0024	390	N	N				1634-04-4
		Methylene chloride	U	0.0024	45	N	N				75-09-2
		Styrene	U	0.0024	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0024	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0024	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0024	12	N	N				127-18-4
		Toluene	U	0.0024	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0024	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0024	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0024	13	N	N				79-01-6
		Vinyl chloride	U	0.0024	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0024	110	N	N				1330-20-7

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B1	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-5	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B2	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-3	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-B2-D	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-4	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW2-6.5	Soil	Acenaphthene	U	0.28	43	N	N	1/19/2005	SW8270C	53400-6	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW2-2	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-7	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW1-6.5	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-8	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW1-2	Soil	Acenaphthene	U	0.3	43	N	N	1/19/2005	SW8270C	53400-9	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW3-6.5	Soil	Acenaphthene	U	0.29	43	N	N	1/19/2005	SW8270C	53400-10	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-22
Tank Farm 4
UST 39 Pump Chamber Removal Action Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
C-TF4-39-SW3-2	Soil	Acenaphthene	U	0.28	43	N	N	1/19/2005	SW8070C	53400-11	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-23
Tank Farm 5 Shunt Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-52-SP-1-8-10	Dry	12/30/04	1	34
TF5-P-52-SP-2-6-8	Dry	12/30/04	1	12
TF5-P-53-SP-1-9-11	Dry	12/30/04	1	10
TF5-P-53-SP-2-8-10	Dry	12/30/04	1	16
TF5-P-53-SP-3-7.5-9.5	Dry	12/30/04	1	4
TF5-P-53-SP-4-7.5-9.5	Dry	12/30/04	1	104
TF5-L-NS-49A-6.5-8.5	N/A	1/19/2005	1	107
TF5-L-NS-50-7.5-9.5	N/A	1/11/2005	1	904
TF5-P-NS-52-8.5-10.5	N/A	1/21/2005	1	255
TF5-P-NS-53-7.5-9.5	N/A	1/21/2005	1	208
TF5-P-NS-5-6-8	N/A	1/20/2005	1	1429
TF5-P-NS-56-3-5	N/A	1/20/2005	1	57
TF5-P-NS-59-7-9	N/A	1/20/2005	1	185

TABLE 6-24
Tank Farm 5 Shunt Piping
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-53SP-4-7.5-9.5	Soil	Total Petroleum Hydrocarbons (TPH)		27	500	N	N	1/5/2005	EPA8015	53347-1	
TF5-L-NS-52-8.5-10.5	Soil	Total Petroleum Hydrocarbons (TPH)		155	500	N	N	2/2/2005	SW8015	53480-4	
TF5-L-NS-53-7.5-9.5	Soil	Total Petroleum Hydrocarbons (TPH)		94	500	N	N	2/2/2005	SW8015	53480-6	
TF5-L-NS-59-7-9	Soil	Total Petroleum Hydrocarbons (TPH)		115	500	N	N	2/2/2005	SW8015	53480-7	
TF5-L-NS-49A-6.5-8.5	Soil	Total Petroleum Hydrocarbons (TPH)		120	500	N	N	1/21/2005	SW8015	53421-1	
TF5-L-NS-50-7.5-9.5	Soil	Total Petroleum Hydrocarbons (TPH)		316	500	N	N	1/21/2005	SW8015	53421-2	
TF-L-NS-58-7-9	Soil	Total Petroleum Hydrocarbons (TPH)		193	500	N	N	1/21/2005	SW8015	53421-3	

TABLE 6-25
Tank Farm 5 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-49A-6.5-8.5	Soil	Acetone	B	0.0088	7800	N	N	1/26/2005	SW8260B	606067	67-64-1
		Benzene	U	0.0027	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0027	10	N	N				75-27-4
		Bromoform	U	0.0027	81	N	N				75-25-2
		Bromomethane	U	0.0027	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0027	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0027	210	N	N				108-90-7
		Chloroform	U	0.0027	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0027	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0027	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0027	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0027	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0027	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0027	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0027	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0027	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0027	71	N	N				100-41-4
		Ethylene dibromide	U	0.0027	0.01	N	N				
		Isopropyl benzene	U	0.0027	27	N	N				98-82-8
		Methyl ethyl ketone	J	0.0018	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0027	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0027	390	N	N				1634-04-4
		Methylene chloride	U	0.0027	45	N	N				75-09-2
		Styrene	U	0.0027	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0027	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0027	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0027	12	N	N				127-18-4
		Toluene	U	0.0027	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0027	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0027	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0027	13	N	N				79-01-6
		Vinyl chloride	U	0.0027	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0027	110	N	N				1330-20-7

TABLE 6-25
Tank Farm 5 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-50-7.5-9.5	Soil	Acetone	B	0.023	7800	N	N	1/25/2005	SW8260B	606068	67-64-1
		Benzene	J	0.00094	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0027	10	N	N				75-27-4
		Bromoform	U	0.0027	81	N	N				75-25-2
		Bromomethane	U	0.0027	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0027	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0027	210	N	N				108-90-7
		Chloroform	U	0.0027	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0027	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0027	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0027	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0027	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0027	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0027	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0027	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0027	1.9	N	N				78-87-5
		Ethyl benzene	J	0.00081	71	N	N				100-41-4
		Ethylene dibromide	U	0.0027	0.01	N	N				
		Isopropyl benzene		0.01	27	N	N				98-82-8
		Methyl ethyl ketone		0.0058	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0027	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0027	390	N	N				1634-04-4
		Methylene chloride	U	0.0027	45	N	N				75-09-2
		Styrene	U	0.0027	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0027	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0027	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0027	12	N	N				127-18-4
		Toluene	U	0.0027	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0027	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0027	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0027	13	N	N				79-01-6
		Vinyl chloride	U	0.0027	0.02	N	N				75-01-4
		Xylenes (total)		0.029	110	N	N				1330-20-7

TABLE 6-25
Tank Farm 5 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-58-7-9	Soil	Acetone	B	0.011	7800	N	N	1/26/2005	SW8260B	606069	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	J	0.00066	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-25
Tank Farm 5 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-52-8.5-10.5	Soil	Acetone	U	0.27	7800	N	N	2/4/2005	SW8260B	607014	67-64-1
		Benzene	U	0.27	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.27	10	N	N				75-27-4
		Bromoform	U	0.27	81	N	N				75-25-2
		Bromomethane	U	0.27	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.27	1.5	N	N				56-23-5
		Chlorobenzene	U	0.27	210	N	N				108-90-7
		Chloroform	U	0.27	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.27	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.27	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.27	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.27	0.2	**Y**	**Y**				75-35-4
		1,2-Dichloroethane	U	0.27	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.27	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.27	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.27	1.9	N	N				78-87-5
		Ethyl benzene	U	0.27	71	N	N				100-41-4
		Ethylene dibromide	U	0.27	0.01	**Y**	**Y**				
		Isopropyl benzene	U	0.27	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.27	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.27	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.27	390	N	N				1634-04-4
		Methylene chloride	U	0.27	45	N	N				75-09-2
		Styrene	U	0.27	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.27	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.27	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.27	12	N	N				127-18-4
		Toluene	U	0.27	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.27	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.27	3.6	N	N				79-00-5
		Trichloroethylene	U	0.27	13	N	N				79-01-6
		Vinyl chloride	U	0.27	0.02	**Y**	**Y**				75-01-4
		Xylenes (total)	U	0.27	110	N	N				1330-20-7

TABLE 6-25
Tank Farm 5 Shunt Piping
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-59-7-9	Soil	Acetone	B	0.025	7800	N	N	2/3/2005	SW8260B	607016	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	J	0.0028	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-49A-6.5-8.5	Soil	Acenaphthene		1.16	43	N	N	1/26/2005	SW8270C	53421-1	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene		2.96	35	N	N				120-12-7
		Benzo(a)anthracene		3.65	0.9	Y	N				56-55-3
		Benzo(a)pyrene		3.25	0.4	Y	N				50-32-8
		Benzo(b)fluoranthene		3.01	0.9	Y	N				205-99-2
		Benzo(g,h,i)perylene		1.55	0.8	Y	N				191-24-2
		Benzo(k)fluoranthene		1.83	0.9	Y	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene		3.54	0.4	Y	N				218-01-9
		Dibenzo(a,h)anthracene		0.397	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene		10.1	20	N	N				206-44-0
		Fluorene		1.32	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		1.86	0.9	Y	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	J	0.203	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene		10.3	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene		7.51	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-50-7.5-9.5	Soil	Acenaphthene	U	0.28	43	N	N	1/26/2005	SW8270C	53421-2	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	J	0.187	35	N	N				120-12-7
		Benzo(a)anthracene	J	0.241	0.9	N	N				56-55-3
		Benzo(a)pyrene	J	0.226	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	J	0.19	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	J	0.153	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	J	0.247	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene		0.608	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene		0.646	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene		0.501	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-58-7-9	Soil	Acenaphthene	U	0.31	43	N	N	1/25/2005	SW8270C	53421-3	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene		0.341	0.9	N	N				56-55-3
		Benzo(a)pyrene	J	0.297	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	J	0.231	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	J	0.179	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	J	0.216	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene		0.347	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene		0.738	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	J	0.198	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene		0.399	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene		0.656	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-52-8.5-10.5	Soil	Acenaphthene	U	0.29	43	N	N	2/8/2005	SW8270C	53484-3	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	J	0.157	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	J	0.155	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene		0.424	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene		0.412	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene		0.331	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-59-7-9	Soil	Acenaphthene	U	0.29	43	N	N	2/17/2005	SW8270C	53542-1	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	J	**0.246**	35	N	N				120-12-7
		Benzo(a)anthracene		**0.466**	0.9	N	N				56-55-3
		Benzo(a)pyrene		**0.412**	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene		**0.339**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	J	**0.289**	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		**0.336**	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene		**0.465**	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene		**1.12**	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		**0.29**	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene		**0.862**	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene		**0.888**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-26
Tank Farm 5 Shunt Piping
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NS-59-7-9	Soil	Acenaphthene	U	0.29	43	N	N	2/17/2005	SW8270C	53542-1	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	J	**0.246**	35	N	N				120-12-7
		Benzo(a)anthracene		**0.466**	0.9	N	N				56-55-3
		Benzo(a)pyrene		**0.412**	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene		**0.339**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	J	**0.289**	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		**0.336**	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene		**0.465**	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene		**1.12**	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		**0.29**	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene		**0.862**	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene		**0.888**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-27
Tank Farm 5 Exit Piping
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-24-1-3-5	Dry	12/15/04	1	34
TF5-P-24-2-3-5	Dry	12/15/04	1	7
TF5-P-24-3-3-5	Dry	12/15/04	1	9
TF5-P-24-4-3-5	Dry	12/15/04	1	20
TF5-P-24-5-3-5	Dry	12/15/04	1	10
TF5-P-24-6-3-5	Dry	12/15/04	1	3

TABLE 6-28
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1	Soil	TPH		**37**	500	N	N	3/15/2005	EPA8015	53626-1	
TF5-L-CT53-SW1D	Soil	TPH	U	22	500	N	N	3/15/2005	EPA8015	53626-2	
TF5-L-CT53-SW2	Soil	TPH		**45**	500	N	N	3/15/2005	EPA8015	53626-3	
TF5-L-CT53-SW3	Soil	TPH		**3730**	500	Y	N	3/15/2005	EPA8015	53626-4	
TF5-L-CT53-SW4	Soil	TPH		**212**	500	N	N	3/15/2005	EPA8015	53626-5	
TF5-L-CT53-SW5	Soil	TPH		**517**	500	Y	N	3/15/2005	EPA8015	53626-6	
TF5-L-CT53-B1	Soil	TPH	U	22	500	N	N	3/15/2005	EPA8015	53626-7	
TF5-L-CT53-B2	Soil	TPH	U	22	500	N	N	3/15/2005	EPA8015	53626-8	
TF5-L-CT53-B3	Soil	TPH	U	22	500	N	N	3/15/2005	EPA8015	53626-9	
TF5-L-CT53-SW6	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53642-1	
TF5-L-CT53-SW7	Soil	TPH		**4180**	500	Y	N	3/18/2005	EPA8015	53642-2	
TF5-L-CT53-B4	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53642-3	
TF5-L-CT53-SW3A	Soil	TPH	U	36	500	N	N	3/29/2005	EPA8015	53716-1	
TF5-L-CT53-SW5A	Soil	TPH	U	22	500	N	N	3/29/2005	EPA8015	53716-3	
TF5-L-CT53-SW7A	Soil	TPH		**156**	500	N	N	3/29/2005	EPA8015	53716-2	

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1	Soil	Acetone		0.034	7800	N	N	3/15/2005	SW8260B	610550	67-64-1
		Benzene	U	0.0025	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0025	10	N	N				75-27-4
		Bromoform	U	0.0025	81	N	N				75-25-2
		Bromomethane	U	0.0025	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0025	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0025	210	N	N				108-90-7
		Chloroform	U	0.0025	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0025	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0025	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0025	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0025	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0025	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0025	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0025	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0025	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0025	71	N	N				100-41-4
		Ethylene dibromide	U	0.0025	0.01	N	N				
		Isopropyl benzene	U	0.0025	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0025	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0025	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0025	390	N	N				1634-04-4
		Methylene chloride	U	0.0025	45	N	N				75-09-2
		Styrene	U	0.0025	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0025	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0025	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0025	12	N	N				127-18-4
		Toluene	U	0.0025	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0025	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0025	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0025	13	N	N				79-01-6
		Vinyl chloride	U	0.0025	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0025	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1D	Soil	Acetone		0.046	7800	N	N	3/15/2005	SW8260B	610551	67-64-1
		Benzene	U	0.0032	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0032	10	N	N				75-27-4
		Bromoform	U	0.0032	81	N	N				75-25-2
		Bromomethane	U	0.0032	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0032	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0032	210	N	N				108-90-7
		Chloroform	U	0.0032	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0032	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0032	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0032	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0032	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0032	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0032	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0032	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0032	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0032	71	N	N				100-41-4
		Ethylene dibromide	U	0.0032	0.01	N	N				
		Isopropyl benzene	U	0.0032	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0032	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0032	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0032	390	N	N				1634-04-4
		Methylene chloride	U	0.0032	45	N	N				75-09-2
		Styrene	U	0.0032	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0032	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0032	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0032	12	N	N				127-18-4
		Toluene	U	0.0032	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0032	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0032	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0032	13	N	N				79-01-6
		Vinyl chloride	U	0.0032	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0032	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW2	Soil	Acetone		0.011	7800	N	N	3/15/2005	SW8260B	610552	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.003	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	U	0.003	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW3	Soil	Acetone		0.052	7800	N	N	3/15/2005	SW8260B	610553	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone		0.011	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW4	Soil	Acetone		0.038	7800	N	N	3/15/2005	SW8260B	610554	67-64-1
		Benzene	U	0.0025	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0025	10	N	N				75-27-4
		Bromoform	U	0.0025	81	N	N				75-25-2
		Bromomethane	U	0.0025	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0025	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0025	210	N	N				108-90-7
		Chloroform	U	0.0025	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0025	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0025	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0025	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0025	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0025	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0025	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0025	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0025	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0025	71	N	N				100-41-4
		Ethylene dibromide	U	0.0025	0.01	N	N				
		Isopropyl benzene	U	0.0025	27	N	N				98-82-8
		Methyl ethyl ketone		0.0038	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0025	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0025	390	N	N				1634-04-4
		Methylene chloride	U	0.0025	45	N	N				75-09-2
		Styrene	U	0.0025	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0025	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0025	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0025	12	N	N				127-18-4
		Toluene	U	0.0025	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0025	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0025	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0025	13	N	N				79-01-6
		Vinyl chloride	U	0.0025	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0025	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW5	Soil	Acetone		0.033	7800	N	N	3/15/2005	SW8260B	610555	67-64-1
		Benzene	U	0.0032	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0032	10	N	N				75-27-4
		Bromoform	U	0.0032	81	N	N				75-25-2
		Bromomethane	U	0.0032	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0032	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0032	210	N	N				108-90-7
		Chloroform	U	0.0032	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0032	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0032	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0032	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0032	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0032	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0032	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0032	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0032	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0032	71	N	N				100-41-4
		Ethylene dibromide	U	0.0032	0.01	N	N				
		Isopropyl benzene	U	0.0032	27	N	N				98-82-8
		Methyl ethyl ketone		0.0044	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0032	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0032	390	N	N				1634-04-4
		Methylene chloride	U	0.0032	45	N	N				75-09-2
		Styrene	U	0.0032	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0032	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0032	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0032	12	N	N				127-18-4
		Toluene	U	0.0032	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0032	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0032	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0032	13	N	N				79-01-6
		Vinyl chloride	U	0.0032	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0032	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B1	Soil	Acetone		0.014	7800	N	N	3/15/2005	SW8260B	610556	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B2	Soil	Acetone		0.013	7800	N	N	3/15/2005	SW8260B	610557	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	U	0.0031	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B3	Soil	Acetone		0.033	7800	N	N	3/15/2005	SW8260B	610558	67-64-1
		Benzene	U	0.0029	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0029	10	N	N				75-27-4
		Bromoform	U	0.0029	81	N	N				75-25-2
		Bromomethane	U	0.0029	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0029	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0029	210	N	N				108-90-7
		Chloroform	U	0.0029	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0029	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0029	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0029	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0029	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0029	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0029	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0029	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0029	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0029	71	N	N				100-41-4
		Ethylene dibromide	U	0.0029	0.01	N	N				
		Isopropyl benzene	U	0.0029	27	N	N				98-82-8
		Methyl ethyl ketone		0.0038	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0029	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0029	390	N	N				1634-04-4
		Methylene chloride	U	0.0029	45	N	N				75-09-2
		Styrene	U	0.0029	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0029	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0029	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0029	12	N	N				127-18-4
		Toluene	U	0.0029	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0029	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0029	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0029	13	N	N				79-01-6
		Vinyl chloride	U	0.0029	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0029	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B4A	Soil	Acetone		0.0045	7800	N	N	3/21/2005	SW8260B	611341	67-64-1
		Benzene	U	0.0025	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0025	10	N	N				75-27-4
		Bromoform	U	0.0025	81	N	N				75-25-2
		Bromomethane	U	0.0025	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0025	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0025	210	N	N				108-90-7
		Chloroform	U	0.0025	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0025	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0025	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0025	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0025	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0025	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0025	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0025	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0025	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0025	71	N	N				100-41-4
		Ethylene dibromide	U	0.0025	0.01	N	N				
		Isopropyl benzene	U	0.0025	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0025	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0025	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0025	390	N	N				1634-04-4
		Methylene chloride	J	0.0011	45	N	N				75-09-2
		Styrene	U	0.0025	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0025	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0025	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0025	12	N	N				127-18-4
		Toluene	U	0.0025	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0025	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0025	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0025	13	N	N				79-01-6
		Vinyl chloride	U	0.0025	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0025	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW6	Soil	Acetone		0.016	7800	N	N	3/18/2005	SW8260B	611084	67-64-1
		Benzene	U	0.0032	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0032	10	N	N				75-27-4
		Bromoform	U	0.0032	81	N	N				75-25-2
		Bromomethane	U	0.0032	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0032	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0032	210	N	N				108-90-7
		Chloroform	U	0.0032	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0032	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0032	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0032	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0032	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0032	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0032	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0032	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0032	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0032	71	N	N				100-41-4
		Ethylene dibromide	U	0.0032	0.01	N	N				
		Isopropyl benzene	U	0.0032	27	N	N				98-82-8
		Methyl ethyl ketone	J	0.0016	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0032	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0032	390	N	N				1634-04-4
		Methylene chloride	U	0.0032	45	N	N				75-09-2
		Styrene	U	0.0032	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0032	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0032	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0032	12	N	N				127-18-4
		Toluene	U	0.0032	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0032	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0032	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0032	13	N	N				79-01-6
		Vinyl chloride	U	0.0032	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0032	110	N	N				1330-20-7

TABLE 6-29
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW7*	Soil	Acetone	U	0.34	7800	N	N	3/17/2005	SW8260B	611085	67-64-1
		Benzene	U	0.34	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.34	10	N	N				75-27-4
		Bromoform	U	0.34	81	N	N				75-25-2
		Bromomethane	U	0.34	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.34	1.5	N	N				56-23-5
		Chlorobenzene	U	0.34	210	N	N				108-90-7
		Chloroform	U	0.34	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.34	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.34	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.34	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.34	0.2	**Y**	**Y**				75-35-4
		1,2-Dichloroethane	U	0.34	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.34	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.34	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.34	1.9	N	N				78-87-5
		Ethyl benzene	U	0.34	71	N	N				100-41-4
		Ethylene dibromide	U	0.34	0.01	**Y**	**Y**				
		Isopropyl benzene	U	0.34	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.34	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.34	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.34	390	N	N				1634-04-4
		Methylene chloride	U	0.34	45	N	N				75-09-2
		Styrene	U	0.34	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.34	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.34	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.34	12	N	N				127-18-4
		Toluene	U	0.34	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.34	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.34	3.6	N	N				79-00-5
		Trichloroethylene	U	0.34	13	N	N				79-01-6
		Vinyl chloride	U	0.34	0.02	**Y**	**Y**				75-01-4
		Xylenes (total)	U	0.34	110	N	N				1330-20-7

Note:

* During pre-analysis screening, the lab found non-target volatile hydrocarbons at high concentrations in sample TF5-L-CT53-SW7. The TPH value of this sample is 4180 mg/kg. To prevent potential damage to the analytical instruments due to high-concentration contaminants, the sample was analyzed at a dilution, causing high reporting limits for the sample.

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1	Soil	Acenaphthene	U	0.4	43	N	N	3/12/2005	SW8270	53626-1	83-32-9
		Acenaphthylene	U	0.4	23	N	N				208-96-8
		Anthracene	U	0.4	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.4	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.4	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.4	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.4	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.4	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.4	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.4	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.4	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.4	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.4	310	N	N				106-47-8
		2-Chlorophenol	U	0.4	50	N	N				95-57-8
		Chrysene	U	0.4	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.4	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.4	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.4	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.4	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.4	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.4	30	N	N				120-83-2
		Diethyl phthalate	U	0.4	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.4	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.4	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.4	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.4	0.9	N	N				121-14-2
		Fluoranthene	U	0.4	20	N	N				206-44-0
		Fluorene	U	0.4	28	N	N				86-73-7
		Hexachlorobenzene	U	0.4	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.4	8.2	N	N				87-68-3
		Hexachloroethane	U	0.4	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.4	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.4	123	N	N				91-57-6
		Naphthalene	U	0.4	54	N	N				91-20-3
		Pentachlorophenol	U	0.4	5.3	N	N				87-86-5
		Phenanthrene	U	0.4	40	N	N				85-01-8
		Phenol	U	0.4	6000	N	N				108-95-2
		Pyrene	U	0.4	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.4	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.4	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.4	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1D	Soil	Acenaphthene	U	0.29	43	N	N	3/12/2005	SW8270	53626-2	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW2	Soil	Acenaphthene	U	0.28	43	N	N	3/12/2005	SW8270	53626-3	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW3	Soil	Acenaphthene	U	0.29	43	N	N	3/12/2005	SW8270	53626-4	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW4	Soil	Acenaphthene	U	0.3	43	N	N	3/12/2005	SW8270	53626-5	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW5	Soil	Acenaphthene		0.4	43	N	N	3/12/2005	SW8270	53626-6	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene		1.3	35	N	N				120-12-7
		Benzo(a)anthracene		2.4	0.9	Y	N				56-55-3
		Benzo(a)pyrene		1.62	0.4	Y	N				50-32-8
		Benzo(b)fluoranthene		1.62	0.9	Y	N				205-99-2
		Benzo(g,h,i)perylene		0.362	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		1.45	0.9	Y	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene		2.33	0.4	Y	N				218-01-9
		Dibenzo(a,h)anthracene		0.149	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene		4.86	20	N	N				206-44-0
		Fluorene		0.424	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		0.519	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene		3.94	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene		3.78	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B1	Soil	Acenaphthene	U	0.27	43	N	N	3/12/2005	SW8270	53626-7	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.27	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.27	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.27	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.27	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	U	0.27	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene	U	0.27	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	U	0.27	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene	U	0.27	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B2	Soil	Acenaphthene	U	0.28	43	N	N	3/12/2005	SW8270	53626-8	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B3	Soil	Acenaphthene	U	0.28	43	N	N	3/12/2005	SW8270	53626-9	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B4	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53642-3	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW6	Soil	Acenaphthene	U	0.27	43	N	N	3/19/2005	SW8270	53642-1	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.27	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.27	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.27	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.27	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	U	0.27	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene	U	0.27	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	U	0.27	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene	U	0.27	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW7	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53642-2	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW3A	Soil	Acenaphthene	U	0.31	43	N	N	4/1/2005	SW8270	53716-1	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW5A	Soil	Acenaphthene	U	0.28	43	N	N	4/1/2005	SW8270	53716-3	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4

TABLE 6-30
Tank Farm 5 CT-53 Chamber Removal Action
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		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW7A	Soil	Acenaphthene	U	0.29	43	N	N	4/1/2005	SW8270	53716-2	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

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Tank Farm 5 CT-53 Chamber Removal Action
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		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1	Soil	Antimony	B	0.89	10	N	N	3/11/2005		610550	7440-36-0
		Arsenic		13.4	7.0	Y	N				7440-38-2
		Barium	B	20.1	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium	B	0.19	39	N	N				7440-43-9
		Chromium		9.9	390	N	N				7440-47-3
		Copper		11.9	3100	N	N				7440-50-8
		Cyanide	U	0.55	200	N	N				57-12-5
		Lead		17.7	150	N	N				7439-92-1
		Manganese		287	390	N	N				7439-96-5
		Mercury	B	0.019	23	N	N				7439-97-6
		Nickel		16.6	1000	N	N				7440-02-0
		Selenium	U	0.56	390	N	N				7782-49-2
		Silver	U	0.16	200	N	N				7440-22-4
		Thallium	U	0.8	5.5	N	N				7440-28-0
		Vanadium		12.9	550	N	N				7440-62-2
		Zinc		36.6	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1D	Soil	Antimony	B	0.72	10	N	N	3/11/2005		610551	7440-36-0
		Arsenic		12	7.0	Y	N				7440-38-2
		Barium		37.1	5500	N	N				7440-39-3
		Beryllium	B	0.41	0.4	Y	N				7440-41-7
		Cadmium	B	0.18	39	N	N				7440-43-9
		Chromium		10.9	390	N	N				7440-47-3
		Copper		26.9	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		16.4	150	N	N				7439-92-1
		Manganese		317	390	N	N				7439-96-5
		Mercury	U	0.016	23	N	N				7439-97-6
		Nickel		16.2	1000	N	N				7440-02-0
		Selenium	U	0.46	390	N	N				7782-49-2
		Silver	U	0.13	200	N	N				7440-22-4
		Thallium	U	0.66	5.5	N	N				7440-28-0
		Vanadium		15.9	550	N	N				7440-62-2
		Zinc		52	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW2	Soil	Antimony	B	0.83	10	N	N	3/11/2005		610552	7440-36-0
		Arsenic		16.8	7.0	Y	N				7440-38-2
		Barium	B	17.4	5500	N	N				7440-39-3
		Beryllium	B	0.43	0.4	Y	N				7440-41-7
		Cadmium	B	0.29	39	N	N				7440-43-9
		Chromium		12.9	390	N	N				7440-47-3
		Copper		19.7	3100	N	N				7440-50-8
		Cyanide	U	0.55	200	N	N				57-12-5
		Lead		9.8	150	N	N				7439-92-1
		Manganese		384	390	N	N				7439-96-5
		Mercury	U	0.015	23	N	N				7439-97-6
		Nickel		24.1	1000	N	N				7440-02-0
		Selenium	U	0.54	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.77	5.5	N	N				7440-28-0
		Vanadium		18.2	550	N	N				7440-62-2
		Zinc		55.7	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW3	Soil	Antimony	B	0.7	10	N	N	3/11/2005		610553	7440-36-0
		Arsenic		11	7.0	Y	N				7440-38-2
		Barium	B	14.1	5500	N	N				7440-39-3
		Beryllium	B	0.34	0.4	N	N				7440-41-7
		Cadmium	B	0.16	39	N	N				7440-43-9
		Chromium		9.8	390	N	N				7440-47-3
		Copper		13.8	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		8.1	150	N	N				7439-92-1
		Manganese		134	390	N	N				7439-96-5
		Mercury	U	0.015	23	N	N				7439-97-6
		Nickel		16.6	1000	N	N				7440-02-0
		Selenium	U	0.49	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.7	5.5	N	N				7440-28-0
		Vanadium		14.3	550	N	N				7440-62-2
		Zinc		38.4	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW4	Soil	Antimony	B	0.66	10	N	N	3/11/2005		610554	7440-36-0
		Arsenic		16.6	7.0	Y	N				7440-38-2
		Barium	B	17.9	5500	N	N				7440-39-3
		Beryllium	B	0.34	0.4	N	N				7440-41-7
		Cadmium	B	0.21	39	N	N				7440-43-9
		Chromium		9.8	390	N	N				7440-47-3
		Copper		14.7	3100	N	N				7440-50-8
		Cyanide	U	0.56	200	N	N				57-12-5
		Lead		17.5	150	N	N				7439-92-1
		Manganese		301	390	N	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		18.7	1000	N	N				7440-02-0
		Selenium	U	0.47	390	N	N				7782-49-2
		Silver	U	0.13	200	N	N				7440-22-4
		Thallium	U	0.67	5.5	N	N				7440-28-0
		Vanadium		12.7	550	N	N				7440-62-2
		Zinc		47.8	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW5	Soil	Antimony	B	0.76	10	N	N	3/11/2005		610555	7440-36-0
		Arsenic		14	7.0	Y	N				7440-38-2
		Barium	B	16.6	5500	N	N				7440-39-3
		Beryllium	B	0.33	0.4	N	N				7440-41-7
		Cadmium	B	0.29	39	N	N				7440-43-9
		Chromium		12.9	390	N	N				7440-47-3
		Copper		11.9	3100	N	N				7440-50-8
		Cyanide	U	0.6	200	N	N				57-12-5
		Lead		17.3	150	N	N				7439-92-1
		Manganese		320	390	N	N				7439-96-5
		Mercury	U	0.016	23	N	N				7439-97-6
		Nickel		19	1000	N	N				7440-02-0
		Selenium	U	0.49	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.7	5.5	N	N				7440-28-0
		Vanadium		16	550	N	N				7440-62-2
		Zinc		45	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B1	Soil	Antimony	B	0.53	10	N	N	3/11/2005		610556	7440-36-0
		Arsenic		27.4	7.0	Y	N				7440-38-2
		Barium	B	11.7	5500	N	N				7440-39-3
		Beryllium	B	0.42	0.4	Y	N				7440-41-7
		Cadmium	B	0.4	39	N	N				7440-43-9
		Chromium		19.5	390	N	N				7440-47-3
		Copper		30.2	3100	N	N				7440-50-8
		Cyanide	U	0.56	200	N	N				57-12-5
		Lead		19.1	150	N	N				7439-92-1
		Manganese		860	390	Y	N				7439-96-5
		Mercury	U	0.015	23	N	N				7439-97-6
		Nickel		42.7	1000	N	N				7440-02-0
		Selenium	U	0.5	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.72	5.5	N	N				7440-28-0
		Vanadium		18.5	550	N	N				7440-62-2
		Zinc		94.7	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B2	Soil	Antimony	B	0.82	10	N	N	3/12/2005		610557	7440-36-0
		Arsenic		16.7	7.0	Y	N				7440-38-2
		Barium	B	11.9	5500	N	N				7440-39-3
		Beryllium	B	0.33	0.4	N	N				7440-41-7
		Cadmium	B	0.22	39	N	N				7440-43-9
		Chromium		11.8	390	N	N				7440-47-3
		Copper		14.7	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		12.4	150	N	N				7439-92-1
		Manganese		363	390	N	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		24	1000	N	N				7440-02-0
		Selenium	U	0.48	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.69	5.5	N	N				7440-28-0
		Vanadium		13.8	550	N	N				7440-62-2
		Zinc		52.8	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B3	Soil	Antimony	B	0.4	10	N	N	3/11/2005		610558	7440-36-0
		Arsenic		5.3	7.0	N	N				7440-38-2
		Barium	B	9.8	5500	N	N				7440-39-3
		Beryllium	B	0.2	0.4	N	N				7440-41-7
		Cadmium	B	0.11	39	N	N				7440-43-9
		Chromium		5.6	390	N	N				7440-47-3
		Copper		6.2	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		4	150	N	N				7439-92-1
		Manganese		169	390	N	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		8.4	1000	N	N				7440-02-0
		Selenium	U	0.49	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.7	5.5	N	N				7440-28-0
		Vanadium		8.2	550	N	N				7440-62-2
		Zinc		20.1	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-B4	Soil	Antimony	B	0.73	10	N	N	3/16/2005		611086	7440-36-0
		Arsenic		17.4	7.0	Y	N				7440-38-2
		Barium	B	14.5	5500	N	N				7440-39-3
		Beryllium	B	0.17	0.4	N	N				7440-41-7
		Cadmium	U	0.063	39	N	N				7440-43-9
		Chromium		15	390	N	N				7440-47-3
		Copper		19.8	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		8	150	N	N				7439-92-1
		Manganese		466	390	Y	N				7439-96-5
		Mercury	U	0.019	23	N	N				7439-97-6
		Nickel		26.4	1000	N	N				7440-02-0
		Selenium	U	0.52	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.74	5.5	N	N				7440-28-0
		Vanadium		14.9	550	N	N				7440-62-2
		Zinc		58.6	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW6	Soil	Antimony	B	0.68	10	N	N	3/16/2005		611084	7440-36-0
		Arsenic		10.4	7.0	Y	N				7440-38-2
		Barium	B	14.3	5500	N	N				7440-39-3
		Beryllium	B	0.13	0.4	N	N				7440-41-7
		Cadmium	U	0.056	39	N	N				7440-43-9
		Chromium		8.4	390	N	N				7440-47-3
		Copper		10.4	3100	N	N				7440-50-8
		Cyanide	U	0.53	200	N	N				57-12-5
		Lead		6	150	N	N				7439-92-1
		Manganese		251	390	N	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		15.8	1000	N	N				7440-02-0
		Selenium	U	0.46	390	N	N				7782-49-2
		Silver	U	0.13	200	N	N				7440-22-4
		Thallium	U	0.66	5.5	N	N				7440-28-0
		Vanadium		10.5	550	N	N				7440-62-2
		Zinc		33.2	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW7	Soil	Antimony	B	0.84	10	N	N	3/16/2005		611085	7440-36-0
		Arsenic		23.5	7.0	Y	N				7440-38-2
		Barium	B	11.2	5500	N	N				7440-39-3
		Beryllium	B	0.24	0.4	N	N				7440-41-7
		Cadmium	U	0.067	39	N	N				7440-43-9
		Chromium		17.3	390	N	N				7440-47-3
		Copper		27.3	3100	N	N				7440-50-8
		Cyanide	U	0.54	200	N	N				57-12-5
		Lead		9.4	150	N	N				7439-92-1
		Manganese		713	390	Y	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		38.4	1000	N	N				7440-02-0
		Selenium	U	0.54	390	N	N				7782-49-2
		Silver	U	0.16	200	N	N				7440-22-4
		Thallium	U	0.78	5.5	N	N				7440-28-0
		Vanadium		13.9	550	N	N				7440-62-2
		Zinc		91.8	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW3A	Soil	Antimony	B	0.5	10	N	N	3/29/2005		612312	7440-36-0
		Arsenic		4.9	7.0	N	N				7440-38-2
		Barium	B	13	5500	N	N				7440-39-3
		Beryllium	B	0.31	0.4	N	N				7440-41-7
		Cadmium	U	0.062	39	N	N				7440-43-9
		Chromium		7.5	390	N	N				7440-47-3
		Copper		7	3100	N	N				7440-50-8
		Cyanide	U	0.55	200	N	N				57-12-5
		Lead		4	150	N	N				7439-92-1
		Manganese		170	390	N	N				7439-96-5
		Mercury	U	0.017	23	N	N				7439-97-6
		Nickel		7.9	1000	N	N				7440-02-0
		Selenium	U	0.51	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	B	0.85	5.5	N	N				7440-28-0
		Vanadium		15.6	550	N	N				7440-62-2
		Zinc		18.5	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW5A	Soil	Antimony	U	0.38	10	N	N	3/29/2005		612314	7440-36-0
		Arsenic		15.1	7.0	Y	N				7440-38-2
		Barium	B	16.7	5500	N	N				7440-39-3
		Beryllium	B	0.38	0.4	N	N				7440-41-7
		Cadmium	B	0.16	39	N	N				7440-43-9
		Chromium		10.6	390	N	N				7440-47-3
		Copper		19.5	3100	N	N				7440-50-8
		Cyanide	U	0.55	200	N	N				57-12-5
		Lead		7.3	150	N	N				7439-92-1
		Manganese		442	390	Y	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		23.9	1000	N	N				7440-02-0
		Selenium	U	0.48	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	B	1	5.5	N	N				7440-28-0
		Vanadium		13	550	N	N				7440-62-2
		Zinc		52.3	6000	N	N				7440-66-6

TABLE 6-31
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW7A	Soil	Antimony	B	0.49	10	N	N	3/29/2005		612313	7440-36-0
		Arsenic		13.3	7.0	Y	N				7440-38-2
		Barium	B	19.3	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium	B	0.082	39	N	N				7440-43-9
		Chromium		9.6	390	N	N				7440-47-3
		Copper		14.9	3100	N	N				7440-50-8
		Cyanide	U	0.51	200	N	N				57-12-5
		Lead		6.3	150	N	N				7439-92-1
		Manganese		151	390	N	N				7439-96-5
		Mercury	U	0.017	23	N	N				7439-97-6
		Nickel		18.6	1000	N	N				7440-02-0
		Selenium	U	0.52	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.74	5.5	N	N				7440-28-0
		Vanadium		13.2	550	N	N				7440-62-2
		Zinc		38.7	6000	N	N				7440-66-6

TABLE 6-32
Tank Farm 5 CT-53 Chamber Removal Action
Confirmatory Sample PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT53-SW1	Soil	Total PCBs	U	0.024	10	N	N	3/14/2005	EPA8082	53626-1	1336-36-3
TF5-L-CT53-SW1D	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-2	1336-36-3
TF5-L-CT53-SW2	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-3	1336-36-3
TF5-L-CT53-SW3	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-4	1336-36-3
TF5-L-CT53-SW4	Soil	Total PCBs		**0.026**	10	N	N	3/14/2005	EPA8082	53626-5	1336-36-3
TF5-L-CT53-SW5	Soil	Total PCBs		**0.142**	10	N	N	3/14/2005	EPA8082	53626-6	1336-36-3
TF5-L-CT53-B1	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-7	1336-36-3
TF5-L-CT53-B2	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-8	1336-36-3
TF5-L-CT53-B3	Soil	Total PCBs	U	0.017	10	N	N	3/14/2005	EPA8082	53626-9	1336-36-3
TF5-L-CT53-SW6	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53642-1	1336-36-3
TF5-L-CT53-SW7	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53642-2	1336-36-3
TF5-L-CT53-B4	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53642-3	1336-36-3
TF5-L-CT53-SW3A	Soil	Total PCBs	U	0.018	10	N	N	3/29/2005	EPA8082	53716-1	1336-36-3
TF5-L-CT53-SW5A	Soil	Total PCBs	U	0.017	10	N	N	3/29/2005	EPA8082	53716-3	1336-36-3
TF5-L-CT53-SW7A	Soil	Total PCBs	U	0.018	10	N	N	3/29/2005	EPA8082	53716-2	1336-36-3

TABLE 6-33
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B1	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53645-1	
TF5-L-CT56-B2	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53645-2	
TF5-L-CT56-SW1	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53645-3	
TF5-L-CT56-SW2	Soil	TPH		**51**	500	N	N	3/17/2005	EPA8015	53645-4	
TF5-L-CT56-SW3	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53645-5	
TF5-L-CT56-SW4	Soil	TPH	U	22	500	N	N	3/17/2005	EPA8015	53645-6	

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B1	Soil	Acetone		0.013	7800	N	N	3/21/2005	SW8260B	611334	67-64-1
		Benzene	U	0.0031	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0031	10	N	N				75-27-4
		Bromoform	U	0.0031	81	N	N				75-25-2
		Bromomethane	U	0.0031	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0031	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0031	210	N	N				108-90-7
		Chloroform	U	0.0031	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0031	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0031	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0031	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0031	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0031	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0031	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0031	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0031	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0031	71	N	N				100-41-4
		Ethylene dibromide	U	0.0031	0.01	N	N				
		Isopropyl benzene	U	0.0031	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0031	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0031	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0031	390	N	N				1634-04-4
		Methylene chloride	J	0.0019	45	N	N				75-09-2
		Styrene	U	0.0031	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0031	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0031	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0031	12	N	N				127-18-4
		Toluene	U	0.0031	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0031	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0031	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0031	13	N	N				79-01-6
		Vinyl chloride	U	0.0031	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0031	110	N	N				1330-20-7

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B2	Soil	Acetone		0.013	7800	N	N	3/21/2005	SW8260B	611335	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.003	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	J	0.0018	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW1	Soil	Acetone		0.016	7800	N	N	3/21/2005	SW8260B	611335	67-64-1
		Benzene	U	0.0029	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0029	10	N	N				75-27-4
		Bromoform	U	0.0029	81	N	N				75-25-2
		Bromomethane	U	0.0029	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0029	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0029	210	N	N				108-90-7
		Chloroform	U	0.0029	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0029	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0029	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0029	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0029	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0029	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0029	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0029	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0029	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0029	71	N	N				100-41-4
		Ethylene dibromide	U	0.0029	0.01	N	N				
		Isopropyl benzene	U	0.0029	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0029	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0029	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0029	390	N	N				1634-04-4
		Methylene chloride	J	0.0013	45	N	N				75-09-2
		Styrene	U	0.0029	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0029	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0029	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0029	12	N	N				127-18-4
		Toluene	U	0.0029	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0029	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0029	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0029	13	N	N				79-01-6
		Vinyl chloride	U	0.0029	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0029	110	N	N				1330-20-7

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW2	Soil	Acetone		0.017	7800	N	N	3/21/2005	SW8260B	611337	67-64-1
		Benzene	U	0.0034	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0034	10	N	N				75-27-4
		Bromoform	U	0.0034	81	N	N				75-25-2
		Bromomethane	U	0.0034	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0034	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0034	210	N	N				108-90-7
		Chloroform	U	0.0034	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0034	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0034	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0034	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0034	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0034	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0034	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0034	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0034	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0034	71	N	N				100-41-4
		Ethylene dibromide	U	0.0034	0.01	N	N				
		Isopropyl benzene	U	0.0034	27	N	N				98-82-8
		Methyl ethyl ketone	U	0.0034	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0034	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0034	390	N	N				1634-04-4
		Methylene chloride	J	0.0013	45	N	N				75-09-2
		Styrene	U	0.0034	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0034	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0034	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0034	12	N	N				127-18-4
		Toluene	U	0.0034	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0034	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0034	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0034	13	N	N				79-01-6
		Vinyl chloride	U	0.0034	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0034	110	N	N				1330-20-7

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW3	Soil	Acetone		0.06	7800	N	N	3/21/2005	SW8260B	611338	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone		0.024	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0026	390	N	N				1634-04-4
		Methylene chloride	J	0.0011	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-34
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW4	Soil	Acetone		0.02	7800	N	N	3/21/2005	SW8260B	611339	67-64-1
		Benzene	U	0.0026	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0026	10	N	N				75-27-4
		Bromoform	U	0.0026	81	N	N				75-25-2
		Bromomethane	U	0.0026	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0026	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0026	210	N	N				108-90-7
		Chloroform	U	0.0026	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0026	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0026	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0026	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0026	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0026	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0026	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0026	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0026	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0026	71	N	N				100-41-4
		Ethylene dibromide	U	0.0026	0.01	N	N				
		Isopropyl benzene	U	0.0026	27	N	N				98-82-8
		Methyl ethyl ketone		0.0027	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0026	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0026	390	N	N				1634-04-4
		Methylene chloride	J	0.0014	45	N	N				75-09-2
		Styrene	U	0.0026	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0026	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0026	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0026	12	N	N				127-18-4
		Toluene	U	0.0026	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0026	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0026	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0026	13	N	N				79-01-6
		Vinyl chloride	U	0.0026	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0026	110	N	N				1330-20-7

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B1	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53645-1	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B2	Soil	Acenaphthene	U	0.29	43	N	N	3/19/2005	SW8270	53645-2	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2
TF5-L-CT56-SW1	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53645-3	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW2	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53645-4	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW3	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53645-5	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW4	Soil	Acenaphthene	U	0.28	43	N	N	3/19/2005	SW8270	53645-6	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8

TABLE 6-35
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample SVOC Analytical Data

		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 6-36
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B1	Soil	Antimony	U	0.38	10	N	N	3/18/2005		611334	7440-36-0
		Arsenic	E	36.4	7.0	Y	N				7440-38-2
		Barium	B	18.4	5500	N	N				7440-39-3
		Beryllium	B	0.37	0.4	N	N				7440-41-7
		Cadmium	U	0.059	39	N	N				7440-43-9
		Chromium		11.6	390	N	N				7440-47-3
		Copper		23.7	3100	N	N				7440-50-8
		Cyanide	U	0.51	200	N	N				57-12-5
		Lead		8.3	150	N	N				7439-92-1
		Manganese		548	390	Y	N				7439-96-5
		Mercury	U	0.017	23	N	N				7439-97-6
		Nickel	E	28.6	1000	N	N				7440-02-0
		Selenium	U	0.48	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.68	5.5	N	N				7440-28-0
		Vanadium		13.3	550	N	N				7440-62-2
		Zinc		59.9	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B2	Soil	Antimony	U	0.37	10	N	N	3/18/2005		611335	7440-36-0
		Arsenic	E	48.2	7.0	Y	N				7440-38-2
		Barium	B	15.2	5500	N	N				7440-39-3
		Beryllium	B	0.38	0.4	N	N				7440-41-7
		Cadmium	U	0.057	39	N	N				7440-43-9
		Chromium		13.1	390	N	N				7440-47-3
		Copper		24	3100	N	N				7440-50-8
		Cyanide	U	0.52	200	N	N				57-12-5
		Lead		7.2	150	N	N				7439-92-1
		Manganese		442	390	Y	N				7439-96-5
		Mercury	U	0.015	23	N	N				7439-97-6
		Nickel	E	27.1	1000	N	N				7440-02-0
		Selenium	U	0.47	390	N	N				7782-49-2
		Silver	U	0.13	200	N	N				7440-22-4
		Thallium	U	0.66	5.5	N	N				7440-28-0
		Vanadium		14.1	550	N	N				7440-62-2
		Zinc		54.1	6000	N	N				7440-66-6

TABLE 6-36
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW1	Soil	Antimony	U	0.42	10	N	N	3/18/2005		611336	7440-36-0
		Arsenic	E	31.8	7.0	Y	N				7440-38-2
		Barium	B	15.7	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium	U	0.065	39	N	N				7440-43-9
		Chromium		12.1	390	N	N				7440-47-3
		Copper		21.4	3100	N	N				7440-50-8
		Cyanide	U	0.52	200	N	N				57-12-5
		Lead		10.6	150	N	N				7439-92-1
		Manganese		425	390	Y	N				7439-96-5
		Mercury	U	0.015	23	N	N				7439-97-6
		Nickel	E	27.1	1000	N	N				7440-02-0
		Selenium	U	0.53	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.76	5.5	N	N				7440-28-0
		Vanadium		14	550	N	N				7440-62-2
		Zinc		56.7	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW2	Soil	Antimony	U	0.38	10	N	N	3/18/2005		611337	7440-36-0
		Arsenic	E	27.9	7.0	Y	N				7440-38-2
		Barium	B	16	5500	N	N				7440-39-3
		Beryllium	B	0.39	0.4	N	N				7440-41-7
		Cadmium	U	0.059	39	N	N				7440-43-9
		Chromium		14	390	N	N				7440-47-3
		Copper		23	3100	N	N				7440-50-8
		Cyanide	U	0.51	200	N	N				57-12-5
		Lead		10.4	150	N	N				7439-92-1
		Manganese		527	390	Y	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel	E	24.9	1000	N	N				7440-02-0
		Selenium	U	0.48	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium	U	0.69	5.5	N	N				7440-28-0
		Vanadium		13	550	N	N				7440-62-2
		Zinc		79.6	6000	N	N				7440-66-6

TABLE 6-36
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW3	Soil	Antimony	U	0.37	10	N	N	3/18/2005		611338	7440-36-0
		Arsenic	E	21	7.0	Y	N				7440-38-2
		Barium	B	18.7	5500	N	N				7440-39-3
		Beryllium	B	0.31	0.4	N	N				7440-41-7
		Cadmium	U	0.057	39	N	N				7440-43-9
		Chromium		11.5	390	N	N				7440-47-3
		Copper		17.9	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		8.9	150	N	N				7439-92-1
		Manganese		382	390	N	N				7439-96-5
		Mercury	U	0.017	23	N	N				7439-97-6
		Nickel	E	23.7	1000	N	N				7440-02-0
		Selenium	U	0.47	390	N	N				7782-49-2
		Silver	U	0.13	200	N	N				7440-22-4
		Thallium	U	0.67	5.5	N	N				7440-28-0
		Vanadium		13.2	550	N	N				7440-62-2
		Zinc		48.2	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-SW4	Soil	Antimony	U	0.41	10	N	N	3/18/2005		611339	7440-36-0
		Arsenic	E	25.7	7.0	Y	N				7440-38-2
		Barium	B	16.7	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium	U	0.064	39	N	N				7440-43-9
		Chromium		11	390	N	N				7440-47-3
		Copper		18.4	3100	N	N				7440-50-8
		Cyanide	U	0.48	200	N	N				57-12-5
		Lead		9.9	150	N	N				7439-92-1
		Manganese		383	390	N	N				7439-96-5
		Mercury	U	0.017	23	N	N				7439-97-6
		Nickel	E	21.9	1000	N	N				7440-02-0
		Selenium	U	0.52	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.74	5.5	N	N				7440-28-0
		Vanadium		13.3	550	N	N				7440-62-2
		Zinc		48.9	6000	N	N				7440-66-6

TABLE 6-37
Tank Farm 5 CT-56 Chamber Removal Action
Confirmatory Sample PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-CT56-B1	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53645-1	1336-36-3
TF5-L-CT56-B2	Soil	Total PCBs	U	0.018	10	N	N	3/18/2005	EPA8082	53645-2	1336-36-3
TF5-L-CT56-SW1	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53645-3	1336-36-3
TF5-L-CT56-SW2	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53645-4	1336-36-3
TF5-L-CT56-SW3	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53645-5	1336-36-3
TF5-L-CT56-SW4	Soil	Total PCBs	U	0.017	10	N	N	3/18/2005	EPA8082	53645-6	1336-36-3

TABLE 6-38
Tank Farm 5 A-18 Chamber Removal Action
Confirmatory Sample TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-A18-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	5/17/2005	SW8015	54113-1	
TF5-L-A18-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	5/17/2005	SW8015	54113-2	
TF5-L-A18-SW3	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	5/17/2005	SW8015	54113-3	
TF5-L-A18-SW4	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	5/17/2005	SW8015	54113-4	
TF5-L-A18-B1	Soil	Total Petroleum Hydrocarbons (TPH)		88	500	N	N	5/17/2005	SW8015	54113-5	
TF5-L-A18-VC4	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	5/17/2005	SW8015	54113-6	
TF5-L-A18-VC2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	5/17/2005	SW8015	54113-7	
TF5-L-A18-VC3	Soil	Total Petroleum Hydrocarbons (TPH)		1200	500	**Y**	N	5/17/2005	SW8015	54113-8	

TABLE 7-1
Tank Farm 4 Transformer Vaults
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-1	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-5	
TF4-TV-2	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-6	
TF4-TV-3	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53052-7	
TF4-TV-4	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-8	
TF4-TV-4D	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53052-9	
TF4-TV-Chp	Soil	**Total PCBs**		4.3	10	N	N	1/5/2005	EPA 8082	53340-1	

TABLE 7-2
Tank Farm 4 Transformer Vaults
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-1	Soil	1,2-Dichlorobenzene	U	0.3	510	N	N	11/20/2004	SW8270	53052-5	95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-2	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-6	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-3	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-7	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-4	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-8	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

TABLE 7-2
Tank Farm 4 Transformer Vaults
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-TV-4D	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-9	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

TABLE 7-3
Tank Farm 5 Transformer Vaults
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-TV-1	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53051-5	
TF5-TV-2	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53051-6	
TF5-TV-3	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53051-7	
TF5-TV-4	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53051-8	
TF5-TV-Chp	Soil	**Total PCBs**		0.32	10	N	N	1/4/2005	EPA 8082	53339-1	

TABLE 7-4
Tank Farm 5 Transformer Vaults
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-TV-1	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	11/19/2004	SW8270	53051-5	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-TV-2	Soil	1,2-Dichlorobenzene	U	0.31	510	N	N	11/19/2004	SW8270	53051-6	95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-TV-3	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	11/19/2004	SW8270	53051-7	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-TV-4	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	11/19/2004	SW8270	53051-8	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

TABLE 7-5
Tank Farm 4 Substation
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	Qualifier	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	RIDEM Industrial Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Sub-1	Soil	Lead		11100	150	Y	N	N	12/1/2004	SW6010B	598955	7439-92-1
TF4-Sub-2	Soil	Lead		33000	150	Y	N	N	12/1/2004	SW6010B	598956	7439-92-1
TF4-Sub-3	Soil	Lead		148	150	N	N	N	12/1/2004	SW6010B	598957	7439-92-1
TF4-L-BATTERY1	Soil	Lead		54	150	500	N	N	3/17/2005	SW6010B	611091	7439-92-1
TF4-L-BATTERY2	Soil	Lead		30.7	150	500	N	N	3/17/2005	SW6010B	611092	7439-92-1
TF4-L-BATTERY3	Soil	Lead		14.7	150	500	N	N	3/17/2005	SW6010B	611093	7439-92-1
TF4-L-BATTERY4	Soil	Lead		48.9	150	500	N	N	3/17/2005	SW6010B	611094	7439-92-1
TF4-L-BATTERY5	Soil	Lead		40.3	150	500	N	N	3/17/2005	SW6010B	611095	7439-92-1
TF4-L-BATTERY6	Soil	Lead		12.4	150	500	N	N	3/17/2005	SW6010B	611096	7439-92-1
TF4-L-SUB-01	Soil	Lead	B	210	150	500	Y	N	1/11/2006	SW6010B	55662-11	7439-92-1
TF4-L-SUB-02	Soil	Lead	B	1000	150	500	Y	N	1/11/2006	SW6010B	55662-12	7439-92-1
TF4-L-SUB-03	Soil	Lead	B	45	150	500	N	N	1/11/2006	SW6010B	55662-13	7439-92-1
TF4-L-SUB-04	Soil	Lead	B	31	150	500	N	N	1/11/2006	SW6010B	55662-14	7439-92-1
TF4-L-SUB-05	Soil	Lead	B	140	150	500	N	N	1/10/2006	SW6010B	55662-15	7439-92-1
TF4-L-SUB-06	Soil	Lead	B	73	150	500	N	N	1/10/2006	SW6010B	55662-16	7439-92-1
TF4-L-SUB-07	Soil	Lead	B	390	150	500	Y	N	1/10/2006	SW6010B	55662-17	7439-92-1
TF4-L-SUB-08	Soil	Lead	B	660	150	500	Y	N	1/10/2006	SW6010B	55662-18	7439-92-1
TF4-L-SUB-09	Soil	Lead	B	290	150	500	Y	N	1/10/2006	SW6010B	55662-19	7439-92-1
TF4-L-SUB-10	Soil	Lead	B	190	150	500	Y	N	1/10/2006	SW6010B	55662-19	7439-92-1
TF4-C-SUB-11	Soil	Lead		9.6	150	500	N	N	1/26/2006	SW6010B	55782-1	7439-92-1
TF4-C-SUB-12	Soil	Lead		33	150	500	N	N	1/26/2006	SW6010B	55782-2	7439-92-1
TF4-C-SUB-13	Soil	Lead		19	150	500	N	N	1/26/2006	SW6010B	55782-3	7439-92-1
TF4-C-SUB-14	Soil	Lead		11	150	500	N	N	1/26/2006	SW6010B	55782-4	7439-92-1
TF4-C-SUB-14D	Soil	Lead		12	150	500	N	N	1/26/2006	SW6010B	55782-5	7439-92-1
TF4-C-SUB-15	Soil	Lead		60	150	500	N	N	1/26/2006	SW6010B	55782-6	7439-92-1
TF4-C-SUB-17	Soil	Lead		15	150	500	N	N	1/26/2006	SW6010B	55782-7	7439-92-1
TF4-C-SUB-16	Soil	Lead		13	150	500	N	N	1/26/2006	SW6010B	55782-8	7439-92-1
TF4-C-SUB-18	Soil	Lead	B	19	150	500	N	N	2/14/2006	SW6010B	680-13537-1	7439-92-1
TF4-C-SUB-19	Soil	Lead	B	13	150	500	N	N	2/14/2006	SW6010B	680-13537-2	7439-92-1
TF4-C-SUB-20	Soil	Lead	B	14	150	500	N	N	2/14/2006	SW6010B	680-13537-3	7439-92-1
TF4-C-SUB-21	Soil	Lead	B	16	150	500	N	N	2/14/2006	SW6010B	680-13537-4	7439-92-1
TF4-C-SUB-22	Soil	Lead	B	79	150	500	N	N	2/14/2006	SW6010B	680-13537-5	7439-92-1
TF4-C-SUB-23	Soil	Lead	B	31	150	500	N	N	2/14/2006	SW6010B	680-13537-6	7439-92-1
TF4-C-SUB-24	Soil	Lead	B	17	150	500	N	N	2/14/2006	SW6010B	680-13537-7	7439-92-1

B means that the compound was found in the blank and the sample
Method Blank MB 680-33140/13-A exhibited 0.36 ppm lead

TABLE 7-6
Tank Farm 4 Substation
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-1	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-1	
TF4-SUB-1A	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53330-11	
TF4-SUB-2	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-2	
TF4-SUB-2A	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53330-12	
TF4-SUB-3	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53052-3	
TF4-SUB-3A	Soil	**Total PCBs**		0.031	10	N	N	1/4/2005	EPA 8082	53330-13	
TF4-SUB-4	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53052-4	
TF4-SUB-5	Soil	**Total PCBs**	J	0.015	10	N	N	1/4/2005	EPA 8082	53330-14	
TF4-SUB-6	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53330-15	
TF4-SUB-7	Soil	**Total PCBs**	U	0.017	10	N	N	1/4/2005	EPA 8082	53330-16	
TF4-SUB-Chp	Soil	**Total PCBs**	U	0.017	10	N	N	1/4/2005	EPA 8082	53340-2	
TF4-SUB-BLKMATERIAL	Soil	**Total PCBs**		0.0925	10	N	N	11/24/2004	EPA 8082	53084-2	

TABLE 7-7
Tank Farm 4 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-1	Soil	1,2-Dichlorobenzene	U	0.3	510	N	N	11/20/2004	SW8270	53052-1	95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-1A	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/4/2005	SW8270	53330-11	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-2	Soil	1,2-Dichlorobenzene	U	0.31	510	N	N	11/20/2004	SW8270	53052-2	95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-2A	Soil	1,2-Dichlorobenzene	U	0.31	510	N	N	1/4/2005	SW8270	53330-12	95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1

TABLE 7-7
Tank Farm 4 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-3	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-3	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-3A	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	1/4/2005	SW8270	53330-13	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-4	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/20/2004	SW8270	53052-4	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-5	Soil	1,2-Dichlorobenzene	U	0.27	510	N	N	1/4/2005	SW8270	53330-14	95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1

TABLE 7-7
Tank Farm 4 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-6	Soil	1,2-Dichlorobenzene	U	0.3	510	N	N	1/4/2005	SW8270	53330-15	95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-7	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	1/4/2005	SW8270	53330-16	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-SUB-BLKMATERIAL	Soil	1,2-Dichlorobenzene	U	0.25	510	N	N	11/24/2004	SW8270	53084-2	95-50-1
		1,3-Dichlorobenzene	U	0.25	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.25	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.25	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.25	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.25	96	N	N				120-82-1

TABLE 7-8
Tank Farm 5 Substation
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	Qualifier	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	RIDEM Industrial Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-BATTERY1	Soil	Lead		48.2	150	500	N	N	4/4/2005	SW6010B	612606	7439-92-1
TF5-L-BATTERY2	Soil	Lead		85.6	150	500	N	N	4/4/2005	SW6010B	612607	7439-92-1
TF5-L-BATTERY3	Soil	Lead		71.4	150	500	N	N	4/4/2005	SW6010B	612608	7439-92-1
TF5-L-BATTERY4	Soil	Lead		229	150	500	Y	N	4/4/2005	SW6010B	612609	7439-92-1
TF5-L-BATTERY5	Soil	Lead		204	150	500	Y	N	4/4/2005	SW6010B	612610	7439-92-1
TF5-L-BATTERY6	Soil	Lead		79.5	150	500	N	N	4/4/2005	SW6010B	612611	7439-92-1
TF5-L-SUB-01	Soil	Lead	B	10	150	500	N	N	1/16/2006	SW6010B	55681-1	7439-92-1
TF5-L-SUB-02	Soil	Lead	B	2200	150	500	Y	N	1/16/2006	SW6010B	55681-2	7439-92-1
TF5-L-SUB-03	Soil	Lead	B	300	150	500	Y	N	1/16/2006	SW6010B	55681-3	7439-92-1
TF5-L-SUB-04	Soil	Lead	B	210	150	500	Y	N	1/16/2006	SW6010B	55681-4	7439-92-1
TF5-L-SUB-05	Soil	Lead	B	630	150	500	Y	N	1/16/2006	SW6010B	55681-5	7439-92-1
TF5-L-SUB-06	Soil	Lead	B	97	150	500	N	N	1/16/2006	SW6010B	55681-6	7439-92-1
TF5-L-SUB-07	Soil	Lead	B	37	150	500	N	N	1/16/2006	SW6010B	55681-7	7439-92-1
TF5-L-SUB-08	Soil	Lead	B	160	150	500	Y	N	1/16/2006	SW6010B	55681-8	7439-92-1
TF5-L-SUB-09	Soil	Lead	B	280	150	500	Y	N	1/16/2006	SW6010B	55681-9	7439-92-1
TF5-L-SUB-10	Soil	Lead	B	83	150	500	N	N	1/16/2006	SW6010B	55681-10	7439-92-1
TF5-C-SUB-11	Soil	Lead		19	150	500	N	N	2/10/2006	SW6010B	55841-3	7439-92-1
TF5-C-SUB-12	Soil	Lead		67	150	500	N	N	2/10/2006	SW6010B	55841-4	7439-92-1
TF5-C-SUB-13	Soil	Lead		19	150	500	N	N	2/10/2006	SW6010B	55841-5	7439-92-1
TF5-C-SUB-14	Soil	Lead		32	150	500	N	N	2/10/2006	SW6010B	55841-6	7439-92-1
TF5-C-SUB-15	Soil	Lead		28	150	500	N	N	2/10/2006	SW6010B	55841-7	7439-92-1
TF5-C-SUB-16	Soil	Lead		22	150	500	N	N	2/10/2006	SW6010B	55841-8	7439-92-1
TF5-C-SUB-17	Soil	Lead		15	150	500	N	N	2/10/2006	SW6010B	55841-9	7439-92-1
TF5-C-SUB-18	Soil	Lead		9.3	150	500	N	N	2/10/2006	SW6010B	55841-10	7439-92-1
TF5-C-SUB-19	Soil	Lead		23	150	500	N	N	2/10/2006	SW6010B	55841-12	7439-92-1
TF5-C-SUB-20	Soil	Lead		46	150	500	N	N	2/10/2006	SW6010B	55841-13	7439-92-1
TF5-C-SUB-21	Soil	Lead		12	150	500	N	N	2/10/2006	SW6010B	55841-11	7439-92-1
TF5-C-SUB-22	Soil	Lead		30	150	500	N	N	2/10/2006	SW6010B	55841-14	7439-92-1
TF5-C-SUB-23	Soil	Lead		16	150	500	N	N	3/1/2006	SW6010B	55841-15	7439-92-1
TF5-C-SUB-24	Soil	Lead		13	150	500	N	N	3/1/2006	SW6010B	55909-7	7439-92-1
TF5-C-SUB-25	Soil	Lead		9.2	150	500	N	N	3/1/2006	SW6010B	55909-8	7439-92-1
TF5-C-SUB-26	Soil	Lead		37	150	500	N	N	3/1/2006	SW6010B	55909-9	7439-92-1

B means that the compound was found in the blank and the sample
Method Blank MB 680-33140/13-A exhibited 0.36 ppm lead

TABLE 7-9
Tank Farm 5 Substation
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-1	Soil	**Total PCBs**	U	0.02	10	N	N	11/19/2004	EPA 8082	53051-1	
TF5-SUB-1A	Soil	**Total PCBs**	U	0.017	10	N	N	1/4/2005	EPA 8082	53329-5	
TF5-SUB-2	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53051-2	
TF5-SUB-2A	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53329-6	
TF5-SUB-3	Soil	**Total PCBs**	U	0.017	10	N	N	11/19/2004	EPA 8082	53051-3	
TF5-SUB-3A	Soil	**Total PCBs**	U	0.017	10	N	N	1/4/2005	EPA 8082	53329-7	
TF5-SUB-4	Soil	**Total PCBs**	U	0.018	10	N	N	11/19/2004	EPA 8082	53051-4	
TF5-SUB-5	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53329-8	
TF5-SUB-6	Soil	**Total PCBs**	U	0.017	10	N	N	1/4/2005	EPA 8082	53329-9	
TF5-SUB-7	Soil	**Total PCBs**	U	0.018	10	N	N	1/4/2005	EPA 8082	53329-10	
TF5-SUB-Chp	Soil	**Total PCBs**	U	0.015	10	N	N	1/4/2005	EPA 8082	53339-2	

TABLE 7-10
Tank Farm 5 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-1	Soil	1,2-Dichlorobenzene	U	0.31	510	N	N	11/19/2004	SW8270	53051-1	95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-1A	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/3/2005	SW8270	53329-5	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-2	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/19/2004	SW8270	53051-2	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-2A	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/3/2005	SW8270	53329-6	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

TABLE 7-10
Tank Farm 5 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-3	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	11/19/2004	SW8270	53051-3	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-3A	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/3/2005	SW8270	53329-7	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-4	Soil	1,2-Dichlorobenzene	U	0.3	510	N	N	11/19/2004	SW8270	53051-4	95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-5	Soil	1,2-Dichlorobenzene	U	0.28	510	N	N	1/3/2005	SW8270	53329-8	95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1

TABLE 7-10
Tank Farm 5 Substation
Chlorinated Benzene Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-6	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/3/2005	SW8270	53329-9	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-SUB-7	Soil	1,2-Dichlorobenzene	U	0.29	510	N	N	1/3/2005	SW8270	53329-10	95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1

TABLE 7-11
Tank Farm 4 Ruin 1 Demolition
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-SW1	Soil	Total Petroleum Hydrocarbons (TPH)	U	26	500	N	N	12/16/2004	SW8015	53271-1	
L-TF4-R1-SW2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/16/2004	SW8015	53271-2	
L-TF4-R1-SW3	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/16/2004	SW8015	53271-3	
L-TF4-R1-SW4	Soil	Total Petroleum Hydrocarbons (TPH)		50	500	N	N	12/16/2004	SW8015	53271-4	
L-TF4-R1-SW5	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/16/2004	SW8015	53271-5	
L-TF4-R1-SW6	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	12/16/2004	SW8015	53271-6	
L-TF4-R1-SW7	Soil	Total Petroleum Hydrocarbons (TPH)		51	500	N	N	12/16/2004	SW8015	53271-7	
L-TF4-R1-SW8	Soil	Total Petroleum Hydrocarbons (TPH)	U	26	500	N	N	12/16/2004	SW8015	53271-8	
L-TF4-R1-SW9	Soil	Total Petroleum Hydrocarbons (TPH)		33	500	N	N	12/16/2004	SW8015	53271-9	
L-TF4-R1-SW10	Soil	Total Petroleum Hydrocarbons (TPH)		65	500	N	N	12/16/2004	SW8015	53271-10	
L-TF4-R1-SW11	Soil	Total Petroleum Hydrocarbons (TPH)		76	500	N	N	12/16/2004	SW8015	53271-11	
L-TF4-R1-SW12	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/17/2004	SW8015	53271-12	
L-TF4-R1-SW13	Soil	Total Petroleum Hydrocarbons (TPH)		**199**	500	N	N	12/17/2004	SW8015	53271-13	
L-TF4-R1-SW14	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/17/2004	SW8015	53271-14	
L-TF4-R1-SW15	Soil	Total Petroleum Hydrocarbons (TPH)		29	500	N	N	12/17/2004	SW8015	53271-15	
L-TF4-R1-SW16	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/17/2004	SW8015	53271-16	
L-TF4-R1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		**266**	500	N	N	12/17/2004	SW8015	53281-1	
L-TF4-R1-B1D	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/17/2004	SW8015	53281-2	
L-TF4-R1-B2	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/17/2004	SW8015	53281-3	
L-TF4-R1-B3	Soil	Total Petroleum Hydrocarbons (TPH)		68	500	N	N	12/17/2004	SW8015	53281-4	
L-TF4-R1-B4	Soil	Total Petroleum Hydrocarbons (TPH)		145	500	N	N	12/22/2004	SW8015	53301-1	
L-TF4-R1-B5	Soil	Total Petroleum Hydrocarbons (TPH)		45	500	N	N	12/22/2004	SW8015	53301-2	
L-TF4-R1-B6	Soil	Total Petroleum Hydrocarbons (TPH)		42	500	N	N	12/22/2004	SW8015	53301-3	
L-TF4-R1-B7	Soil	Total Petroleum Hydrocarbons (TPH)		32	500	N	N	12/22/2004	SW8015	53301-4	
L-TF4-R1-B8	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	12/22/2004	SW8015	53301-5	
L-TF4-R1-B9	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	12/22/2004	SW8015	53301-6	

TABLE 7-12
Tank Farm 4 Ruin 1 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-SW13	Soil	Acenaphthene	U	0.31	43	N	N	12/21/2004	SW8270	53288-1	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 7-12
Tank Farm 4 Ruin 1 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-B4	Soil	Acenaphthene	U	0.28	43	N	N	12/29/2004	SW8270	53316-1	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 7-12
Tank Farm 4 Ruin 1 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-B1	Soil	Acenaphthene	U	0.29	43	N	N	12/30/2004	SW8270	53323-1	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-13
Tank Farm 4 Ruin 1 Demolition
Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-B4	Soil	1,2,3,4,6,7,8-HpCDD		25					1/7/2005		53316-1	35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	0.22								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.15								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.21								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.23								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.17								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.22								57117-44-9
		1,2,3,7,8,9-HxCDD	U	0.35								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.27								72918-21-9
		1,2,3,7,8-PeCDD	U	0.31								40321-76-4
		1,2,3,7,8-PeCDF	U	0.17								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.24								60851-34-5
		2,3,4,7,8-PeCDF	U	0.17								57117-31-4
		2,3,7,8-TCDD	U	0.13								1746-01-6
		2,3,7,8-TCDF	U	0.14								51207-31-9
		OCDD		2700								3268-87-9
		OCDF	U	0.74								39001-02-0
		Total HpCDDs		53								37871-00-4
		Total HpCDFs	U	0.22								38998-75-3
		Total HxCDDs	U	1.1								34465-46-8
		Total HxCDFs	U	0.27								55684-94-1
		Total PeCDDs	U	0.31								36088-22-9
		Total PeCDFs	U	0.18								30402-15-4
		Total TCDDs	U	0.13								41903-57-5
		Total TCDFs	U	0.35								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			3.2	3.9	N						

Note:
* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-13
Tank Farm 4 Ruin 1 Demolition
Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-B1	Soil	1,2,3,4,6,7,8-HpCDD		110					1/7/2005		53323-1	35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	0.79								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.17								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.69								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.25								70648-26-9
		1,2,3,6,7,8-HxCDD	U	1.2								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.24								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.5								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.28								72918-21-9
		1,2,3,7,8-PeCDD	U	0.42								40321-76-4
		1,2,3,7,8-PeCDF	U	0.24								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.27								60851-34-5
		2,3,4,7,8-PeCDF	U	0.24								57117-31-4
		2,3,7,8-TCDD	U	0.21								1746-01-6
		2,3,7,8-TCDF	U	0.22								51207-31-9
		OCDD	E	11000								3268-87-9
		OCDF	U	2.3								39001-02-0
		Total HpCDDs		230								37871-00-4
		Total HpCDFs	U	0.79								38998-75-3
		Total HxCDDs		9.2								34465-46-8
		Total HxCDFs	U	0.28								55684-94-1
		Total PeCDDs	U	0.57								36088-22-9
		Total PeCDFs	U	0.35								30402-15-4
		Total TCDDs	U	0.21								41903-57-5
		Total TCDFs	U	0.22								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			12.6	3.9	Y						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-14
Tank Farm 4
Ruin 1 Excavated Backfill TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP1-A1	Soil	Total Petroleum Hydrocarbons (TPH)		63	500	N	N	2/2/2005	SW8015	53479-1	
TF4-L-RUIN1-SP1-A2	Soil	Total Petroleum Hydrocarbons (TPH)		67	500	N	N	2/2/2005	SW8015	53479-2	
TF4-L-RUIN1-SP1-A3	Soil	Total Petroleum Hydrocarbons (TPH)		81	500	N	N	2/2/2005	SW8015	53479-3	
TF4-L-RUIN1-SP1-B1	Soil	Total Petroleum Hydrocarbons (TPH)		66	500	N	N	2/2/2005	SW8015	53479-4	
TF4-L-RUIN1-SP1-B2	Soil	Total Petroleum Hydrocarbons (TPH)		77	500	N	N	2/3/2005	SW8015	53479-5	
TF4-L-RUIN1-SP1-B3	Soil	Total Petroleum Hydrocarbons (TPH)		62	500	N	N	2/3/2005	SW8015	53479-6	
TF4-L-RUIN1-SP1-C1	Soil	Total Petroleum Hydrocarbons (TPH)		130	500	N	N	2/3/2005	SW8015	53479-7	
TF4-L-RUIN1-SP1-C2	Soil	Total Petroleum Hydrocarbons (TPH)		54	500	N	N	2/3/2005	SW8015	53479-8	
TF4-L-RUIN1-SP1-C3	Soil	Total Petroleum Hydrocarbons (TPH)		120	500	N	N	2/3/2005	SW8015	53479-9	
TF4-L-RUIN1-SP2-A1	Soil	Total Petroleum Hydrocarbons (TPH)		51	500	N	N	2/3/2005	SW8015	53479-10	
TF4-L-RUIN1-SP2-A2	Soil	Total Petroleum Hydrocarbons (TPH)		73	500	N	N	2/3/2005	SW8015	53479-11	
TF4-L-RUIN1-SP2-A3	Soil	Total Petroleum Hydrocarbons (TPH)		49	500	N	N	2/3/2005	SW8015	53479-12	
TF4-L-RUIN1-SP2-B1	Soil	Total Petroleum Hydrocarbons (TPH)		107	500	N	N	2/3/2005	SW8015	53479-13	
TF4-L-RUIN1-SP2-B2	Soil	Total Petroleum Hydrocarbons (TPH)		55	500	N	N	2/3/2005	SW8015	53479-14	
TF4-L-RUIN1-SP2-B3	Soil	Total Petroleum Hydrocarbons (TPH)		128	500	N	N	2/4/2005	SW8015	53479-15RX	
TF4-L-RUIN1-SP2-C1	Soil	Total Petroleum Hydrocarbons (TPH)		86	500	N	N	2/3/2005	SW8015	53479-16	
TF4-L-RUIN1-SP2-C2	Soil	Total Petroleum Hydrocarbons (TPH)		112	500	N	N	2/3/2005	SW8015	53479-17	
TF4-L-RUIN1-SP2-C2D	Soil	Total Petroleum Hydrocarbons (TPH)		114	500	N	N	2/3/2005	SW8015	53479-18	
TF4-L-RUIN1-SP2-C3	Soil	Total Petroleum Hydrocarbons (TPH)		107	500	N	N	2/3/2005	SW8015	53479-19	
TF4-L-RUIN1-SP2-D1	Soil	Total Petroleum Hydrocarbons (TPH)		60	500	N	N	2/3/2005	SW8015	53479-20	
TF4-L-RUIN1-SP2-D2	Soil	Total Petroleum Hydrocarbons (TPH)		79	500	N	N	2/3/2005	SW8015	53479-21	
TF4-L-RUIN1-SP2-D3	Soil	Total Petroleum Hydrocarbons (TPH)		119	500	N	N	2/3/2005	SW8015	53479-22	
TF4-L-RUIN1-SP2-E1	Soil	Total Petroleum Hydrocarbons (TPH)		48	500	N	N	2/3/2005	SW8015	53479-23	
TF4-L-RUIN1-SP2-E1D	Soil	Total Petroleum Hydrocarbons (TPH)		47	500	N	N	2/3/2005	SW8015	53479-24	
TF4-L-RUIN1-SP2-E2	Soil	Total Petroleum Hydrocarbons (TPH)		99	500	N	N	2/3/2005	SW8015	53479-25	
TF4-L-RUIN1-SP2-E3	Soil	Total Petroleum Hydrocarbons (TPH)		55	500	N	N	2/3/2005	SW8015	53479-26	

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP1-C1	Soil	Acenaphthene	U	0.3	43	N	N	2/9/2005	SW8270C	53504-1	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP1-C3	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-2	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-B1	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-3	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C2	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-4	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C2D	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-5	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C3	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-6	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-D3	Soil	Acenaphthene	U	0.29	43	N	N	2/9/2005	SW8270C	53504-7	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-15
Tank Farm 4
Ruin 1 Excavated Backfill SVOC Analytical Data

SAMP_ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-B3	Soil	Acenaphthene	U	0.28	43	N	N	2/10/2005	SW8270C	53504-8	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	U	0.28	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	U	0.28	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-B1	Soil	1,2,3,4,6,7,8-HpCDD		49						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	1.3								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.42								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.4								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.37								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.5								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.44								57117-44-9
		1,2,3,7,8,9-HxCDD	U	0.88								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.44								72918-21-9
		1,2,3,7,8-PeCDD	U	0.46								40321-76-4
		1,2,3,7,8-PeCDF	U	0.22								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.56								60851-34-5
		2,3,4,7,8-PeCDF	U	0.21								57117-31-4
		2,3,7,8-TCDD	U	0.14								1746-01-6
		2,3,7,8-TCDF	U	0.25								51207-31-9
		OCDD	E	5100								3268-87-9
		OCDF	U	0.23								39001-02-0
		Total HpCDDs		100								37871-00-4
		Total HpCDFs	U	1.4								38998-75-3
		Total HxCDDs	U	2.5								34465-46-8
		Total HxCDFs	U	0.56								55684-94-1
		Total PeCDDs	U	0.54								36088-22-9
		Total PeCDFs	U	0.22								30402-15-4
		Total TCDDs	U	0.14								41903-57-5
		Total TCDFs	U	0.25								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			6.0	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C2	Soil	1,2,3,4,6,7,8-HpCDD		83						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	2								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.41								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.45								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.39								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.73								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.62								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.3								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.46								72918-21-9
		1,2,3,7,8-PeCDD	U	0.36								40321-76-4
		1,2,3,7,8-PeCDF	U	0.25								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.41								60851-34-5
		2,3,4,7,8-PeCDF	U	0.23								57117-31-4
		2,3,7,8-TCDD	U	0.16								1746-01-6
		2,3,7,8-TCDF	U	0.34								51207-31-9
		OCDD	E	5700								3268-87-9
		OCDF	U	0.26								39001-02-0
		Total HpCDDs		160								37871-00-4
		Total HpCDFs	U	2.9								38998-75-3
		Total HxCDDs	U	3.1								34465-46-8
		Total HxCDFs	U	0.62								55684-94-1
		Total PeCDDs	U	0.86								36088-22-9
		Total PeCDFs	U	0.25								30402-15-4
		Total TCDDs	U	0.16								41903-57-5
		Total TCDFs	U	0.34								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			7.0	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C2-D	Soil	1,2,3,4,6,7,8-HpCDD		110						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	J	3.3								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.87								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.87								39227-28-6
		1,2,3,4,7,8-HxCDF	U	1								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.93								57653-85-7
		1,2,3,6,7,8-HxCDF	U	1								57117-44-9
		1,2,3,7,8,9-HxCDD	U	2.8								19408-74-3
		1,2,3,7,8,9-HxCDF	U	1.2								72918-21-9
		1,2,3,7,8-PeCDD	U	0.72								40321-76-4
		1,2,3,7,8-PeCDF	U	0.33								57117-41-6
		2,3,4,6,7,8-HxCDF	U	1.1								60851-34-5
		2,3,4,7,8-PeCDF	U	0.34								57117-31-4
		2,3,7,8-TCDD	U	0.22								1746-01-6
		2,3,7,8-TCDF	U	0.36								51207-31-9
		OCDD	E	8500								3268-87-9
		OCDF	U	0.32								39001-02-0
		Total HpCDDs		210								37871-00-4
		Total HpCDFs		8.8								38998-75-3
		Total HxCDDs		3.2								34465-46-8
		Total HxCDFs		1.1								55684-94-1
		Total PeCDDs	U	0.95								36088-22-9
		Total PeCDFs	U	0.34								30402-15-4
		Total TCDDs	U	0.22								41903-57-5
		Total TCDFs	U	0.36								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			10.5	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-C3	Soil	1,2,3,4,6,7,8-HpCDD		62						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	1.9								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.32								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.38								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.35								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.61								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.53								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.1								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.35								72918-21-9
		1,2,3,7,8-PeCDD	U	0.34								40321-76-4
		1,2,3,7,8-PeCDF	U	0.2								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.31								60851-34-5
		2,3,4,7,8-PeCDF	U	0.21								57117-31-4
		2,3,7,8-TCDD	U	0.17								1746-01-6
		2,3,7,8-TCDF	U	0.29								51207-31-9
		OCDD	E	5000								3268-87-9
		OCDF	U	0.21								39001-02-0
		Total HpCDDs		130								37871-00-4
		Total HpCDFs	U	2.6								38998-75-3
		Total HxCDDs	U	2.5								34465-46-8
		Total HxCDFs	U	0.53								55684-94-1
		Total PeCDDs	U	0.72								36088-22-9
		Total PeCDFs	U	0.21								30402-15-4
		Total TCDDs	U	0.17								41903-57-5
		Total TCDFs	U	0.29								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			6.1	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-D3	Soil	1,2,3,4,6,7,8-HpCDD		77						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	1.4								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.71								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.54								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.57								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.53								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.75								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.4								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.68								72918-21-9
		1,2,3,7,8-PeCDD	U	0.46								40321-76-4
		1,2,3,7,8-PeCDF	U	0.26								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.6								60851-34-5
		2,3,4,7,8-PeCDF	U	0.25								57117-31-4
		2,3,7,8-TCDD	U	0.15								1746-01-6
		2,3,7,8-TCDF	U	0.23								51207-31-9
		OCDD	E	5400								3268-87-9
		OCDF	U	0.22								39001-02-0
		Total HpCDDs		140								37871-00-4
		Total HpCDFs	U	2.4								38998-75-3
		Total HxCDDs	U	2.3								34465-46-8
		Total HxCDFs	U	0.75								55684-94-1
		Total PeCDDs	U	0.81								36088-22-9
		Total PeCDFs	U	0.26								30402-15-4
		Total TCDDs	U	0.15								41903-57-5
		Total TCDFs	U	0.23								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			6.7	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-16
Tank Farm 4
Ruin 1 Excavated Backfill Dioxin/Furan Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-RUIN1-SP2-B3	Soil	1,2,3,4,6,7,8-HpCDD		51						SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	0.26								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	1.9								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.47								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.34								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.55								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.35								57117-44-9
		1,2,3,7,8,9-HxCDD	U	0.72								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.26								72918-21-9
		1,2,3,7,8-PeCDD	U	0.29								40321-76-4
		1,2,3,7,8-PeCDF	U	0.18								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.25								60851-34-5
		2,3,4,7,8-PeCDF	U	0.18								57117-31-4
		2,3,7,8-TCDD	U	0.14								1746-01-6
		2,3,7,8-TCDF	U	0.31								51207-31-9
		OCDD	E	4800								3268-87-9
		OCDF	U	0.26								39001-02-0
		Total HpCDDs		110								37871-00-4
		Total HpCDFs	U	1.9								38998-75-3
		Total HxCDDs		3.1								34465-46-8
		Total HxCDFs	U	0.48								55684-94-1
		Total PeCDDs	U	0.29								36088-22-9
		Total PeCDFs	U	0.18								30402-15-4
		Total TCDDs	U	0.14								41903-57-5
		Total TCDFs	U	0.31								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			5.7	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-17
Tank Farm 4 Ruin 2 Demolition
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-R2-SW5	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-1	
TF4-L-R2-SW6	Soil	TPH	U	24	500	N	N	3/24/2005	EPA8015	53692-2	
TF4-L-R2-SW7	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-3	
TF4-L-R2-SW8	Soil	TPH		28	500	N	N	3/24/2005	EPA8015	53692-4	
TF4-L-R2-SW9	Soil	TPH	U	24	500	N	N	3/24/2005	EPA8015	53692-5	
TF4-L-R2-SW10	Soil	TPH		**155**	500	N	N	3/24/2005	EPA8015	53692-6	
TF4-L-R2-SW11	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-7	
TF4-L-R2-SW12	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-8	
TF4-L-R2-SW13	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-9	
TF4-L-R2-SW14	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-10	
TF4-L-R2-SW15	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-11	
TF4-L-R2-SW15D	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-12	
TF4-L-R2-B1	Soil	TPH	U	34	500	N	N	3/24/2005	EPA8015	53692-13	
TF4-L-R2-B2	Soil	TPH		**110**	500	N	N	3/24/2005	EPA8015	53692-14	
TF4-L-R2-B3	Soil	TPH	U	32	500	N	N	3/24/2005	EPA8015	53692-15	
TF4-L-R2-B4	Soil	TPH	U	22	500	N	N	3/24/2005	EPA8015	53692-16	
TF4-L-R2-B5	Soil	TPH		92	500	N	N	3/24/2005	EPA8015	53692-17	
TF4-L-R2-B6	Soil	TPH		57	500	N	N	3/24/2005	EPA8015	53692-18	
TF4-L-R2-B7	Soil	TPH	U	34	500	N	N	3/24/2005	EPA8015	53692-19	
TF4-L-R2-B8	Soil	TPH		**218**	500	N	N	3/24/2005	EPA8015	53692-20	
TF4-L-R2-B9	Soil	TPH		**214**	500	N	N	3/24/2005	EPA8015	53692-21	

TABLE 7-18
Tank Farm 4 Ruin 2 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-R2-SW10	Soil	Acenaphthene	U	0.28	43	N	N	4/1/2005	SW8270	53692-6	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene		**0.521**	35	N	N				120-12-7
		Benzo(a)anthracene		**0.703**	0.9	N	N				56-55-3
		Benzo(a)pyrene		**0.626**	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene		**0.523**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene		**0.364**	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		**0.503**	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene		**0.693**	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene		**1.96**	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		**0.398**	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene		**1.79**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 7-18
Tank Farm 4 Ruin 2 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-R2-B2*	Soil	Acenaphthene	U	0.3	43	N	N	4/5/2005	SW8270	53692-14RX	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	J	**0.161**	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	J	**0.193**	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene		**0.325**	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	J	**0.209**	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	J	**0.292**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

Note: * Surrogate recovery for 2,4,6-Tribromophenol was 16%, below the QC limit of 36% - 141%. Reported results for phenolic compounds may have a low-bias. Results for PAHs are reliable.

TABLE 7-18
Tank Farm 4 Ruin 2 Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-R2-B8*	Soil	Acenaphthene	J	**0.153**	43	N	N	4/5/2005	SW8270	53692-20RX	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene		**0.604**	35	N	N				120-12-7
		Benzo(a)anthracene		**0.908**	0.9	**Y**	N				56-55-3
		Benzo(a)pyrene		**0.901**	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene		**0.591**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene		**0.728**	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		**0.585**	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene		**0.869**	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	J	**0.154**	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene		**2.11**	20	N	N				206-44-0
		Fluorene	J	**0.209**	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		**0.838**	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene		**0.954**	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene		**1.78**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

Note: * Surrogate recovery for 2,4,6-Tribromophenol was 7%, below the QC limit of 36% - 141%; surrogate recovery for 2-Fluorophenol was 20%, below the QC limit of 29% - 97%. Reported results for

TABLE 7-18
Tank Farm 4 Ruin 2 Demolition
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phenolic compounds may have a low-bias. Results for PAHs are reliable.

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-R2-B9*	Soil	Acenaphthene	U	0.32	43	N	N	4/5/2005	SW8270	53692-21RX	83-32-9
		Acenaphthylene	U	0.32	23	N	N				208-96-8
		Anthracene	U	0.32	35	N	N				120-12-7
		Benzo(a)anthracene	J	**0.165**	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.32	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.32	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.32	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.32	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.32	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.32	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.32	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.32	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.32	310	N	N				106-47-8
		2-Chlorophenol	U	0.32	50	N	N				95-57-8
		Chrysene	J	**0.183**	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.32	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.32	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.32	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.32	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.32	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.32	30	N	N				120-83-2
		Diethyl phthalate	U	0.32	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.32	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.32	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.32	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.32	0.9	N	N				121-14-2
		Fluoranthene		**0.37**	20	N	N				206-44-0
		Fluorene	U	0.32	28	N	N				86-73-7
		Hexachlorobenzene	U	0.32	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.32	8.2	N	N				87-68-3
		Hexachloroethane	U	0.32	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.32	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.32	123	N	N				91-57-6
		Naphthalene	U	0.32	54	N	N				91-20-3
		Pentachlorophenol	U	0.32	5.3	N	N				87-86-5
		Phenanthrene	J	**0.274**	40	N	N				85-01-8
		Phenol	U	0.32	6000	N	N				108-95-2
		Pyrene		**0.341**	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.32	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.32	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.32	58	N	N				88-06-2

TABLE 7-18
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Note: * Surrogate recovery for 2,4,6-Tribromophenol was 30%, below the QC limit of 36% - 141%. Reported results for phenolic compounds may have a low-bias. Results for PAHs are reliable.	

TABLE 7-19
Tank Farm 5 Oil/Water Separator Demolition
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
P-TF5-OW-B1	Moist	12/6/04	1	295
P-TF5-OW-B2	Moist	12/6/04	1	255
P-TF5-OW-B3	Saturated	12/6/04	1	124
P-TF5-OW-B4	Saturated	12/6/04	1	116
P-TF5-OW-B5	Saturated	12/6/04	1	156
P-TF5-OW-B6	Moist	12/6/04	1	132
P-TF5-OW-B7	Moist	12/6/04	1	85
P-TF5-OW-B8	Moist	12/6/04	1	98
P-TF5-OW-B9	Moist	12/6/04	1	103
P-TF5-OW-SW1	Slightly Moist	12/6/04	1	36
P-TF5-OW-SW2	Slightly Moist	12/6/04	1	54
P-TF5-OW-SW3	Slightly Moist	12/6/04	1	83
P-TF5-OW-SW4	Slightly Moist	12/6/04	1	199
P-TF5-OW-SW5	Slightly Moist	12/6/04	1	304
P-TF5-OW-SW6	Moist	12/6/04	1	36
P-TF5-OW-SW7	Moist	12/6/04	1	44
P-TF5-OW-SW8	Moist	12/6/04	1	71
P-TF5-OW-SW9	Moist	12/6/04	1	613
P-TF5-OW-SW10	Moist	12/6/04	1	44
P-TF5-OW-SW11	Moist	12/6/04	1	92
P-TF5-OW-SW12	Moist	12/6/04	1	58
P-TF5-OW-SW13	Slightly Moist	12/6/04	1	13
P-TF5-OW-SW14	Slightly Moist	12/6/04	1	36
P-TF5-OW-SW15	Slightly Moist	12/6/04	1	77
P-TF5-OW-SW16	Slightly Moist	12/6/04	1	53

TABLE 7-20
Tank Farm 5 Oil/Water Separator Demolition
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	Acetone		0.13	7800	N	N	12/14/2004	SW8260B	601268	67-64-1
		Benzene	U	0.0043	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0043	10	N	N				75-27-4
		Bromoform	U	0.0043	81	N	N				75-25-2
		Bromomethane	U	0.0043	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0043	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0043	210	N	N				108-90-7
		Chloroform	U	0.0043	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0043	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0043	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0043	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0043	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0043	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0043	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0043	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0043	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0043	71	N	N				100-41-4
		Ethylene dibromide	U	0.0043	0.01	N	N				
		Isopropyl benzene	U	0.0043	27	N	N				98-82-8
		Methyl ethyl ketone		0.016	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0043	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0043	390	N	N				1634-04-4
		Methylene chloride	U	0.0043	45	N	N				75-09-2
		Styrene	U	0.0043	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0043	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0043	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0043	12	N	N				127-18-4
		Toluene	U	0.0043	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0043	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0043	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0043	13	N	N				79-01-6
		Vinyl chloride	U	0.0043	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0043	110	N	N				1330-20-7

TABLE 7-20
Tank Farm 5 Oil/Water Separator Demolition
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B4	Soil	Acetone		0.14	7800	N	N	12/14/2004	SW8260B	601269	67-64-1
		Benzene	U	0.0051	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0051	10	N	N				75-27-4
		Bromoform	U	0.0051	81	N	N				75-25-2
		Bromomethane	U	0.0051	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0051	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0051	210	N	N				108-90-7
		Chloroform	U	0.0051	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0051	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0051	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0051	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0051	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0051	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0051	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0051	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0051	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0051	71	N	N				100-41-4
		Ethylene dibromide	U	0.0051	0.01	N	N				
		Isopropyl benzene	U	0.0051	27	N	N				98-82-8
		Methyl ethyl ketone		0.02	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0051	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0051	390	N	N				1634-04-4
		Methylene chloride	U	0.0051	45	N	N				75-09-2
		Styrene	U	0.0051	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0051	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0051	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0051	12	N	N				127-18-4
		Toluene	U	0.0051	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0051	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0051	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0051	13	N	N				79-01-6
		Vinyl chloride	U	0.0051	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0051	110	N	N				1330-20-7

TABLE 7-20
Tank Farm 5 Oil/Water Separator Demolition
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW5	Soil	Acetone		0.062	7800	N	N	12/14/2004	SW8260B	601270	67-64-1
		Benzene	U	0.0037	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0037	10	N	N				75-27-4
		Bromoform	U	0.0037	81	N	N				75-25-2
		Bromomethane	U	0.0037	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0037	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0037	210	N	N				108-90-7
		Chloroform	U	0.0037	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0037	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0037	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0037	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0037	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0037	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0037	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0037	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0037	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0037	71	N	N				100-41-4
		Ethylene dibromide	U	0.0037	0.01	N	N				
		Isopropyl benzene	U	0.0037	27	N	N				98-82-8
		Methyl ethyl ketone		0.0095	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0037	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0037	390	N	N				1634-04-4
		Methylene chloride	U	0.0037	45	N	N				75-09-2
		Styrene	U	0.0037	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0037	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0037	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0037	12	N	N				127-18-4
		Toluene	U	0.0037	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0037	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0037	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0037	13	N	N				79-01-6
		Vinyl chloride	U	0.0037	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0037	110	N	N				1330-20-7

TABLE 7-20
Tank Farm 5 Oil/Water Separator Demolition
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW9	Soil	Acetone		0.021	7800	N	N	12/14/2004	SW8260B	601271	67-64-1
		Benzene	U	0.004	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.004	10	N	N				75-27-4
		Bromoform	U	0.004	81	N	N				75-25-2
		Bromomethane	U	0.004	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.004	1.5	N	N				56-23-5
		Chlorobenzene	U	0.004	210	N	N				108-90-7
		Chloroform	U	0.004	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.004	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.004	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.004	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.004	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.004	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.004	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.004	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.004	1.9	N	N				78-87-5
		Ethyl benzene	U	0.004	71	N	N				100-41-4
		Ethylene dibromide	U	0.004	0.01	N	N				
		Isopropyl benzene	U	0.004	27	N	N				98-82-8
		Methyl ethyl ketone	J	0.0033	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.004	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.004	390	N	N				1634-04-4
		Methylene chloride	U	0.004	45	N	N				75-09-2
		Styrene	U	0.004	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.004	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.004	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.004	12	N	N				127-18-4
		Toluene	U	0.004	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.004	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.004	3.6	N	N				79-00-5
		Trichloroethylene	U	0.004	13	N	N				79-01-6
		Vinyl chloride	U	0.004	0.02	N	N				75-01-4
		Xylenes (total)	U	0.004	110	N	N				1330-20-7

TABLE 7-21
Tank Farm 5 Oil/Water Separator Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	Acenaphthene	U	0.3	43	N	N	12/10/2004	SW8270	53207-1	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-21
Tank Farm 5 Oil/Water Separator Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B4	Soil	Acenaphthene	U	0.3	43	N	N	12/11/2004	SW8270	53207-2	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-21
Tank Farm 5 Oil/Water Separator Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW5	Soil	Acenaphthene	U	0.29	43	N	N	12/10/2004	SW8270	53207-3	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-21
Tank Farm 5 Oil/Water Separator Demolition
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW9	Soil	Acenaphthene	U	0.28	43	N	N	12/10/2004	SW8270	53207-4	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	U	0.28	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.28	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.28	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.28	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.28	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.28	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene	U	0.28	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene	J	0.187	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.28	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene	U	0.28	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene	J	0.141	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 7-22
Tank Farm 5 Oil/Water Separator Demolition
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	Antimony	U	0.43	10	N	N			601268	7440-36-0
		Arsenic		22.2	7.0	Y	N				7440-38-2
		Barium		27.2	5500	N	N				7440-39-3
		Beryllium	B	0.29	0.4	N	N				7440-41-7
		Cadmium		1.1	39	N	N				7440-43-9
		Chromium		14	390	N	N				7440-47-3
		Copper		12.6	3100	N	N				7440-50-8
		Cyanide	U	0.6	200	N	N				57-12-5
		Lead		19.3	150	N	N				7439-92-1
		Manganese		362	390	N	N				7439-96-5
		Mercury	U	0.018	23	N	N				7439-97-6
		Nickel		19.9	1000	N	N				7440-02-0
		Selenium	B	0.4	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.82	5.5	N	N				7440-28-0
		Vanadium		12.1	550	N	N				7440-62-2
		Zinc	E	55.5	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B4	Soil	Antimony	U	0.43	10	N	N			601269	7440-36-0
		Arsenic		18.3	7.0	Y	N				7440-38-2
		Barium		23.7	5500	N	N				7440-39-3
		Beryllium	B	0.35	0.4	N	N				7440-41-7
		Cadmium		1.2	39	N	N				7440-43-9
		Chromium		11	390	N	N				7440-47-3
		Copper		15.1	3100	N	N				7440-50-8
		Cyanide	U	0.61	200	N	N				57-12-5
		Lead		18	150	N	N				7439-92-1
		Manganese		338	390	N	N				7439-96-5
		Mercury		0.02	23	N	N				7439-97-6
		Nickel		15.4	1000	N	N				7440-02-0
		Selenium	B	0.32	390	N	N				7782-49-2
		Silver	U	0.15	200	N	N				7440-22-4
		Thallium	U	0.81	5.5	N	N				7440-28-0
		Vanadium		14.7	550	N	N				7440-62-2
		Zinc	E	65	6000	N	N				7440-66-6

TABLE 7-22
Tank Farm 5 Oil/Water Separator Demolition
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW5	Soil	Antimony	U	0.48	10	N	N			601270	7440-36-0
		Arsenic		37.1	7.0	Y	N				7440-38-2
		Barium	B	18.8	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium		1.5	39	N	N				7440-43-9
		Chromium		11	390	N	N				7440-47-3
		Copper		23.6	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		17.6	150	N	N				7439-92-1
		Manganese		433	390	Y	N				7439-96-5
		Mercury		0.05	23	N	N				7439-97-6
		Nickel		23.2	1000	N	N				7440-02-0
		Selenium	B	0.36	390	N	N				7782-49-2
		Silver	U	0.17	200	N	N				7440-22-4
		Thallium	U	0.91	5.5	N	N				7440-28-0
		Vanadium		13.9	550	N	N				7440-62-2
		Zinc	E	62	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-SW9	Soil	Antimony	U	0.45	10	N	N			601271	7440-36-0
		Arsenic		8.5	7.0	Y	N				7440-38-2
		Barium	B	21.4	5500	N	N				7440-39-3
		Beryllium	B	0.3	0.4	N	N				7440-41-7
		Cadmium		0.88	39	N	N				7440-43-9
		Chromium		7.5	390	N	N				7440-47-3
		Copper		14.7	3100	N	N				7440-50-8
		Cyanide	U	0.57	200	N	N				57-12-5
		Lead		50.7	150	N	N				7439-92-1
		Manganese		331	390	N	N				7439-96-5
		Mercury		0.066	23	N	N				7439-97-6
		Nickel		11.6	1000	N	N				7440-02-0
		Selenium	U	0.33	390	N	N				7782-49-2
		Silver	U	0.16	200	N	N				7440-22-4
		Thallium	U	0.85	5.5	N	N				7440-28-0
		Vanadium		11.9	550	N	N				7440-62-2
		Zinc		44.1	6000	N	N				7440-66-6

TABLE 7-23
Tank Farm 5 Oil/Water Separator Demolition
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	Total PCBs		0.016	10	N	N	12/10/2004	EPA8082	53207-1	
L-TF5-OW-B4	Soil	Total PCBs	U	0.018	10	N	N	12/10/2004	EPA8082	53207-2	
L-TF5-OW-SW5	Soil	Total PCBs	U	0.018	10	N	N	12/10/2004	EPA8082	53207-3	
L-TF5-OW-SW9	Soil	Total PCBs	U	0.017	10	N	N	12/10/2004	EPA8082	53207-4	

TABLE 7-24
Tank Farm 5 Oil/Water Separator Demolition
Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	1,2,3,4,6,7,8-HpCDD		71					12/14/2004			35822-46-9
		1,2,3,4,6,7,8-HpCDF	J	4.1								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.53								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.91								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.9								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.82								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.85								57117-44-9
		1,2,3,7,8,9-HxCDD	U	2								19408-74-3
		1,2,3,7,8,9-HxCDF	U	1.1								72918-21-9
		1,2,3,7,8-PeCDD	U	0.81								40321-76-4
		1,2,3,7,8-PeCDF	U	0.59								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.92								60851-34-5
		2,3,4,7,8-PeCDF	U	0.64								57117-31-4
		2,3,7,8-TCDD		3.4	3.9	N						1746-01-6
		2,3,7,8-TCDF		1.3								51207-31-9
		OCDD	E	6600								3268-87-9
		OCDF	U	6.1								39001-02-0
		Total HpCDDs		150								37871-00-4
		Total HpCDFs		8.4								38998-75-3
		Total HxCDDs		11								34465-46-8
		Total HxCDFs	U	2								55684-94-1
		Total PeCDDs	U	1.4								36088-22-9
		Total PeCDFs	U	2.3								30402-15-4
		Total TCDDs		3.4								41903-57-5
		Total TCDFs		4.7								55722-27-5

TABLE 7-24
Tank Farm 5 Oil/Water Separator Demolition
Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF5-OW-B1	Soil	1,2,3,4,6,7,8-HpCDD		82					12/14/2004			35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	1.3								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.2								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.76								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.12								70648-26-9
		1,2,3,6,7,8-HxCDD	U	1.6								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.84								57117-44-9
		1,2,3,7,8,9-HxCDD	U	2.9								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.12								72918-21-9
		1,2,3,7,8-PeCDD	U	0.45								40321-76-4
		1,2,3,7,8-PeCDF	U	0.15								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.13								60851-34-5
		2,3,4,7,8-PeCDF	U	0.13								57117-31-4
		2,3,7,8-TCDD	J	0.76	3.9	N						1746-01-6
		2,3,7,8-TCDF	U	0.55								51207-31-9
		OCDD	E	7300								3268-87-9
		OCDF	U	2.3								39001-02-0
		Total HpCDDs		180								37871-00-4
		Total HpCDFs	U	1.3								38998-75-3
		Total HxCDDs		18								34465-46-8
		Total HxCDFs	U	0.84								55684-94-1
		Total PeCDDs	U	1.1								36088-22-9
		Total PeCDFs	U	1								30402-15-4
		Total TCDDs		0.76								41903-57-5
		Total TCDFs	U	1.2								55722-27-5

TABLE 7-25
Ruin 1 Straight Line Discharge Pipe Sediment
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-DISCHARGE	Soil	Total Petroleum Hydrocarbons (TPH)		176	500	N	N	1/21/2005	SW8015	53381-2	

TABLE 7-26
Ruin 1 Straight Line Discharge Pipe Sediment
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-DISCHARGE	Soil	Acetone	B	0.16	7800	N	N	1/13/2005	SW8260B	604321	67-64-1
		Benzene	U	0.0072	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0072	10	N	N				75-27-4
		Bromoform	U	0.0072	81	N	N				75-25-2
		Bromomethane	U	0.0072	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0072	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0072	210	N	N				108-90-7
		Chloroform	U	0.0072	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0072	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0072	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0072	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0072	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0072	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0072	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0072	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0072	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0072	71	N	N				100-41-4
		Ethylene dibromide	U	0.0072	0.01	N	N				
		Isopropyl benzene	U	0.0072	27	N	N				98-82-8
		Methyl ethyl ketone		0.03	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0072	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	J	0.0027	390	N	N				1634-04-4
		Methylene chloride	U	0.0072	45	N	N				75-09-2
		Styrene	U	0.0072	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0072	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0072	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0072	12	N	N				127-18-4
		Toluene	J	0.002	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0072	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0072	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0072	13	N	N				79-01-6
		Vinyl chloride	U	0.0072	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0072	110	N	N				1330-20-7

TABLE 7-27
Ruin 1 Straight Line Discharge Pipe Sediment
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-DISCHARGE	Soil	Acenaphthene	U	0.4	43	N	N	1/13/2005	SW8270C	53381-2	83-32-9
		Acenaphthylene	U	0.4	23	N	N				208-96-8
		Anthracene	U	0.4	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.4	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.4	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.4	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.4	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.4	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.4	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.4	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.4	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.4	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.4	310	N	N				106-47-8
		2-Chlorophenol	U	0.4	50	N	N				95-57-8
		Chrysene	U	0.4	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.4	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.4	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.4	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.4	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.4	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.4	30	N	N				120-83-2
		Diethyl phthalate	U	0.4	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.4	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.4	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.4	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.4	0.9	N	N				121-14-2
		Fluoranthene	U	0.4	20	N	N				206-44-0
		Fluorene	U	0.4	28	N	N				86-73-7
		Hexachlorobenzene	U	0.4	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.4	8.2	N	N				87-68-3
		Hexachloroethane	U	0.4	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.4	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.4	123	N	N				91-57-6
		Naphthalene	U	0.4	54	N	N				91-20-3
		Pentachlorophenol	U	0.4	5.3	N	N				87-86-5
		Phenanthrene	U	0.4	40	N	N				85-01-8
		Phenol	U	0.4	6000	N	N				108-95-2
		Pyrene	U	0.4	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.4	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.4	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.4	58	N	N				88-06-2

TABLE 7-28
Ruin 1 Straight Line Discharge Pipe Sediment
Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
L-TF4-R1-DISCHARGE	Soil	1,2,3,4,6,7,8-HpCDD		26					1/18/2005	SW8290	G5A130357-001	35822-46-9
		1,2,3,4,6,7,8-HpCDF	U	2.9								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	2.1								55673-89-7
		1,2,3,4,7,8-HxCDD	U	2.1								39227-28-6
		1,2,3,4,7,8-HxCDF	U	1.3								70648-26-9
		1,2,3,6,7,8-HxCDD	U	1.9								57653-85-7
		1,2,3,6,7,8-HxCDF	U	1.3								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.9								19408-74-3
		1,2,3,7,8,9-HxCDF	U	1.6								72918-21-9
		1,2,3,7,8-PeCDD	U	3.1								40321-76-4
		1,2,3,7,8-PeCDF	U	2.1								57117-41-6
		2,3,4,6,7,8-HxCDF	U	1.4								60851-34-5
		2,3,4,7,8-PeCDF	U	2								57117-31-4
		2,3,7,8-TCDD	U	1.2								1746-01-6
		2,3,7,8-TCDF	U	1.2								51207-31-9
		OCDD		1300								3268-87-9
		OCDF	U	8								39001-02-0
		Total HpCDDs		55								37871-00-4
		Total HpCDFs	U	3.8								38998-75-3
		Total HxCDDs	U	2.1								34465-46-8
		Total HxCDFs	U	1.6								55684-94-1
		Total PeCDDs	U	3.1								36088-22-9
		Total PeCDFs	U	2.3								30402-15-4
		Total TCDDs	U	1.2								41903-57-5
		Total TCDFs	U	1.2								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			4.2	3.9	Y						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-29
Tank Farm 5 Oil/Water Separator Discharge
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-OW-DISCHARGE5	Dry	1524/2-7-05	1	25
TF5-OW-DISCHARGE6	Slightly Moist	1525/2-7-05	1	203
TF5-OW-DISCHARGE7	Slightly Moist	1527/2-7-05	1	15
TF5-OW-DISCHARGE8	Dry	1527/2-7-05	1	33
TF5-OW-DISCHARGE9	Dry	1528/2-8-05	1	101
TF5-OW-DISCHARGE10	Moist	samples too wet to run, sending to lab for analysis		
TF5-OW-DISCHARGE11	Moist	samples too wet to run, sending to lab for analysis		
TF5-OW-DISCHARGE12	Moist	samples too wet to run, sending to lab for analysis		

Notes:

Dilution Factor: e.g., for 5 g soil sample DF=10g/5g=2

TABLE 7-30
Tank Farm 5 Oil/Water Separator Discharge
TPH Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE1	Soil	Total Petroleum Hydrocarbons (TPH)		185	500	N	N	2/2/2005	SW8015	53480-1	
TF5-OW-DISCHARGE2	Soil	Total Petroleum Hydrocarbons (TPH)		90	500	N	N	2/2/2005	SW8015	53480-2	
TF5-OW-DISCHARGE4	Soil	Total Petroleum Hydrocarbons (TPH)		45	500	N	N	2/10/2005	SW8015	53526-1	
TF5-OW-DISCHARGE6	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	2/10/2005	SW8015	53526-2	
TF5-OW-DISCHARGE9	Soil	Total Petroleum Hydrocarbons (TPH)		48	500	N	N	2/10/2005	SW8015	53526-3	
TF5-OW-DISCHARGE10	Soil	Total Petroleum Hydrocarbons (TPH)		40	500	N	N	2/10/2005	SW8015	53526-4	
TF5-OW-DISCHARGE11	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	2/10/2005	SW8015	53526-5	
TF5-OW-DISCHARGE12	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	2/10/2005	SW8015	53526-6	
TF5-OW-DISCHARGE13	Soil	Total Petroleum Hydrocarbons (TPH)		86	500	N	N	2/22/2005	SW8015	53554-1	
TF5-OW-DISCHARGE14	Soil	Total Petroleum Hydrocarbons (TPH)		182	500	N	N	2/22/2005	SW8015	53554-2	
TF5-OW-DISCHARGE15	Soil	Total Petroleum Hydrocarbons (TPH)		327	500	N	N	2/23/2005	SW8015	53579-1	
TF5-OW-WESTCHAM-P3	Soil	Total Petroleum Hydrocarbons (TPH)		60	500	N	N	2/2/2005	SW8015	53480-3	

TABLE 7-31
Tank Farm 5 Oil/Water Separator Discharge
VOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE1	Soil	Acetone	B	0.018	7800	N	N	2/3/2005	SW8260B	607012	67-64-1
		Benzene	U	0.0029	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0029	10	N	N				75-27-4
		Bromoform	U	0.0029	81	N	N				75-25-2
		Bromomethane	U	0.0029	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0029	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0029	210	N	N				108-90-7
		Chloroform	U	0.0029	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0029	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0029	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0029	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0029	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0029	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0029	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0029	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0029	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0029	71	N	N				100-41-4
		Ethylene dibromide	U	0.0029	0.01	N	N				
		Isopropyl benzene	U	0.0029	27	N	N				98-82-8
		Methyl ethyl ketone		0.0045	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0029	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0029	390	N	N				1634-04-4
		Methylene chloride	U	0.0029	45	N	N				75-09-2
		Styrene	U	0.0029	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0029	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0029	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0029	12	N	N				127-18-4
		Toluene	J	0.00064	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0029	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0029	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0029	13	N	N				79-01-6
		Vinyl chloride	U	0.0029	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0029	110	N	N				1330-20-7

TABLE 7-31
Tank Farm 5 Oil/Water Separator Discharge
VOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE14	Soil	Acetone		29	7800	N	N	2/25/2005	SW8260B	609108	67-64-1
		Benzene	U	0.003	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.003	10	N	N				75-27-4
		Bromoform	U	0.003	81	N	N				75-25-2
		Bromomethane	U	0.003	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.003	1.5	N	N				56-23-5
		Chlorobenzene	U	0.003	210	N	N				108-90-7
		Chloroform	U	0.003	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.003	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.003	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.003	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.003	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.003	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.003	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.003	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.003	1.9	N	N				78-87-5
		Ethyl benzene	U	0.003	71	N	N				100-41-4
		Ethylene dibromide	U	0.003	0.01	N	N				
		Isopropyl benzene	U	0.003	27	N	N				98-82-8
		Methyl ethyl ketone		0.0057	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.003	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.003	390	N	N				1634-04-4
		Methylene chloride	U	0.003	45	N	N				75-09-2
		Styrene	U	0.003	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.003	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.003	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.003	12	N	N				127-18-4
		Toluene	U	0.003	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.003	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.003	3.6	N	N				79-00-5
		Trichloroethylene	U	0.003	13	N	N				79-01-6
		Vinyl chloride	U	0.003	0.02	N	N				75-01-4
		Xylenes (total)	U	0.003	110	N	N				1330-20-7

TABLE 7-31
Tank Farm 5 Oil/Water Separator Discharge
VOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE15	Soil	Acetone		0.055	7800	N	N	3/3/2005	SW8260B	609474	67-64-1
		Benzene	U	0.0042	2.5	N	N				71-43-2
		Bromodichloromethane	U	0.0042	10	N	N				75-27-4
		Bromoform	U	0.0042	81	N	N				75-25-2
		Bromomethane	U	0.0042	0.8	N	N				74-83-9
		Carbon tetrachloride	U	0.0042	1.5	N	N				56-23-5
		Chlorobenzene	U	0.0042	210	N	N				108-90-7
		Chloroform	U	0.0042	1.2	N	N				67-66-3
		Dibromochloromethane	U	0.0042	7.6	N	N				124-48-1
		Dibromochloropropane	U	0.0042	0.5	N	N				96-12-8
		1,1-Dichloroethane	U	0.0042	920	N	N				75-34-3
		1,1-Dichloroethene	U	0.0042	0.2	N	N				75-35-4
		1,2-Dichloroethane	U	0.0042	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	U	0.0042	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	U	0.0042	1100	N	N				156-60-5
		1,2-Dichloropropane	U	0.0042	1.9	N	N				78-87-5
		Ethyl benzene	U	0.0042	71	N	N				100-41-4
		Ethylene dibromide	U	0.0042	0.01	N	N				
		Isopropyl benzene	U	0.0042	27	N	N				98-82-8
		Methyl ethyl ketone		0.01	10000	N	N				78-93-3
		Methyl isobutyl ketone	U	0.0042	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	U	0.0042	390	N	N				1634-04-4
		Methylene chloride	U	0.0042	45	N	N				75-09-2
		Styrene	U	0.0042	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	U	0.0042	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	U	0.0042	1.3	N	N				79-34-5
		Tetrachloroethylene	U	0.0042	12	N	N				127-18-4
		Toluene	U	0.0042	190	N	N				108-88-3
		1,1,1-Trichloroethane	U	0.0042	540	N	N				71-55-6
		1,1,2-Trichloroethane	U	0.0042	3.6	N	N				79-00-5
		Trichloroethylene	U	0.0042	13	N	N				79-01-6
		Vinyl chloride	U	0.0042	0.02	N	N				75-01-4
		Xylenes (total)	U	0.0042	110	N	N				1330-20-7

TABLE 7-32
Tank Farm 5 Oil/Water Separator Discharge
SVOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-Discharge1	Soil	Acenaphthene	U	0.31	43	N	N	2/8/2005	SW8270C	53484-1	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	J	0.164	35	N	N				120-12-7
		Benzo(a)anthracene		0.537	0.9	N	N				56-55-3
		Benzo(a)pyrene		0.461	0.4	Y	N				50-32-8
		Benzo(b)fluoranthene		0.434	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	J	0.262	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		0.359	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene		0.547	0.4	Y	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene		1.32	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	J	0.304	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene		0.879	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene		1.09	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 7-32
Tank Farm 5 Oil/Water Separator Discharge
SVOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-Discharge14	Soil	Acenaphthene	U	0.28	43	N	N	2/26/2005	SW8270C	53568-1	83-32-9
		Acenaphthylene	U	0.28	23	N	N				208-96-8
		Anthracene	J	176	35	Y	N				120-12-7
		Benzo(a)anthracene		0.936	0.9	Y	N				56-55-3
		Benzo(a)pyrene		1.04	0.4	Y	N				50-32-8
		Benzo(b)fluoranthene		0.911	0.9	Y	N				205-99-2
		Benzo(g,h,i)perylene	J	0.352	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		0.898	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.28	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.28	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.28	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.28	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.28	310	N	N				106-47-8
		2-Chlorophenol	U	0.28	50	N	N				95-57-8
		Chrysene		1.02	0.4	Y	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.28	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.28	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.28	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.28	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.28	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.28	30	N	N				120-83-2
		Diethyl phthalate	U	0.28	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.28	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.28	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.28	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.28	0.9	N	N				121-14-2
		Fluoranthene		1.56	20	N	N				206-44-0
		Fluorene	U	0.28	28	N	N				86-73-7
		Hexachlorobenzene	U	0.28	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.28	8.2	N	N				87-68-3
		Hexachloroethane	U	0.28	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene		0.494	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.28	123	N	N				91-57-6
		Naphthalene	U	0.28	54	N	N				91-20-3
		Pentachlorophenol	U	0.28	5.3	N	N				87-86-5
		Phenanthrene		0.736	40	N	N				85-01-8
		Phenol	U	0.28	6000	N	N				108-95-2
		Pyrene		1.22	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.28	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.28	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.28	58	N	N				88-06-2

TABLE 7-32
Tank Farm 5 Oil/Water Separator Discharge
SVOC Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-Discharge15	Soil	Acenaphthene	U	0.34	43	N	N	3/2/2005	SW8270C	53588-1	83-32-9
		Acenaphthylene	U	0.34	23	N	N				208-96-8
		Anthracene	U	0.34	35	N	N				120-12-7
		Benzo(a)anthracene		0.415	0.9	N	N				56-55-3
		Benzo(a)pyrene		0.43	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene		0.409	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	J	0.34	0.8	N	N				191-24-2
		Benzo(k)fluoranthene		0.356	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.34	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.34	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.34	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.34	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.34	310	N	N				106-47-8
		2-Chlorophenol	U	0.34	50	N	N				95-57-8
		Chrysene		0.447	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.34	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.34	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.34	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.34	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.34	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.34	30	N	N				120-83-2
		Diethyl phthalate	U	0.34	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.34	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.34	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.34	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.34	0.9	N	N				121-14-2
		Fluoranthene		0.695	20	N	N				206-44-0
		Fluorene	U	0.34	28	N	N				86-73-7
		Hexachlorobenzene	U	0.34	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.34	8.2	N	N				87-68-3
		Hexachloroethane	U	0.34	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	J	0.182	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.34	123	N	N				91-57-6
		Naphthalene	U	0.34	54	N	N				91-20-3
		Pentachlorophenol	U	0.34	5.3	N	N				87-86-5
		Phenanthrene	J	0.316	40	N	N				85-01-8
		Phenol	U	0.34	6000	N	N				108-95-2
		Pyrene		0.526	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.34	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.34	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.34	58	N	N				88-06-2

TABLE 7-33
Tank Farm 5 Oil/Water Separator Discharge
Metals Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE1	Soil	Antimony	B	0.75	10	N	N		SW6010/7471	607150	7440-36-0
		Arsenic		51.5	7.0	Y	N				7440-38-2
		Barium	B	19.4	5500	N	N				7440-39-3
		Beryllium	B	0.41	0.4	Y	N				7440-41-7
		Cadmium		0.52	39	N	N				7440-43-9
		Chromium		11	390	N	N				7440-47-3
		Copper		19.6	3100	N	N				7440-50-8
		Cyanide	U	0.62	200	N	N				57-12-5
		Lead		17.2	150	N	N				7439-92-1
		Manganese		652	390	Y	N				7439-96-5
		Mercury	U	0.016	23	N	N				7439-97-6
		Nickel		28	1000	N	N				7440-02-0
		Selenium	U	0.49	390	N	N				7782-49-2
		Silver	U	0.14	200	N	N				7440-22-4
		Thallium		1.4	5.5	N	N				7440-28-0
		Vanadium		14.1	550	N	N				7440-62-2
		Zinc		105	6000	N	N				7440-66-6

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE14	Soil	Antimony	B	0.55	10	N	N	2/24/2005	SW6010/7471	609108	7440-36-0
		Arsenic		19.4	7.0	Y	N				7440-38-2
		Barium	B	15.2	5500	N	N				7440-39-3
		Beryllium	B	0.36	0.4	N	N				7440-41-7
		Cadmium	B	0.38	39	N	N				7440-43-9
		Chromium		13.1	390	N	N				7440-47-3
		Copper		20.8	3100	N	N				7440-50-8
		Cyanide	U	0.68	200	N	N				57-12-5
		Lead		23.5	150	N	N				7439-92-1
		Manganese		386	390	N	N				7439-96-5
		Mercury	U	0.022	23	N	N				7439-97-6
		Nickel		21.7	1000	N	N				7440-02-0
		Selenium	U	0.6	390	N	N				7782-49-2
		Silver	U	0.17	200	N	N				7440-22-4
		Thallium		0.86	5.5	N	N				7440-28-0
		Vanadium		14.1	550	N	N				7440-62-2
		Zinc		61.2	6000	N	N				7440-66-6

TABLE 7-33
Tank Farm 5 Oil/Water Separator Discharge
Metals Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE15	Soil	Antimony	B	0.73	10	N	N	3/1/2005	SW6010/7471	609474	7440-36-0
		Arsenic		17.7	7.0	**Y**	N				7440-38-2
		Barium	B	24.9	5500	N	N				7440-39-3
		Beryllium	B	0.45	0.4	**Y**	N				7440-41-7
		Cadmium	B	0.61	39	N	N				7440-43-9
		Chromium		13.5	390	N	N				7440-47-3
		Copper		20.2	3100	N	N				7440-50-8
		Cyanide	U	0.56	200	N	N				57-12-5
		Lead		57.8	150	N	N				7439-92-1
		Manganese		314	390	N	N				7439-96-5
		Mercury	B	0.032	23	N	N				7439-97-6
		Nickel		22.4	1000	N	N				7440-02-0
		Selenium	U	0.62	390	N	N				7782-49-2
		Silver	U	0.18	200	N	N				7440-22-4
		Thallium	U	0.89	5.5	N	N				7440-28-0
		Vanadium		17.5	550	N	N				7440-62-2
		Zinc		106	6000	N	N				7440-66-6

TABLE 7-34
Tank Farm 5 Oil/Water Separator Discharge
PCB Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE1	Soil	Total PCBs	U	0.018	10	N	N	2/7/2005	EPA 8082	53484-1	
TF5-OW-DISCHARGE14	Soil	Total PCBs	U	0.017	10	N	N	2/24/2005	EPA 8082	53568-1	
TF5-OW-DISCHARGE15	Soil	Total PCBs		0.023	10	N	N	3/3/2005	EPA 8082	53588-1	

TABLE 7-35
Tank Farm 5 Oil/Water Separator Discharge
Dioxin/Furans Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE1	Soil	1,2,3,4,6,7,8-HpCDD		95					2/11/2005	SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF	J	3.5								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	0.33								55673-89-7
		1,2,3,4,7,8-HxCDD	U	0.92								39227-28-6
		1,2,3,4,7,8-HxCDF	U	0.48								70648-26-9
		1,2,3,6,7,8-HxCDD	U	0.97								57653-85-7
		1,2,3,6,7,8-HxCDF	U	0.45								57117-44-9
		1,2,3,7,8,9-HxCDD	U	1.5								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.52								72918-21-9
		1,2,3,7,8-PeCDD	U	0.44								40321-76-4
		1,2,3,7,8-PeCDF	U	0.41								57117-41-6
		2,3,4,6,7,8-HxCDF	U	0.49								60851-34-5
		2,3,4,7,8-PeCDF	U	0.43								57117-31-4
		2,3,7,8-TCDD		1.7								1746-01-6
		2,3,7,8-TCDF	U	1.1								51207-31-9
		OCDD	E	13000								3268-87-9
		OCDF	U	4.6								39001-02-0
		Total HpCDDs		180								37871-00-4
		Total HpCDFs		7.5								38998-75-3
		Total HxCDDs		8.9								34465-46-8
		Total HxCDFs		1.5								55684-94-1
		Total PeCDDs		3.7								36088-22-9
		Total PeCDFs		1.3								30402-15-4
		Total TCDDs		1.7								41903-57-5
		Total TCDFs		1.1								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			16.3	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-35
Tank Farm 5 Oil/Water Separator Discharge
Dioxin/Furans Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE14	Soil	1,2,3,4,6,7,8-HpCDD		83					3/1/2005	SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF		24								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	1.4								55673-89-7
		1,2,3,4,7,8-HxCDD	U	1.1								39227-28-6
		1,2,3,4,7,8-HxCDF	U	1.6								70648-26-9
		1,2,3,6,7,8-HxCDD	J	3.3								57653-85-7
		1,2,3,6,7,8-HxCDF	U	1.6								57117-44-9
		1,2,3,7,8,9-HxCDD	U	2.5								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.36								72918-21-9
		1,2,3,7,8-PeCDD	U	0.4								40321-76-4
		1,2,3,7,8-PeCDF	U	0.39								57117-41-6
		2,3,4,6,7,8-HxCDF	U	1.2								60851-34-5
		2,3,4,7,8-PeCDF	U	0.4								57117-31-4
		2,3,7,8-TCDD	U	0.21								1746-01-6
		2,3,7,8-TCDF		2.9								51207-31-9
		OCDD		3400								3268-87-9
		OCDF	U	36								39001-02-0
		Total HpCDDs		140								37871-00-4
		Total HpCDFs		47								38998-75-3
		Total HxCDDs		13								34465-46-8
		Total HxCDFs		22								55684-94-1
		Total PeCDDs	U	0.47								36088-22-9
		Total PeCDFs	U	2.5								30402-15-4
		Total TCDDs	U	1								41903-57-5
		Total TCDFs		2.9								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			6.0	3.9	**Y**						

Note:
* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-35
Tank Farm 5 Oil/Water Separator Discharge
Dioxin/Furans Analytical Results

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-OW-DISCHARGE15	Soil	1,2,3,4,6,7,8-HpCDD		180					3/4/2005	SW8290		35822-46-9
		1,2,3,4,6,7,8-HpCDF		33								67562-39-4
		1,2,3,4,7,8,9-HpCDF	U	1.8								55673-89-7
		1,2,3,4,7,8-HxCDD	U	2.3								39227-28-6
		1,2,3,4,7,8-HxCDF	U	3								70648-26-9
		1,2,3,6,7,8-HxCDD	J	6.9								57653-85-7
		1,2,3,6,7,8-HxCDF	U	3.3								57117-44-9
		1,2,3,7,8,9-HxCDD	J	4.9								19408-74-3
		1,2,3,7,8,9-HxCDF	U	0.53								72918-21-9
		1,2,3,7,8-PeCDD	U	1.1								40321-76-4
		1,2,3,7,8-PeCDF	U	0.68								57117-41-6
		2,3,4,6,7,8-HxCDF	U	2.3								60851-34-5
		2,3,4,7,8-PeCDF	U	1.3								57117-31-4
		2,3,7,8-TCDD	U	0.33								1746-01-6
		2,3,7,8-TCDF	J	1								51207-31-9
		OCDD		7100								3268-87-9
		OCDF		58								39001-02-0
		Total HpCDDs		320								37871-00-4
		Total HpCDFs		70								38998-75-3
		Total HxCDDs		41								34465-46-8
		Total HxCDFs		40								55684-94-1
		Total PeCDDs	U	2.4								36088-22-9
		Total PeCDFs		22								30402-15-4
		Total TCDDs	U	1								41903-57-5
		Total TCDFs		14								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			12.1	3.9	**Y**						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-36
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF4-P-STRAIGHTDIS-19	Dry	8/16/05	1	49
TF4-P-STRAIGHTDIS-20	Dry	8/16/05	1	284
TF4-P-STRAIGHTDIS-22	Dry	8/16/05	1	410
TF4-P-STRAIGHTDIS-J16-S	Slightly Moist	1/10/06	1	1183

Notes:
DF=10g/5g=2

TABLE 7-37
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	Analysis Run
TF4-L-STRAIGHTDIS-11	Soil	TPH	24	479	500	N	N	8/18/2005	SW8015	54738-1		TPH
TF4-L-STRAIGHTDIS-12	Soil	TPH	26	101	500	N	N	8/18/2005	SW8015	54738-2		TPH
TF4-L-STRAIGHTDIS-10	Soil	TPH	26	92	500	N	N	8/18/2005	SW8015	54738-3		TPH
TF4-L-STRAIGHTDIS-14D	Soil	TPH	24	122	500	N	N	8/18/2005	SW8015	54738-4		TPH
TF4-L-STRAIGHTDIS-13	Soil	TPH	24	123	500	N	N	8/18/2005	SW8015	54738-5		TPH
TF4-L-STRAIGHTDIS-14	Soil	TPH	24	109	500	N	N	8/18/2005	SW8015	54738-6		TPH
TF4-L-STRAIGHTDIS-15	Soil	TPH	22	168	500	N	N	8/18/2005	SW8015	54738-7		TPH
TF4-L-STRAIGHTDIS-21	Soil	TPH	26	215	500	N	N	8/18/2005	SW8015	54738-8		TPH
TF4-L-STRAIGHTDIS-18	Soil	TPH	24	160	500	N	N	8/18/2005	SW8015	54738-9		TPH
TF4-L-STRAIGHTDIS-22	Soil	TPH	22	283	500	N	N	8/18/2005	SW8015	54738-10		TPH
TF4-L-STRAIGHTDIS-20	Soil	TPH	26	164	500	N	N	8/18/2005	SW8015	54738-11		TPH
TF4-L-STRAIGHTDIS-9B	Soil	TPH	28	142	500	N	N	8/24/2005	SW8015	54775-2		TPH
TF4-L-STRAIGHTDIS-25	Soil	TPH	22	170	500	N	N	8/24/2005	SW8015	54775-3		TPH
TF4-L-STRAIGHTDIS-26	Soil	TPH	22	86	500	N	N	8/24/2005	SW8015	54775-4		TPH
TF4-L-STRAIGHTDIS-9C	Soil	TPH	22	87	500	N	N	8/26/2005	SW8015	54794-3		TPH
TF4-L-STRAIGHTDIS-9D	Soil	TPH	22	94	500	N	N	8/25/2005	SW8015	54794-4		TPH
TF4-L-STRAIGHTDIS-27	Soil	TPH	26	39	500	N	N	8/31/2005	SW8015	54827-1		TPH
TF4-L-STRAIGHTDIS-9E	Soil	TPH	26	113	500	N	N	8/31/2005	SW8015	54827-2		TPH
TF4-L-STRAIGHTDIS-11B	Soil	TPH	24	61	500	N	N	9/1/2005	SW8015	54827-3		TPH
TF4-L-STRAIGHTDIS-17B	Soil	TPH	24	221	500	N	N	9/1/2005	SW8015	54827-4		TPH
TF4-L-STRAIGHTDIS-9F	Soil	TPH	26	57	500	N	N	9/8/2005	SW8015	54862-1		TPH
TF4-L-STRAIGHTDIS-17D	Soil	TPH	300	2560	500	Y	N	9/9/2005	SW8015	54862-2		TPH
TF4-L-STRAIGHTDIS-23	Soil	TPH	300	1530	500	Y	N	8/20/2005	SW8015	54743-1		TPH
TF4-L-STRAIGHTDIS-16A	Soil	TPH	22	83	500	N	N	8/20/2005	SW8015	54743-2		TPH
TF4-L-STRAIGHTDIS-17A	Soil	TPH	22	168	500	N	N	8/20/2005	SW8015	54743-3		TPH
TF4-L-STRAIGHTDIS-24	Soil	TPH	22	93	500	N	N	8/20/2005	SW8015	54743-4		TPH
TF4-L-STRAIGHTDIS-9A	Soil	TPH	340	1070	500	Y	N	8/20/2005	SW8015	54743-5		TPH
TF4-L-STRAIGHTDIS-E7	Soil	TPH	24	74	500	N	N	9/29/2005	SW8015	54987-3		TPH
TF4-L-STRAIGHTDIS-E8	Soil	TPH	24	59	500	N	N	9/29/2005	SW8015	54987-4		TPH
TF4-L-STRAIGHTDIS-E9	Soil	TPH	28	394	500	N	N	9/29/2005	SW8015	54987-5		TPH
TF4-L-STRAIGHTDIS-E10	Soil	TPH	24	262	500	N	N	9/29/2005	SW8015	54987-6		TPH
TF4-L-STRAIGHTDIS-E11	Soil	TPH	24	36	500	N	N	9/30/2005	SW8015	54987-7		TPH
TF4-L-STRAIGHTDIS-F9	Soil	TPH	26	85	500	N	N	9/30/2005	SW8015	54987-8		TPH
TF4-L-STRAIGHTDIS-F10	Soil	TPH	24	40	500	N	N	9/30/2005	SW8015	54987-9		TPH
TF4-L-STRAIGHTDIS-F11	Soil	TPH	24	44	500	N	N	9/30/2005	SW8015	54987-10		TPH
TF4-L-STRAIGHTDIS-G9	Soil	TPH	24	39	500	N	N	9/30/2005	SW8015	54987-11		TPH
TF4-L-STRAIGHTDIS-G10	Soil	TPH	24	33	500	N	N	9/30/2005	SW8015	54987-12		TPH
TF4-L-STRAIGHTDIS-G11	Soil	TPH	24	48	500	N	N	9/30/2005	SW8015	54987-13		TPH
TF4-L-STRAIGHTDIS-B2	Soil	TPH	24	35	500	N	N	9/30/2005	SW8015	54987-14		TPH
TF4-L-STRAIGHTDIS-A2	Soil	TPH	26	62	500	N	N	9/30/2005	SW8015	54987-15		TPH
TF4-L-STRAIGHTDIS-9H	Soil	TPH	24	43	500	N	N	9/30/2005	SW8015	54987-16		TPH
TF4-L-STRAIGHTDIS-29	Soil	TPH	44	U	500	N	N	11/2/2005	SW8015	55237-1		TPH
TF4-L-STRAIGHTDIS-32	Soil	TPH	42	181	500	N	N	11/2/2005	SW8015	55237-2		TPH, SVOCs
TF4-L-STRAIGHTDIS-35	Soil	TPH	42	627	500	Y	N	11/2/2005	SW8015	55237-3		TPH
TF4-L-STRAIGHTDIS-38	Soil	TPH	38	1140	500	Y	N	11/2/2005	SW8015	55237-4		TPH
TF4-L-STRAIGHTDIS-41	Soil	TPH	50	154	500	N	N	11/2/2005	SW8015	55237-5		TPH, SVOCs
TF4-L-STRAIGHTDIS-44	Soil	TPH	60	91	500	N	N	11/2/2005	SW8015	55237-6		TPH

TABLE 7-37
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory TPH Analytical Data

TF4-L-STRAIGHTDIS-34	Soil	TPH	28	123	500	N	N	11/10/2005	SW8015	55297-5		TPH, SVOCs
TF4-L-STRAIGHTDIS-36	Soil	TPH	30	171	500	N	N	11/10/2005	SW8015	55297-6		TPH, SVOCs
TF4-L-STRAIGHTDIS-39	Soil	TPH	26	88	500	N	N	11/10/2005	SW8015	55297-7		TPH
TF4-L-STRAIGHTDIS-37	Soil	TPH	28	108	500	N	N	11/10/2005	SW8015	55297-8		TPH, SVOCs
TF4-L-STRAIGHTDIS-46	Soil	TPH	36	218	500	N	N	12/24/2005	SW8015	55616-1		TPH, SVOCs
TF4-L-STRAIGHTDIS-44-1	Soil	TPH	40	256	500	N	N	12/24/2005	SW8015	55616-2		TPH, SVOCs
TF-L-STRAIGHTDIS-M19-S5	Soil	TPH	26	55	500	N	N	1/30/2006	SW8015	55793-1		TPH, SVOCs
TF-L-STRAIGHTDIS-M19-S11	Soil	TPH	26	49	500	N	N	1/31/2006	SW8015	55793-2		TPH, SVOCs
TF-L-STRAIGHTDIS-M19-S21	Soil	TPH	26	9350	500	Y	N	1/31/2006	SW8015	55793-3		TPH
TF-L-STRAIGHTDIS-J17-S29	Soil	TPH	26	154	500	N	N	1/31/2006	SW8015	55793-4		TPH, SVOCs
TF-L-STRAIGHTDIS-J17-S19	Soil	TPH	26	63	500	N	N	1/31/2006	SW8015	55793-5		TPH, SVOCs
TF-L-STRAIGHTDIS-J17-S9	Soil	TPH	26	67	500	N	N	1/31/2006	SW8015	55793-6		TPH, SVOCs
TF4-L-STRAIGHTDIS-52-S	Soil	TPH	72	10400	500	Y	N	2/28/2006	SW8015	55924-7		TPH, D/F
<u>Testpits 1 & 4:</u> Excavated Northwest of Samples TF4-C-STRAIGHTDIS-M13-S, TF4-C-STRAIGHTDIS-L11-S, TF4-C-STRAIGHTDIS-K9-S												
TF4-L-TESTPIT07-SW-1	Soil	TPH	28	38	500	N	N	3/2/2006	SW8015B	55935-4		TPH
TF4-L-TESTPIT06-SW-1	Soil	TPH	700	16900	500	Y	Y	3/2/2006	SW8015B	55935-3		TPH
TF4-L-TESTPIT04-SW-1	Soil	TPH	32	218	500	N	N	2/21/2006	SW8015B	55885-3		TPH, SVOCs
TF4-L-TESTPIT04-SW-2	Soil	TPH	480	10500	500	Y	N	2/22/2006	SW8015B	55885-4		TPH
TF4-L-TESTPIT01-SW-1	Soil	TPH	26	36	500	N	N	2/21/2006	SW8015B	55885-5		TPH
TF4-L-TESTPIT01-SW-2	Soil	TPH	32	1910	500	Y	N	2/22/2006	SW8015B	55885-6		TPH
TF4-L-TESTPIT01-SW-3	Soil	TPH	46	2910	500	Y	N	2/22/2006	SW8015B	55885-7		TPH
<u>Testpits 2 & 3:</u> Excavated Northwest of Samples TF4-C-STRAIGHTDIS-54-S												
TF4-L-TESTPIT03-SW-1	Soil	TPH	28	285	500	N	N	2/21/2006	SW8015B	55885-8		TPH, SVOCs
TF4-L-TESTPIT03-SW-2	Soil	TPH	32	332	500	N	N	2/22/2006	SW8015B	55885-9		TPH, SVOCs

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-32	Soil	Acenaphthene	0.54		U	43	N	N	11/11/2005	8270	55298-11	83-32-9
		Acenaphthylene	0.54		U	23	N	N				208-96-8
		Anthracene	0.54		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.54		0.618	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.54	J	0.531	0.4	Y	Y				50-32-8
		Benzo(b)fluoranthene	0.54	J	0.45	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.54		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.54	J	0.438	0.9	N	N				207-08-9
		1,1-Biphenyl	0.54		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.54		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.54		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.54		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.54		U	310	N	N				106-47-8
		2-Chlorophenol	0.54		U	50	N	N				95-57-8
		Chrysene	0.54		0.561	0.4	Y	Y				218-01-9
		Dibenzo(a,h)anthracene	0.54		U	0.4	N	Y				53-70-3
		1,2-Dichlorobenzene	0.54		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.54		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.54		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.54		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.54		U	30	N	N				120-83-2
		Diethyl phthalate	0.54		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.54		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.54		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.54		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.54		U	0.9	N	N				121-14-2
		Fluoranthene	0.54		1.34	20	N	N				206-44-0
		Fluorene	0.54		U	28	N	N				86-73-7
		Hexachlorobenzene	0.54		U	0.4	N	Y				118-74-1
		Hexachlorobutadiene	0.54		U	8.2	N	N				87-68-3
		Hexachloroethane	0.54		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.54	J	0.376	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.54		U	123	N	N				91-57-6
		Naphthalene	0.54		U	54	N	N				91-20-3
		Pentachlorophenol	0.54		U	5.3	N	N				87-86-5
		Phenanthrene	0.54		0.763	40	N	N				85-01-8
		Phenol	0.54		U	6000	N	N				108-95-2
		Pyrene	0.54		1.13	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.54		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.54		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.54		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-41	Soil	Acenaphthene	0.64		U	43	N	N	11/11/2005	8270	55298-12	83-32-9
		Acenaphthylene	0.64		U	23	N	N				208-96-8
		Anthracene	0.64		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.64	J	0.534	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.64	J	0.478	0.4	Y	Y				50-32-8
		Benzo(b)fluoranthene	0.64	J	0.378	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.64		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.64	J	0.383	0.9	N	N				207-08-9
		1,1-Biphenyl	0.64		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.64		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.64		U	0.6	N	Y				111-44-4
		bis(2-chloroisopropyl)ether	0.64		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.64		U	310	N	N				106-47-8
		2-Chlorophenol	0.64		U	50	N	N				95-57-8
		Chrysene	0.64	J	0.492	0.4	Y	Y				218-01-9
		Dibenzo(a,h)anthracene	0.64		U	0.4	N	Y				53-70-3
		1,2-Dichlorobenzene	0.64		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.64		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.64		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.64		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.64		U	30	N	N				120-83-2
		Diethyl phthalate	0.64		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.64		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.64		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.64		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.64		U	0.9	N	N				121-14-2
		Fluoranthene	0.64		1.01	20	N	N				206-44-0
		Fluorene	0.64		U	28	N	N				86-73-7
		Hexachlorobenzene	0.64		U	0.4	N	Y				118-74-1
		Hexachlorobutadiene	0.64		U	8.2	N	N				87-68-3
		Hexachloroethane	0.64		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.64	J	0.377	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.64		U	123	N	N				91-57-6
		Naphthalene	0.64		U	54	N	N				91-20-3
		Pentachlorophenol	0.64		U	5.3	N	N				87-86-5
		Phenanthrene	0.64	J	0.554	40	N	N				85-01-8
		Phenol	0.64		U	6000	N	N				108-95-2
		Pyrene	0.64		0.959	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.64		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.64		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.64		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-34	Soil	Acenaphthene	0.34		U	43	N	N	11/15/2005	8270	55329-3	83-32-9
		Acenaphthylene	0.34		U	23	N	N				208-96-8
		Anthracene	0.34		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.34		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.34		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.34		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.34		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.34		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.34		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.34		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.34		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.34		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.34		U	310	N	N				106-47-8
		2-Chlorophenol	0.34		U	50	N	N				95-57-8
		Chrysene	0.34		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.34		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.34		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.34		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.34		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.34		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.34		U	30	N	N				120-83-2
		Diethyl phthalate	0.34		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.34		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.34		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.34		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.34		U	0.9	N	N				121-14-2
		Fluoranthene	0.34	J	0.271	20	N	N				206-44-0
		Fluorene	0.34		U	28	N	N				86-73-7
		Hexachlorobenzene	0.34		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.34		U	8.2	N	N				87-68-3
		Hexachloroethane	0.34		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.34		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.34		U	123	N	N				91-57-6
		Naphthalene	0.34		U	54	N	N				91-20-3
		Pentachlorophenol	0.34		U	5.3	N	N				87-86-5
		Phenanthrene	0.34		U	40	N	N				85-01-8
		Phenol	0.34		U	6000	N	N				108-95-2
		Pyrene	0.34	J	0.253	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.34		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.34		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.34		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-36	Soil	Acenaphthene	0.38		U	43	N	N	11/15/2005	8270	55329-4	83-32-9
		Acenaphthylene	0.38		U	23	N	N				208-96-8
		Anthracene	0.38		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.38		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.38		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.38		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.38		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.38		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.38		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.38		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.38		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.38		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.38		U	310	N	N				106-47-8
		2-Chlorophenol	0.38		U	50	N	N				95-57-8
		Chrysene	0.38		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.38		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.38		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.38		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.38		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.38		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.38		U	30	N	N				120-83-2
		Diethyl phthalate	0.38		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.38		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.38		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.38		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.38		U	0.9	N	N				121-14-2
		Fluoranthene	0.38		U	20	N	N				206-44-0
		Fluorene	0.38		U	28	N	N				86-73-7
		Hexachlorobenzene	0.38		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.38		U	8.2	N	N				87-68-3
		Hexachloroethane	0.38		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.38		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.38		U	123	N	N				91-57-6
		Naphthalene	0.38		U	54	N	N				91-20-3
		Pentachlorophenol	0.38		U	5.3	N	N				87-86-5
		Phenanthrene	0.38		U	40	N	N				85-01-8
		Phenol	0.38		U	6000	N	N				108-95-2
		Pyrene	0.38		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.38		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.38		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.38		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-37	Soil	Acenaphthene	0.35		U	43	N	N	11/15/2005	8270	55329-5	83-32-9
		Acenaphthylene	0.35		U	23	N	N				208-96-8
		Anthracene	0.35		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.35		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.35		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.35		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.35		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.35		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.35		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.35		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.35		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.35		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.35		U	310	N	N				106-47-8
		2-Chlorophenol	0.35		U	50	N	N				95-57-8
		Chrysene	0.35		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.35		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.35		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.35		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.35		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.35		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.35		U	30	N	N				120-83-2
		Diethyl phthalate	0.35		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.35		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.35		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.35		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.35		U	0.9	N	N				121-14-2
		Fluoranthene	0.35		U	20	N	N				206-44-0
		Fluorene	0.35		U	28	N	N				86-73-7
		Hexachlorobenzene	0.35		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.35		U	8.2	N	N				87-68-3
		Hexachloroethane	0.35		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.35		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.35		U	123	N	N				91-57-6
		Naphthalene	0.35		U	54	N	N				91-20-3
		Pentachlorophenol	0.35		U	5.3	N	N				87-86-5
		Phenanthrene	0.35		U	40	N	N				85-01-8
		Phenol	0.35		U	6000	N	N				108-95-2
		Pyrene	0.35		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.35		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.35		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.35		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-46	Soil	Acenaphthene	0.48		U	43	N	N	12/30/2005	8270	55627-1	83-32-9
		Acenaphthylene	0.48		U	23	N	N				208-96-8
		Anthracene	0.48		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.48		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.48		U	0.4	N	Y				50-32-8
		Benzo(b)fluoranthene	0.48		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.48		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.48		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.48		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.48		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.48		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.48		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.48		U	310	N	N				106-47-8
		2-Chlorophenol	0.48		U	50	N	N				95-57-8
		Chrysene	0.48		U	0.4	N	Y				218-01-9
		Dibenzo(a,h)anthracene	0.48		U	0.4	N	Y				53-70-3
		1,2-Dichlorobenzene	0.48		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.48		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.48		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.48		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.48		U	30	N	N				120-83-2
		Diethyl phthalate	0.48		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.48		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.48		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.48		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.48		U	0.9	N	N				121-14-2
		Fluoranthene	0.48		U	20	N	N				206-44-0
		Fluorene	0.48		U	28	N	N				86-73-7
		Hexachlorobenzene	0.48		U	0.4	N	Y				118-74-1
		Hexachlorobutadiene	0.48		U	8.2	N	N				87-68-3
		Hexachloroethane	0.48		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.48		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.48		U	123	N	N				91-57-6
		Naphthalene	0.48		U	54	N	N				91-20-3
		Pentachlorophenol	0.48		U	5.3	N	N				87-86-5
		Phenanthrene	0.48		U	40	N	N				85-01-8
		Phenol	0.48		U	6000	N	N				108-95-2
		Pyrene	0.48	J	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.48		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.48		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.48		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-44-1	Soil	Acenaphthene	0.5		U	43	N	N	12/30/2005	8270	55627-2	83-32-9
		Acenaphthylene	0.5		U	23	N	N				208-96-8
		Anthracene	0.5		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.5		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.5		U	0.4	N	Y				50-32-8
		Benzo(b)fluoranthene	0.5		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.5		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.5		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.5		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.5		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.5		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.5		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.5		U	310	N	N				106-47-8
		2-Chlorophenol	0.5		U	50	N	N				95-57-8
		Chrysene	0.5		U	0.4	N	Y				218-01-9
		Dibenzo(a,h)anthracene	0.5		U	0.4	N	Y				53-70-3
		1,2-Dichlorobenzene	0.5		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.5		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.5		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.5		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.5		U	30	N	N				120-83-2
		Diethyl phthalate	0.5		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.5		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.5		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.5		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.5		U	0.9	N	N				121-14-2
		Fluoranthene	0.5	J	0.289	20	N	N				206-44-0
		Fluorene	0.5		U	28	N	N				86-73-7
		Hexachlorobenzene	0.5		U	0.4	N	Y				118-74-1
		Hexachlorobutadiene	0.5		U	8.2	N	N				87-68-3
		Hexachloroethane	0.5		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.5		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.5		U	123	N	N				91-57-6
		Naphthalene	0.5		U	54	N	N				91-20-3
		Pentachlorophenol	0.5		U	5.3	N	N				87-86-5
		Phenanthrene	0.5		U	40	N	N				85-01-8
		Phenol	0.5		U	6000	N	N				108-95-2
		Pyrene	0.5		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.5		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.5		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.5		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-M19-S5	Soil	Acenaphthene	0.25		U	43	N	N	2/3/2006	8270	55810-1	83-32-9
		Acenaphthylene	0.25		U	23	N	N				208-96-8
		Anthracene	0.25		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.25		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.25		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.25		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.25		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.25		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.25		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.25		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.25		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.25		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.25		U	310	N	N				106-47-8
		2-Chlorophenol	0.25		U	50	N	N				95-57-8
		Chrysene	0.25		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.25		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.25		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.25		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.25		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.25		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.25		U	30	N	N				120-83-2
		Diethyl phthalate	0.25		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.25		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.25		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.25		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.25		U	0.9	N	N				121-14-2
		Fluoranthene	0.25	J	0.289	20	N	N				206-44-0
		Fluorene	0.25		U	28	N	N				86-73-7
		Hexachlorobenzene	0.25		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.25		U	8.2	N	N				87-68-3
		Hexachloroethane	0.25		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.25		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.25		U	123	N	N				91-57-6
		Naphthalene	0.25		U	54	N	N				91-20-3
		Pentachlorophenol	0.25		U	5.3	N	N				87-86-5
		Phenanthrene	0.25		U	40	N	N				85-01-8
		Phenol	0.25		U	6000	N	N				108-95-2
		Pyrene	0.25		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.25		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.25		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.25		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-M19-S11	Soil	Acenaphthene	0.33		U	43	N	N	2/3/2006	8270	55810-2	83-32-9
		Acenaphthylene	0.33		U	23	N	N				208-96-8
		Anthracene	0.33		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.33		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.33		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.33		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.33		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.33		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.33		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.33		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.33		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.33		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.33		U	310	N	N				106-47-8
		2-Chlorophenol	0.33		U	50	N	N				95-57-8
		Chrysene	0.33		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.33		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.33		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.33		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.33		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.33		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.33		U	30	N	N				120-83-2
		Diethyl phthalate	0.33		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.33		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.33		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.33		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.33		U	0.9	N	N				121-14-2
		Fluoranthene	0.33	J	0.289	20	N	N				206-44-0
		Fluorene	0.33		U	28	N	N				86-73-7
		Hexachlorobenzene	0.33		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.33		U	8.2	N	N				87-68-3
		Hexachloroethane	0.33		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.33		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.33		U	123	N	N				91-57-6
		Naphthalene	0.33		U	54	N	N				91-20-3
		Pentachlorophenol	0.33		U	5.3	N	N				87-86-5
		Phenanthrene	0.33		U	40	N	N				85-01-8
		Phenol	0.33		U	6000	N	N				108-95-2
		Pyrene	0.33		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.33		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.33		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.33		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-J17-S29	Soil	Acenaphthene	0.33		U	43	N	N	2/3/2006	8270	55810-3	83-32-9
		Acenaphthylene	0.33		U	23	N	N				208-96-8
		Anthracene	0.33		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.33		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.33		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.33		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.33		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.33		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.33		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.33		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.33		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.33		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.33		U	310	N	N				106-47-8
		2-Chlorophenol	0.33		U	50	N	N				95-57-8
		Chrysene	0.33		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.33		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.33		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.33		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.33		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.33		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.33		U	30	N	N				120-83-2
		Diethyl phthalate	0.33		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.33		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.33		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.33		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.33		U	0.9	N	N				121-14-2
		Fluoranthene	0.33	J	0.289	20	N	N				206-44-0
		Fluorene	0.33		U	28	N	N				86-73-7
		Hexachlorobenzene	0.33		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.33		U	8.2	N	N				87-68-3
		Hexachloroethane	0.33		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.33		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.33		U	123	N	N				91-57-6
		Naphthalene	0.33		U	54	N	N				91-20-3
		Pentachlorophenol	0.33		U	5.3	N	N				87-86-5
		Phenanthrene	0.33		U	40	N	N				85-01-8
		Phenol	0.33		U	6000	N	N				108-95-2
		Pyrene	0.33		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.33		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.33		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.33		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-J17-S19	Soil	Acenaphthene	0.43		U	43	N	N	2/3/2006	8270	55810-4	83-32-9
		Acenaphthylene	0.43		U	23	N	N				208-96-8
		Anthracene	0.43		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.43		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.43		U	0.4	N	Y				50-32-8
		Benzo(b)fluoranthene	0.43		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.43		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.43		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.43		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.43		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.43		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.43		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.43		U	310	N	N				106-47-8
		2-Chlorophenol	0.43		U	50	N	N				95-57-8
		Chrysene	0.43		U	0.4	N	Y				218-01-9
		Dibenzo(a,h)anthracene	0.43		U	0.4	N	Y				53-70-3
		1,2-Dichlorobenzene	0.43		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.43		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.43		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.43		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.43		U	30	N	N				120-83-2
		Diethyl phthalate	0.43		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.43		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.43		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.43		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.43		U	0.9	N	N				121-14-2
		Fluoranthene	0.43	J	0.289	20	N	N				206-44-0
		Fluorene	0.43		U	28	N	N				86-73-7
		Hexachlorobenzene	0.43		U	0.4	N	Y				118-74-1
		Hexachlorobutadiene	0.43		U	8.2	N	N				87-68-3
		Hexachloroethane	0.43		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.43		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.43		U	123	N	N				91-57-6
		Naphthalene	0.43		U	54	N	N				91-20-3
		Pentachlorophenol	0.43		U	5.3	N	N				87-86-5
		Phenanthrene	0.43		U	40	N	N				85-01-8
		Phenol	0.43		U	6000	N	N				108-95-2
		Pyrene	0.43		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.43		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.43		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.43		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-J17-S9	Soil	Acenaphthene	0.33		U	43	N	N	2/3/2006	8270	55810-5	83-32-9
		Acenaphthylene	0.33		U	23	N	N				208-96-8
		Anthracene	0.33		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.33		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.33		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.33		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.33		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.33		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.33		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.33		0.669	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.33		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.33		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.33		U	310	N	N				106-47-8
		2-Chlorophenol	0.33		U	50	N	N				95-57-8
		Chrysene	0.33		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.33		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.33		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.33		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.33		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.33		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.33		U	30	N	N				120-83-2
		Diethyl phthalate	0.33		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.33		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.33		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.33		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.33		U	0.9	N	N				121-14-2
		Fluoranthene	0.33	J	0.289	20	N	N				206-44-0
		Fluorene	0.33		U	28	N	N				86-73-7
		Hexachlorobenzene	0.33		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.33		U	8.2	N	N				87-68-3
		Hexachloroethane	0.33		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.33		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.33		U	123	N	N				91-57-6
		Naphthalene	0.33		U	54	N	N				91-20-3
		Pentachlorophenol	0.33		U	5.3	N	N				87-86-5
		Phenanthrene	0.33		U	40	N	N				85-01-8
		Phenol	0.33		U	6000	N	N				108-95-2
		Pyrene	0.33		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.33		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.33		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.33		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-TESTPIT04-SW1	Soil	Acenaphthene	0.4		U	43	N	N	2/25/2006	8270	55913-3	83-32-9
		Acenaphthylene	0.4		U	23	N	N				208-96-8
		Anthracene	0.4		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.4		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.4		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.4		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.4		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.4		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.4		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.4		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.4		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.4		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.4		U	310	N	N				106-47-8
		2-Chlorophenol	0.4		U	50	N	N				95-57-8
		Chrysene	0.4		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.4		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.4		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.4		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.4		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.4		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.4		U	30	N	N				120-83-2
		Diethyl phthalate	0.4		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.4		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.4		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.4		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.4		U	0.9	N	N				121-14-2
		Fluoranthene	0.4		U	20	N	N				206-44-0
		Fluorene	0.4		U	28	N	N				86-73-7
		Hexachlorobenzene	0.4		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.4		U	8.2	N	N				87-68-3
		Hexachloroethane	0.4		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.4		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.4		U	123	N	N				91-57-6
		Naphthalene	0.4		U	54	N	N				91-20-3
		Pentachlorophenol	0.4		U	5.3	N	N				87-86-5
		Phenanthrene	0.4		U	40	N	N				85-01-8
		Phenol	0.4		U	6000	N	N				108-95-2
		Pyrene	0.4		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.4		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.4		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.4		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-TESTPIT03-SW1	Soil	Acenaphthene	0.36		U	43	N	N	2/25/2006	8270	55913-4	83-32-9
		Acenaphthylene	0.36		U	23	N	N				208-96-8
		Anthracene	0.36		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.36		0.546	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.36		0.58	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene	0.36		0.62	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.36		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.36		0.658	0.9	N	N				207-08-9
		1,1-Biphenyl	0.36		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.36		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.36		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.36		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.36		U	310	N	N				106-47-8
		2-Chlorophenol	0.36		U	50	N	N				95-57-8
		Chrysene	0.36		0.6	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	0.36		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.36		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.36		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.36		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.36		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.36		U	30	N	N				120-83-2
		Diethyl phthalate	0.36		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.36		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.36		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.36		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.36		U	0.9	N	N				121-14-2
		Fluoranthene	0.36		0.855	20	N	N				206-44-0
		Fluorene	0.36		U	28	N	N				86-73-7
		Hexachlorobenzene	0.36		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.36		U	8.2	N	N				87-68-3
		Hexachloroethane	0.36		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.36		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.36		U	123	N	N				91-57-6
		Naphthalene	0.36		U	54	N	N				91-20-3
		Pentachlorophenol	0.36		U	5.3	N	N				87-86-5
		Phenanthrene	0.36		0.365	40	N	N				85-01-8
		Phenol	0.36		U	6000	N	N				108-95-2
		Pyrene	0.36		0.751	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.36		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.36		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.36		U	58	N	N				88-06-2

TABLE 7-38
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT LIMIT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-TESTPIT03-SW2	Soil	Acenaphthene	0.4		U	43	N	N	2/25/2006	8270	55913-5	83-32-9
		Acenaphthylene	0.4		U	23	N	N				208-96-8
		Anthracene	0.4		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.4		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.4	J	0.237	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.4	J	0.242	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.4		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.4	J	0.232	0.9	N	N				207-08-9
		1,1-Biphenyl	0.4		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.4		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.4		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.4		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.4		U	310	N	N				106-47-8
		2-Chlorophenol	0.4		U	50	N	N				95-57-8
		Chrysene	0.4	J	0.232	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.4		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.4		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.4		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.4		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.4		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.4		U	30	N	N				120-83-2
		Diethyl phthalate	0.4		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.4		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.4		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.4		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.4		U	0.9	N	N				121-14-2
		Fluoranthene	0.4	J	0.306	20	N	N				206-44-0
		Fluorene	0.4		U	28	N	N				86-73-7
		Hexachlorobenzene	0.4		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.4		U	8.2	N	N				87-68-3
		Hexachloroethane	0.4		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.4		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.4		U	123	N	N				91-57-6
		Naphthalene	0.4		U	54	N	N				91-20-3
		Pentachlorophenol	0.4		U	5.3	N	N				87-86-5
		Phenanthrene	0.4		U	40	N	N				85-01-8
		Phenol	0.4		U	6000	N	N				108-95-2
		Pyrene	0.4	J	0.292	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.4		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.4		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.4		U	58	N	N				88-06-2

TABLE 7-39
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Exploratory Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-L-STRAIGHTDIS-52-S	Solid	1,2,3,4,6,7,8-HpCDD		190					10/7/2005	SW846 8290	55924-7	35822-46-9
	Solid	1,2,3,4,6,7,8-HpCDF		17								67562-39-4
	Solid	1,2,3,4,7,8,9-HpCDF	ND	2.1								55673-89-7
	Solid	1,2,3,4,7,8-HxCDD	ND	3.8								39227-28-6
	Solid	1,2,3,4,7,8-HxCDF	J	6.4								70648-26-9
	Solid	1,2,3,6,7,8-HxCDD	J	5.6								57653-85-7
	Solid	1,2,3,6,7,8-HxCDF	ND	3.5								57117-44-9
	Solid	1,2,3,7,8,9-HxCDD	ND	4.7								19408-74-3
	Solid	1,2,3,7,8,9-HxCDF	ND	0.41								72918-21-9
	Solid	1,2,3,7,8-PeCDD	ND	1.2								40321-76-4
	Solid	1,2,3,7,8-PeCDF	ND	2.6								57117-41-6
	Solid	2,3,4,6,7,8-HxCDF	ND	2								60851-34-5
	Solid	2,3,4,7,8-PeCDF	ND	3.4								57117-31-4
	Solid	2,3,7,8-TCDD	ND	0.82								1746-01-6
	Solid	2,3,7,8-TCDF	CON	5.1								51207-31-9
	Solid	OCDD	E	20000								3268-87-9
	Solid	OCDF		33								39001-02-0
	Solid	Total HpCDDs		450								37871-00-4
	Solid	Total HpCDFs		29								38998-75-3
	Solid	Total HxCDDs		73								34465-46-8
	Solid	Total HxCDFs		53								55684-94-1
	Solid	Total PeCDDs		7.4								36088-22-9
	Solid	Total PeCDFs		41								30402-15-4
	Solid	Total TCDDs		28								41903-57-5
	Solid	Total TCDFs		79								55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			8.4	3.9	Y						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-40
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory TPH Analytical Data

TF4-C-STRAIGHTDIS-F14	Soil	TPH	140	851	500	**Y**	N	1/18/2006	55714-11RX	TPH
TF4-C-STRAIGHTDIS-J14	Soil	TPH	26	34	500	N	N	1/13/2006	55714-1	TPH, SVOCS
TF4-C-STRAIGHTDIS-J15	Soil	TPH	24	U	500	N	N	1/13/2006	55714-2	TPH, SVOCS
TF4-C-STRAIGHTDIS-I14	Soil	TPH	26	U	500	N	N	1/13/2006	55714-3	TPH, SVOCS
TF4-C-STRAIGHTDIS-H14	Soil	TPH	26	U	500	N	N	1/13/2006	55714-4	TPH, SVOCS
TF4-C-STRAIGHTDIS-G13	Soil	TPH	24	U	500	N	N	1/13/2006	55714-5	TPH, SVOCS
TF4-C-STRAIGHTDIS-G14	Soil	TPH	24	U	500	N	N	1/13/2006	55714-6	TPH, SVOCS
TF4-C-STRAIGHTDIS-H15	Soil	TPH	26	37	500	N	N	1/13/2006	55714-7	TPH, SVOCS
TF4-C-STRAIGHTDIS-F13	Soil	TPH	26	U	500	N	N	1/13/2006	55714-8	TPH, SVOCS
TF4-C-STRAIGHTDIS-I15	Soil	TPH	30	54	500	N	N	1/14/2006	55714-9	TPH, SVOCS
TF4-C-STRAIGHTDIS-E13	Soil	TPH	24	U	500	N	N	1/14/2006	55714-10	TPH, SVOCS
TF4-C-STRAIGHTDIS-G15	Soil	TPH	26	U	500	N	N	1/14/2006	55714-12	TPH, SVOCs
TF4-C-STRAIGHTDIS-L17	Soil	TPH	34	68	500	N	N	1/22/2006	55762-1	TPH, SVOCs
TF4-C-STRAIGHTDIS-K17	Soil	TPH	360	1310	500	**Y**	N	1/23/2006	55762-2	TPH
TF4-C-STRAIGHTDIS-K16	Soil	TPH	30	322	500	N	N	1/23/2006	55762-3	TPH, SVOCs
TF4-C-STRAIGHTDIS-F12	Soil	TPH	26	U	500	N	N	1/23/2006	55762-4	TPH, SVOCs
TF4-C-STRAIGHTDIS-E12	Soil	TPH	26	U	500	N	N	1/23/2006	55762-5	TPH, SVOCs
TF4-C-STRAIGHTDIS-D12	Soil	TPH	28	43	500	N	N	1/23/2006	55762-6	TPH, SVOCs
TF4-C-STRAIGHTDIS-D11	Soil	TPH	26	187	500	N	N	1/23/2006	55762-7	TPH, SVOCs
TF4-C-STRAIGHTDIS-C11	Soil	TPH	28	U	500	N	N	1/23/2006	55762-8	TPH, SVOCs
TF4-C-STRAIGHTDIS-F15	Soil	TPH	24	U	500	N	N	1/22/2006	55742-1	TPH, SVOCs
TF4-C-STRAIGHTDIS-G15 (repeat ID)	Soil	TPH	26	31	500	N	N	1/22/2006	55742-2	TPH, SVOCs
TF4-C-STRAIGHTDIS-G15D	Soil	TPH	24	U	500	N	N	1/22/2006	55742-3	TPH, SVOCs
TF4-C-STRAIGHTDIS-H16	Soil	TPH	32	54	500	N	N	1/22/2006	55742-4	TPH, SVOCs
TF4-C-STRAIGHTDIS-I16	Soil	TPH	32	134	500	N	N	1/22/2006	55742-5	TPH, SVOCs
TF4-C-STRAIGHTDIS-J16	Soil	TPH	36	85	500	N	N	1/22/2006	55742-6	TPH, SVOCs

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D3-A	Acenaphthene	300	0.3		U	U	43	N	N	9/17/2005	8270	54906-1	83-32-9	TPH,SVOC,D/F
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C5	Acenaphthene	340	0.34		U	U	43	N	N	9/20/2005	SW8270	54906-2	83-32-9	TPH,SVOC,D/F
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D1-S	Acenaphthene	280	0.28		U	U	43	N	N	9/17/2005	SW8270	54906-3	83-32-9	TPH,SVOC
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C2-S	Acenaphthene	300	0.3		U	U	43	N	N	9/20/2005	8270	54906-4	83-32-9	TPH, SVOC
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-B3	Acenaphthene	280	0.28		U	U	43	N	N	9/17/2005	SW8270	54906-5	83-32-9	TPH, SVOC
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-B5-S	Acenaphthene	300	0.3		U	U	43	N	N	9/20/2005	SW8270	54906-6	83-32-9	TPH, SVOC
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3	J	150	0.15	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3	J	190	0.19	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3	J	252	0.252	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		307	0.307	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-B7	Acenaphthene	290	0.29	U		0	43	N	N	9/20/2005	8270	54906-7	83-32-9	TPH, SVOC
	Acenaphthylene	290	0.29	U		0	23	N	N				208-96-8	
	Anthracene	290	0.29	U		0	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29	U		0	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29	U		0	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29	U		0	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29	U		0	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29	U		0	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29	U		0	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29	U		0	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29	U		0	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29	U		0	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29	U		0	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29	U		0	50	N	N				95-57-8	
	Chrysene	290	0.29	U		0	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29	U		0	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29	U		0	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29	U		0	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29	U		0	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29	U		0	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29	U		0	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29	U		0	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29	U		0	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29	U		0	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29	U		0	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29	U		0	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29	U		0	20	N	N				206-44-0	
	Fluorene	290	0.29	U		0	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29	U		0	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29	U		0	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29	U		0	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29	U		0	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29	U		0	123	N	N				91-57-6	
	Naphthalene	290	0.29	U		0	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29	U		0	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29	U		0	40	N	N				85-01-8	
	Phenol	290	0.29	U		0	6000	N	N				108-95-2	
	Pyrene	290	0.29	U		0	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29	U		0	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29	U		0	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29	U		0	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C2	Acenaphthene	300	0.3	U		0	43	N	N	9/17/2005	SW8270	54906-8	83-32-9	TPH, SVOC
	Acenaphthylene	300	0.3	U		0	23	N	N				208-96-8	
	Anthracene	300	0.3	U		0	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3	U		0	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3	U		0	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3	U		0	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3	U		0	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3	U		0	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3	U		0	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3	U		0	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3	U		0	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3	U		0	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3	U		0	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3	U		0	50	N	N				95-57-8	
	Chrysene	300	0.3	U		0	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3	U		0	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3	U		0	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3	U		0	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3	U		0	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3	U		0	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3	U		0	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3	U		0	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3	U		0	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3	U		0	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3	U		0	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3	U		0	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3	U		0	20	N	N				206-44-0	
	Fluorene	300	0.3	U		0	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3	U		0	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3	U		0	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3	U		0	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3	U		0	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3	U		0	123	N	N				91-57-6	
	Naphthalene	300	0.3	U		0	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3	U		0	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3	U		0	40	N	N				85-01-8	
	Phenol	300	0.3	U		0	6000	N	N				108-95-2	
	Pyrene	300	0.3	U		0	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3	U		0	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3	U		0	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3	U		0	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-B4	Acenaphthene	310	0.31		U	U	43	N	N	9/20/2005	SW8270	54906-9	83-32-9	TPH, SVOC
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D1	Acenaphthene	290	0.29		U	U	43	N	N	9/17/2005	8270	54906-11	83-32-9	TPH, SVOC
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D2	Acenaphthene	310	0.31		U	U	43	N	N	9/17/2005	SW8270	54906-12	83-32-9	TPH, SVOC
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C4	Acenaphthene	330	0.33		U	U	43	N	N	9/20/2005	SW8270	54906-13	83-32-9	TPH, SVOC
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C8	Acenaphthene	310	0.31		U	U	43	N	N	9/20/2005	8270	54906-14	83-32-9	TPH, SVOC
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D4	Acenaphthene	320	0.32		U	U	43	N	N	9/20/2005	SW8270	54906-15	83-32-9	TPH, SVOC
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D6	Acenaphthene	310	0.31		U	U	43	N	N	9/20/2005	SW8270	54906-16	83-32-9	TPH, SVOC
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D5	Acenaphthene	320	0.32		U	U	43	N	N	9/20/2005	SW8270	54906-17	83-32-9	TPH, SVOC
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E3	Acenaphthene	300	0.3		U	U	43	N	N	9/20/2005	SW8270	54906-18	83-32-9	TPH, SVOC
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E4	Acenaphthene	290	0.29		U	U	43	N	N	9/20/2005	SW8270	54906-19	83-32-9	TPH, SVOC
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E5	Acenaphthene	310	0.31		U	U	43	N	N	9/20/2005	SW8270	54906-20	83-32-9	TPH, SVOC
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E2	Acenaphthene	290	0.29		U	U	43	N	N	9/27/2005	SW8270	54949-1	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F2	Acenaphthene	320	0.32		U	U	43	N	N	9/27/2005	SW8270	54949-2	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F3	Acenaphthene	310	0.31		U	U	43	N	N	9/27/2005	SW8270	54949-3	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31	J	164	0.164	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F3DUP	Acenaphthene	300	0.3	U	U	U	43	N	N	9/27/2005	SW8270	54949-4	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3	J	176	0.176	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3	J	184	0.184	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3	J	272	0.272	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F4	Acenaphthene	310	0.31		U	U	43	N	N	9/27/2005	SW8270	54949-5	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F5	Acenaphthene	300	0.3		U	U	43	N	N	9/27/2005	SW8270	54949-6	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G4	Acenaphthene	320	0.32		U	U	43	N	N	9/27/2005	SW8270	54949-7	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		176	0.176	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		184	0.184	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		272	0.272	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G5	Acenaphthene	320	0.32	J	173	0.173	43	N	N	9/27/2005	SW8270	54949-8	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		397	0.397	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		1230	1.23	0.9	Y	N				56-55-3	
	Benzo(a)pyrene	320	0.32		1030	1.03	0.4	Y	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		1070	1.07	0.9	Y	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		367	0.367	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		911	0.911	0.9	Y	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		1230	1.23	0.4	Y	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		2290	2.29	20	N	N				206-44-0	
	Fluorene	320	0.32	J	176	0.176	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		485	0.485	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		1430	1.43	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		1780	1.78	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G6	Acenaphthene	310	0.31		U	U	43	N	N	9/28/2005	SW8270	54949-9	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G7	Acenaphthene	320	0.32		U	U	43	N	N	9/28/2005	SW8270	54949-10	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H5	Acenaphthene	320	0.32		U	U	43	N	N	9/27/2005	SW8270	54949-11	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H6	Acenaphthene	310	0.31		U	U	43	N	N	9/27/2005	SW8270	54949-12	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H7	Acenaphthene	320	0.32		U	U	43	N	N	9/28/2005	SW8270	54949-13	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-16	Acenaphthene	330	0.33		U	U	43	N	N	9/28/2005	SW8270	54949-14	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I7	Acenaphthene	320	0.32		U	U	43	N	N	9/27/2005	SW8270	54949-15	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J6	Acenaphthene	300	0.3		U	U	43	N	N	9/28/2005	SW8270	54949-16	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J7	Acenaphthene	290	0.29		U	U	43	N	N	9/27/2005	SW8270	54949-17	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K6	Acenaphthene	280	0.28		U	U	43	N	N	9/27/2005	SW8270	54949-18	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K7	Acenaphthene	290	0.29		U	U	43	N	N	9/27/2005	SW8270	54949-19	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I5	Acenaphthene	290	0.29		U	U	43	N	N	9/29/2005	SW8270	54956-1	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J5	Acenaphthene	300	0.3		U	U	43	N	N	9/29/2005	SW8270	54956-2	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J5DUP	Acenaphthene	290	0.29		U	U	43	N	N	9/29/2005	SW8270	54956-3	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K5	Acenaphthene	290	0.29		U	U	43	N	N	9/29/2005	SW8270	54956-4	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E6	Acenaphthene	320	0.32		U	U	43	N	N	9/29/2005	SW8270	54956-5	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F6	Acenaphthene	310	0.31		U	U	43	N	N	9/29/2005	SW8270	54956-6	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F7	Acenaphthene	320	0.32		U	U	43	N	N	9/29/2005	SW8270	54956-7	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32	J	170	0.17	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32	J	162	0.162	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G8	Acenaphthene	320	0.32		U	U	43	N	N	9/29/2005	SW8270	54956-8	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H8	Acenaphthene	290	0.29		U	U	43	N	N	9/29/2005	SW8270	54956-9	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J8	Acenaphthene	290	0.29		U	U	43	N	N	9/29/2005	SW8270	54956-10	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F2-S	Acenaphthene	300	0.3		U	U	43	N	N	10/5/2005	SW8270	55013-1	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3	J	221	0.221	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3	J	182	0.182	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3	J	195	0.195	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3	J	197	0.197	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3	J	254	0.254	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		385	0.385	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3	J	153	0.153	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		333	0.333	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G3-S	Acenaphthene	280	0.28		U	U	43	N	N	10/5/2005	SW8270	55013-2	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K7-S	Acenaphthene	310	0.31		U	U	43	N	N	11/15/2005	SW8270	55329-1	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K9-S	Acenaphthene	320	0.32		U	U	43	N	N	11/15/2005	SW8270	55329-2	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-L11-S	Acenaphthene	390	0.39		U	U	43	N	N	11/11/2005	SW8270	55298-1	83-32-9	TPH, SVOCs
	Acenaphthylene	390	0.39		U	U	23	N	N				208-96-8	
	Anthracene	390	0.39		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	390	0.39		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	390	0.39		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	390	0.39		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	390	0.39		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	390	0.39		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	390	0.39		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	390	0.39		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	390	0.39		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	390	0.39		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	390	0.39		U	U	310	N	N				106-47-8	
	2-Chlorophenol	390	0.39		U	U	50	N	N				95-57-8	
	Chrysene	390	0.39		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	390	0.39		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	390	0.39		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	390	0.39		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	390	0.39		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	390	0.39		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	390	0.39		U	U	30	N	N				120-83-2	
	Diethyl phthalate	390	0.39		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	390	0.39		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	390	0.39		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	390	0.39		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	390	0.39		U	U	0.9	N	N				121-14-2	
	Fluoranthene	390	0.39		U	U	20	N	N				206-44-0	
	Fluorene	390	0.39		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	390	0.39		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	390	0.39		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	390	0.39		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	390	0.39		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	390	0.39		U	U	123	N	N				91-57-6	
	Naphthalene	390	0.39		U	U	54	N	N				91-20-3	
	Pentachlorophenol	390	0.39		U	U	5.3	N	N				87-86-5	
	Phenanthrene	390	0.39		U	U	40	N	N				85-01-8	
	Phenol	390	0.39		U	U	6000	N	N				108-95-2	
	Pyrene	390	0.39		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	390	0.39		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	390	0.39		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	390	0.39		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-M13-S	Acenaphthene	390	0.39		U	U	43	N	N	11/11/2005	SW8270	55298-2	83-32-9	TPH, SVOCs
	Acenaphthylene	390	0.39		U	U	23	N	N				208-96-8	
	Anthracene	390	0.39		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	390	0.39		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	390	0.39		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	390	0.39		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	390	0.39		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	390	0.39		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	390	0.39		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	390	0.39		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	390	0.39		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	390	0.39		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	390	0.39		U	U	310	N	N				106-47-8	
	2-Chlorophenol	390	0.39		U	U	50	N	N				95-57-8	
	Chrysene	390	0.39		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	390	0.39		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	390	0.39		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	390	0.39		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	390	0.39		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	390	0.39		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	390	0.39		U	U	30	N	N				120-83-2	
	Diethyl phthalate	390	0.39		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	390	0.39		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	390	0.39		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	390	0.39		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	390	0.39		U	U	0.9	N	N				121-14-2	
	Fluoranthene	390	0.39		U	U	20	N	N				206-44-0	
	Fluorene	390	0.39		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	390	0.39		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	390	0.39		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	390	0.39		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	390	0.39		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	390	0.39		U	U	123	N	N				91-57-6	
	Naphthalene	390	0.39		U	U	54	N	N				91-20-3	
	Pentachlorophenol	390	0.39		U	U	5.3	N	N				87-86-5	
	Phenanthrene	390	0.39		U	U	40	N	N				85-01-8	
	Phenol	390	0.39		U	U	6000	N	N				108-95-2	
	Pyrene	390	0.39		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	390	0.39		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	390	0.39		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	390	0.39		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-35	Acenaphthene	340	0.34		U	U	43	N	N	12/22/2005	SW8270	55582-2	83-32-9	TPH, SVOCs
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34	J	225	0.225	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-38	Acenaphthene	380	0.38		U	U	43	N	N	12/22/2005	SW8270	55582-1	83-32-9	TPH, SVOCs
	Acenaphthylene	380	0.38		U	U	23	N	N				208-96-8	
	Anthracene	380	0.38		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	380	0.38		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	380	0.38		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	380	0.38		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	380	0.38		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	380	0.38		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	380	0.38		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	380	0.38		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	380	0.38		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	380	0.38		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	380	0.38		U	U	310	N	N				106-47-8	
	2-Chlorophenol	380	0.38		U	U	50	N	N				95-57-8	
	Chrysene	380	0.38		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	380	0.38		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	380	0.38		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	380	0.38		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	380	0.38		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	380	0.38		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	380	0.38		U	U	30	N	N				120-83-2	
	Diethyl phthalate	380	0.38		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	380	0.38		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	380	0.38		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	380	0.38		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	380	0.38		U	U	0.9	N	N				121-14-2	
	Fluoranthene	380	0.38		U	U	20	N	N				206-44-0	
	Fluorene	380	0.38		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	380	0.38		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	380	0.38		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	380	0.38		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	380	0.38		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	380	0.38		U	U	123	N	N				91-57-6	
	Naphthalene	380	0.38		U	U	54	N	N				91-20-3	
	Pentachlorophenol	380	0.38		U	U	5.3	N	N				87-86-5	
	Phenanthrene	380	0.38		U	U	40	N	N				85-01-8	
	Phenol	380	0.38		U	U	6000	N	N				108-95-2	
	Pyrene	380	0.38		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	380	0.38		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	380	0.38		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	380	0.38		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I13	Acenaphthene	310	0.31		U	U	43	N	N	12/29/2005	SW8270	55624-1	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H13	Acenaphthene	360	0.36		U	U	43	N	N	12/29/2005	SW8270	55624-2	83-32-9	TPH, SVOCs
	Acenaphthylene	360	0.36		U	U	23	N	N				208-96-8	
	Anthracene	360	0.36		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	360	0.36		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	360	0.36		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	360	0.36		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	360	0.36		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	360	0.36		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	360	0.36		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	360	0.36		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	360	0.36		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	360	0.36		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	360	0.36		U	U	310	N	N				106-47-8	
	2-Chlorophenol	360	0.36		U	U	50	N	N				95-57-8	
	Chrysene	360	0.36		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	360	0.36		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	360	0.36		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	360	0.36		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	360	0.36		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	360	0.36		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	360	0.36		U	U	30	N	N				120-83-2	
	Diethyl phthalate	360	0.36		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	360	0.36		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	360	0.36		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	360	0.36		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	360	0.36		U	U	0.9	N	N				121-14-2	
	Fluoranthene	360	0.36		U	U	20	N	N				206-44-0	
	Fluorene	360	0.36		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	360	0.36		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	360	0.36		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	360	0.36		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	360	0.36		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	360	0.36		U	U	123	N	N				91-57-6	
	Naphthalene	360	0.36		U	U	54	N	N				91-20-3	
	Pentachlorophenol	360	0.36		U	U	5.3	N	N				87-86-5	
	Phenanthrene	360	0.36		U	U	40	N	N				85-01-8	
	Phenol	360	0.36		U	U	6000	N	N				108-95-2	
	Pyrene	360	0.36		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	360	0.36		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	360	0.36		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	360	0.36		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H12	Acenaphthene	300	0.3		U	U	43	N	N	12/29/2005	SW8270	55624-3	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I12	Acenaphthene	350	0.35		U	U	43	N	N	12/29/2005	SW8270	55624-4	83-32-9	TPH, SVOCs
	Acenaphthylene	350	0.35		U	U	23	N	N				208-96-8	
	Anthracene	350	0.35		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	350	0.35		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	350	0.35		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	350	0.35		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	350	0.35		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	350	0.35		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	350	0.35		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	350	0.35		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	350	0.35		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	350	0.35		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	350	0.35		U	U	310	N	N				106-47-8	
	2-Chlorophenol	350	0.35		U	U	50	N	N				95-57-8	
	Chrysene	350	0.35		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	350	0.35		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	350	0.35		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	350	0.35		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	350	0.35		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	350	0.35		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	350	0.35		U	U	30	N	N				120-83-2	
	Diethyl phthalate	350	0.35		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	350	0.35		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	350	0.35		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	350	0.35		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	350	0.35		U	U	0.9	N	N				121-14-2	
	Fluoranthene	350	0.35		U	U	20	N	N				206-44-0	
	Fluorene	350	0.35		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	350	0.35		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	350	0.35		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	350	0.35		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	350	0.35		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	350	0.35		U	U	123	N	N				91-57-6	
	Naphthalene	350	0.35		U	U	54	N	N				91-20-3	
	Pentachlorophenol	350	0.35		U	U	5.3	N	N				87-86-5	
	Phenanthrene	350	0.35		U	U	40	N	N				85-01-8	
	Phenol	350	0.35		U	U	6000	N	N				108-95-2	
	Pyrene	350	0.35		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	350	0.35		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	350	0.35		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	350	0.35		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I11	Acenaphthene	330	0.33		U	U	43	N	N	12/29/2005	SW8270	55624-5	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H11	Acenaphthene	330	0.33		U	U	43	N	N	12/29/2005	SW8270	55624-6	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H11-D	Acenaphthene	350	0.35		U	U	43	N	N	12/29/2005	SW8270	55624-7	83-32-9	TPH, SVOCs
	Acenaphthylene	350	0.35		U	U	23	N	N				208-96-8	
	Anthracene	350	0.35		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	350	0.35		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	350	0.35		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	350	0.35		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	350	0.35		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	350	0.35		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	350	0.35		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	350	0.35		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	350	0.35		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	350	0.35		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	350	0.35		U	U	310	N	N				106-47-8	
	2-Chlorophenol	350	0.35		U	U	50	N	N				95-57-8	
	Chrysene	350	0.35		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	350	0.35		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	350	0.35		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	350	0.35		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	350	0.35		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	350	0.35		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	350	0.35		U	U	30	N	N				120-83-2	
	Diethyl phthalate	350	0.35		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	350	0.35		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	350	0.35		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	350	0.35		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	350	0.35		U	U	0.9	N	N				121-14-2	
	Fluoranthene	350	0.35		U	U	20	N	N				206-44-0	
	Fluorene	350	0.35		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	350	0.35		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	350	0.35		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	350	0.35		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	350	0.35		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	350	0.35		U	U	123	N	N				91-57-6	
	Naphthalene	350	0.35		U	U	54	N	N				91-20-3	
	Pentachlorophenol	350	0.35		U	U	5.3	N	N				87-86-5	
	Phenanthrene	350	0.35		U	U	40	N	N				85-01-8	
	Phenol	350	0.35		U	U	6000	N	N				108-95-2	
	Pyrene	350	0.35		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	350	0.35		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	350	0.35		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	350	0.35		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I10	Acenaphthene	310	0.31		U	U	43	N	N	12/29/2005	SW8270	55624-8	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H10	Acenaphthene	320	0.32		U	U	43	N	N	12/29/2005	SW8270	55624-9	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H9	Acenaphthene	300	0.3		U	U	43	N	N	12/29/2005	SW8270	55624-10	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-55-S	Acenaphthene	430	0.43		U	U	43	N	N	1/18/2006	SW8270	55706-1	83-32-9	TPH, SVOCs
	Acenaphthylene	430	0.43		U	U	23	N	N				208-96-8	
	Anthracene	430	0.43		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	430	0.43		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	430	0.43		U	U	0.4	N	Y				50-32-8	
	Benzo(b)fluoranthene	430	0.43		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	430	0.43		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	430	0.43		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	430	0.43		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	430	0.43		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	430	0.43		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	430	0.43		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	430	0.43		U	U	310	N	N				106-47-8	
	2-Chlorophenol	430	0.43		U	U	50	N	N				95-57-8	
	Chrysene	430	0.43		U	U	0.4	N	Y				218-01-9	
	Dibenzo(a,h)anthracene	430	0.43		U	U	0.4	N	Y				53-70-3	
	1,2-Dichlorobenzene	430	0.43		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	430	0.43		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	430	0.43		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	430	0.43		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	430	0.43		U	U	30	N	N				120-83-2	
	Diethyl phthalate	430	0.43		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	430	0.43		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	430	0.43		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	430	0.43		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	430	0.43		U	U	0.9	N	N				121-14-2	
	Fluoranthene	430	0.43		U	U	20	N	N				206-44-0	
	Fluorene	430	0.43		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	430	0.43		U	U	0.4	N	Y				118-74-1	
	Hexachlorobutadiene	430	0.43		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	430	0.43		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	430	0.43		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	430	0.43		U	U	123	N	N				91-57-6	
	Naphthalene	430	0.43		U	U	54	N	N				91-20-3	
	Pentachlorophenol	430	0.43		U	U	5.3	N	N				87-86-5	
	Phenanthrene	430	0.43		U	U	40	N	N				85-01-8	
	Phenol	430	0.43		U	U	6000	N	N				108-95-2	
	Pyrene	430	0.43		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	430	0.43		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	430	0.43		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	430	0.43		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-47	Acenaphthene	340	0.34		U	U	43	N	N	1/10/2006	SW8270	55662-3	83-32-9	TPH, SVOCs
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-48	Acenaphthene	320	0.32		U	U	43	N	N	1/10/2006	SW8270	55662-4	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-49	Acenaphthene	300	0.3		U	U	43	N	N	1/10/2006	SW8270	55662-5	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-50	Acenaphthene	340	0.34		U	U	43	N	N	1/10/2006	SW8270	55662-6	83-32-9	TPH, SVOCs
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-51	Acenaphthene	350	0.35		U	U	43	N	N	1/10/2006	SW8270	55662-7	83-32-9	TPH, SVOCs
	Acenaphthylene	350	0.35		U	U	23	N	N				208-96-8	
	Anthracene	350	0.35		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	350	0.35		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	350	0.35		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	350	0.35		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	350	0.35		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	350	0.35		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	350	0.35		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	350	0.35		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	350	0.35		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	350	0.35		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	350	0.35		U	U	310	N	N				106-47-8	
	2-Chlorophenol	350	0.35		U	U	50	N	N				95-57-8	
	Chrysene	350	0.35		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	350	0.35		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	350	0.35		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	350	0.35		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	350	0.35		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	350	0.35		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	350	0.35		U	U	30	N	N				120-83-2	
	Diethyl phthalate	350	0.35		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	350	0.35		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	350	0.35		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	350	0.35		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	350	0.35		U	U	0.9	N	N				121-14-2	
	Fluoranthene	350	0.35		U	U	20	N	N				206-44-0	
	Fluorene	350	0.35		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	350	0.35		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	350	0.35		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	350	0.35		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	350	0.35		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	350	0.35		U	U	123	N	N				91-57-6	
	Naphthalene	350	0.35		U	U	54	N	N				91-20-3	
	Pentachlorophenol	350	0.35		U	U	5.3	N	N				87-86-5	
	Phenanthrene	350	0.35		U	U	40	N	N				85-01-8	
	Phenol	350	0.35		U	U	6000	N	N				108-95-2	
	Pyrene	350	0.35		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	350	0.35		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	350	0.35		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	350	0.35		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J14	Acenaphthene	330	0.33		U	U	43	N	N	1/24/2006	SW8270	55745-1	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J15	Acenaphthene	300	0.3		U	U	43	N	N	1/24/2006	SW8270	55745-2	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I14	Acenaphthene	330	0.33		U	U	43	N	N	1/24/2006	SW8270	55745-3	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H14	Acenaphthene	290	0.29		U	U	43	N	N	1/24/2006	SW8270	55745-4	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G13	Acenaphthene	310	0.31		U	U	43	N	N	1/24/2006	SW8270	55745-5	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G14	Acenaphthene	310	0.31		U	U	43	N	N	1/24/2006	SW8270	55745-6	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H15	Acenaphthene	320	0.32		U	U	43	N	N	1/24/2006	SW8270	55745-7	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F13	Acenaphthene	320	0.32		U	U	43	N	N	1/24/2006	SW8270	55745-8	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I15	Acenaphthene	390	0.39		U	U	43	N	N	1/24/2006	SW8270	55745-9	83-32-9	TPH, SVOCs
	Acenaphthylene	390	0.39		U	U	23	N	N				208-96-8	
	Anthracene	390	0.39		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	390	0.39		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	390	0.39		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	390	0.39		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	390	0.39		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	390	0.39		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	390	0.39		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	390	0.39		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	390	0.39		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	390	0.39		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	390	0.39		U	U	310	N	N				106-47-8	
	2-Chlorophenol	390	0.39		U	U	50	N	N				95-57-8	
	Chrysene	390	0.39		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	390	0.39		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	390	0.39		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	390	0.39		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	390	0.39		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	390	0.39		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	390	0.39		U	U	30	N	N				120-83-2	
	Diethyl phthalate	390	0.39		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	390	0.39		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	390	0.39		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	390	0.39		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	390	0.39		U	U	0.9	N	N				121-14-2	
	Fluoranthene	390	0.39		U	U	20	N	N				206-44-0	
	Fluorene	390	0.39		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	390	0.39		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	390	0.39		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	390	0.39		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	390	0.39		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	390	0.39		U	U	123	N	N				91-57-6	
	Naphthalene	390	0.39		U	U	54	N	N				91-20-3	
	Pentachlorophenol	390	0.39		U	U	5.3	N	N				87-86-5	
	Phenanthrene	390	0.39		U	U	40	N	N				85-01-8	
	Phenol	390	0.39		U	U	6000	N	N				108-95-2	
	Pyrene	390	0.39		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	390	0.39		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	390	0.39		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	390	0.39		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E13	Acenaphthene	350	0.35		U	U	43	N	N	1/24/2006	SW8270	55745-10	83-32-9	TPH, SVOCs
	Acenaphthylene	350	0.35		U	U	23	N	N				208-96-8	
	Anthracene	350	0.35		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	350	0.35		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	350	0.35		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	350	0.35		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	350	0.35		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	350	0.35		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	350	0.35		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	350	0.35		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	350	0.35		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	350	0.35		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	350	0.35		U	U	310	N	N				106-47-8	
	2-Chlorophenol	350	0.35		U	U	50	N	N				95-57-8	
	Chrysene	350	0.35		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	350	0.35		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	350	0.35		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	350	0.35		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	350	0.35		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	350	0.35		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	350	0.35		U	U	30	N	N				120-83-2	
	Diethyl phthalate	350	0.35		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	350	0.35		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	350	0.35		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	350	0.35		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	350	0.35		U	U	0.9	N	N				121-14-2	
	Fluoranthene	350	0.35		U	U	20	N	N				206-44-0	
	Fluorene	350	0.35		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	350	0.35		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	350	0.35		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	350	0.35		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	350	0.35		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	350	0.35		U	U	123	N	N				91-57-6	
	Naphthalene	350	0.35		U	U	54	N	N				91-20-3	
	Pentachlorophenol	350	0.35		U	U	5.3	N	N				87-86-5	
	Phenanthrene	350	0.35		U	U	40	N	N				85-01-8	
	Phenol	350	0.35		U	U	6000	N	N				108-95-2	
	Pyrene	350	0.35		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	350	0.35		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	350	0.35		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	350	0.35		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G15	Acenaphthene	310	0.31		U	U	43	N	N	1/24/2006	SW8270	55745-11	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F15	Acenaphthene	300	0.3		U	U	43	N	N	1/30/2006	SW8270	55797-1	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G15	Acenaphthene	310	0.31		U	U	43	N	N	1/30/2006	SW8270	55797-2	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G15D	Acenaphthene	310	0.31		U	U	43	N	N	1/31/2006	SW8270	55797-3	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-H16	Acenaphthene	370	0.37		U	U	43	N	N	1/31/2006	SW8270	55797-4	83-32-9	TPH, SVOCs
	Acenaphthylene	370	0.37		U	U	23	N	N				208-96-8	
	Anthracene	370	0.37		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	370	0.37		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	370	0.37		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	370	0.37		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	370	0.37		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	370	0.37		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	370	0.37		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	370	0.37		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	370	0.37		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	370	0.37		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	370	0.37		U	U	310	N	N				106-47-8	
	2-Chlorophenol	370	0.37		U	U	50	N	N				95-57-8	
	Chrysene	370	0.37		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	370	0.37		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	370	0.37		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	370	0.37		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	370	0.37		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	370	0.37		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	370	0.37		U	U	30	N	N				120-83-2	
	Diethyl phthalate	370	0.37		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	370	0.37		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	370	0.37		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	370	0.37		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	370	0.37		U	U	0.9	N	N				121-14-2	
	Fluoranthene	370	0.37		U	U	20	N	N				206-44-0	
	Fluorene	370	0.37		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	370	0.37		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	370	0.37		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	370	0.37		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	370	0.37		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	370	0.37		U	U	123	N	N				91-57-6	
	Naphthalene	370	0.37		U	U	54	N	N				91-20-3	
	Pentachlorophenol	370	0.37		U	U	5.3	N	N				87-86-5	
	Phenanthrene	370	0.37		U	U	40	N	N				85-01-8	
	Phenol	370	0.37		U	U	6000	N	N				108-95-2	
	Pyrene	370	0.37		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	370	0.37		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	370	0.37		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	370	0.37		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I16	Acenaphthene	430	0.43		U	U	43	N	N	1/31/2006	SW8270	55797-5	83-32-9	TPH, SVOCs
	Acenaphthylene	430	0.43		U	U	23	N	N				208-96-8	
	Anthracene	430	0.43		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	430	0.43		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	430	0.43		U	U	0.4	N	Y				50-32-8	
	Benzo(b)fluoranthene	430	0.43		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	430	0.43		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	430	0.43		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	430	0.43		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	430	0.43		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	430	0.43		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	430	0.43		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	430	0.43		U	U	310	N	N				106-47-8	
	2-Chlorophenol	430	0.43		U	U	50	N	N				95-57-8	
	Chrysene	430	0.43		U	U	0.4	N	Y				218-01-9	
	Dibenzo(a,h)anthracene	430	0.43		U	U	0.4	N	Y				53-70-3	
	1,2-Dichlorobenzene	430	0.43		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	430	0.43		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	430	0.43		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	430	0.43		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	430	0.43		U	U	30	N	N				120-83-2	
	Diethyl phthalate	430	0.43		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	430	0.43		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	430	0.43		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	430	0.43		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	430	0.43		U	U	0.9	N	N				121-14-2	
	Fluoranthene	430	0.43		U	U	20	N	N				206-44-0	
	Fluorene	430	0.43		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	430	0.43		U	U	0.4	N	Y				118-74-1	
	Hexachlorobutadiene	430	0.43		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	430	0.43		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	430	0.43		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	430	0.43		U	U	123	N	N				91-57-6	
	Naphthalene	430	0.43		U	U	54	N	N				91-20-3	
	Pentachlorophenol	430	0.43		U	U	5.3	N	N				87-86-5	
	Phenanthrene	430	0.43		U	U	40	N	N				85-01-8	
	Phenol	430	0.43		U	U	6000	N	N				108-95-2	
	Pyrene	430	0.43		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	430	0.43		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	430	0.43		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	430	0.43		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J16	Acenaphthene	450	0.45		U	U	43	N	N	1/31/2006	SW8270	55797-6	83-32-9	TPH, SVOCs
	Acenaphthylene	450	0.45		U	U	23	N	N				208-96-8	
	Anthracene	450	0.45		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	450	0.45		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	450	0.45		U	U	0.4	N	Y				50-32-8	
	Benzo(b)fluoranthene	450	0.45		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	450	0.45		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	450	0.45		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	450	0.45		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	450	0.45		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	450	0.45		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	450	0.45		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	450	0.45		U	U	310	N	N				106-47-8	
	2-Chlorophenol	450	0.45		U	U	50	N	N				95-57-8	
	Chrysene	450	0.45		U	U	0.4	N	Y				218-01-9	
	Dibenzo(a,h)anthracene	450	0.45		U	U	0.4	N	Y				53-70-3	
	1,2-Dichlorobenzene	450	0.45		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	450	0.45		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	450	0.45		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	450	0.45		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	450	0.45		U	U	30	N	N				120-83-2	
	Diethyl phthalate	450	0.45		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	450	0.45		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	450	0.45		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	450	0.45		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	450	0.45		U	U	0.9	N	N				121-14-2	
	Fluoranthene	450	0.45		U	U	20	N	N				206-44-0	
	Fluorene	450	0.45		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	450	0.45		U	U	0.4	N	Y				118-74-1	
	Hexachlorobutadiene	450	0.45		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	450	0.45		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	450	0.45		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	450	0.45		U	U	123	N	N				91-57-6	
	Naphthalene	450	0.45		U	U	54	N	N				91-20-3	
	Pentachlorophenol	450	0.45		U	U	5.3	N	N				87-86-5	
	Phenanthrene	450	0.45		U	U	40	N	N				85-01-8	
	Phenol	450	0.45		U	U	6000	N	N				108-95-2	
	Pyrene	450	0.45		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	450	0.45		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	450	0.45		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	450	0.45		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-L17	Acenaphthene	410	0.41		U	U	43	N	N	1/31/2006	SW8270	55797-7	83-32-9	TPH, SVOCs
	Acenaphthylene	410	0.41		U	U	23	N	N				208-96-8	
	Anthracene	410	0.41		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	410	0.41		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	410	0.41		U	U	0.4	N	Y				50-32-8	
	Benzo(b)fluoranthene	410	0.41		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	410	0.41		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	410	0.41		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	410	0.41		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	410	0.41		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	410	0.41		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	410	0.41		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	410	0.41		U	U	310	N	N				106-47-8	
	2-Chlorophenol	410	0.41		U	U	50	N	N				95-57-8	
	Chrysene	410	0.41		U	U	0.4	N	Y				218-01-9	
	Dibenzo(a,h)anthracene	410	0.41		U	U	0.4	N	Y				53-70-3	
	1,2-Dichlorobenzene	410	0.41		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	410	0.41		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	410	0.41		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	410	0.41		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	410	0.41		U	U	30	N	N				120-83-2	
	Diethyl phthalate	410	0.41		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	410	0.41		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	410	0.41		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	410	0.41		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	410	0.41		U	U	0.9	N	N				121-14-2	
	Fluoranthene	410	0.41		U	U	20	N	N				206-44-0	
	Fluorene	410	0.41		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	410	0.41		U	U	0.4	N	Y				118-74-1	
	Hexachlorobutadiene	410	0.41		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	410	0.41		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	410	0.41		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	410	0.41		U	U	123	N	N				91-57-6	
	Naphthalene	410	0.41		U	U	54	N	N				91-20-3	
	Pentachlorophenol	410	0.41		U	U	5.3	N	N				87-86-5	
	Phenanthrene	410	0.41		U	U	40	N	N				85-01-8	
	Phenol	410	0.41		U	U	6000	N	N				108-95-2	
	Pyrene	410	0.41		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	410	0.41		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	410	0.41		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	410	0.41		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K16	Acenaphthene	410	0.41		U	U	43	N	N	1/31/2006	SW8270	55797-8	83-32-9	TPH, SVOCs
	Acenaphthylene	410	0.41		U	U	23	N	N				208-96-8	
	Anthracene	410	0.41		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	410	0.41		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	410	0.41		U	U	0.4	N	Y				50-32-8	
	Benzo(b)fluoranthene	410	0.41		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	410	0.41		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	410	0.41		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	410	0.41		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	410	0.41		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	410	0.41		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	410	0.41		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	410	0.41		U	U	310	N	N				106-47-8	
	2-Chlorophenol	410	0.41		U	U	50	N	N				95-57-8	
	Chrysene	410	0.41		U	U	0.4	N	Y				218-01-9	
	Dibenzo(a,h)anthracene	410	0.41		U	U	0.4	N	Y				53-70-3	
	1,2-Dichlorobenzene	410	0.41		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	410	0.41		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	410	0.41		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	410	0.41		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	410	0.41		U	U	30	N	N				120-83-2	
	Diethyl phthalate	410	0.41		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	410	0.41		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	410	0.41		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	410	0.41		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	410	0.41		U	U	0.9	N	N				121-14-2	
	Fluoranthene	410	0.41		U	U	20	N	N				206-44-0	
	Fluorene	410	0.41		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	410	0.41		U	U	0.4	N	Y				118-74-1	
	Hexachlorobutadiene	410	0.41		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	410	0.41		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	410	0.41		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	410	0.41		U	U	123	N	N				91-57-6	
	Naphthalene	410	0.41		U	U	54	N	N				91-20-3	
	Pentachlorophenol	410	0.41		U	U	5.3	N	N				87-86-5	
	Phenanthrene	410	0.41		U	U	40	N	N				85-01-8	
	Phenol	410	0.41		U	U	6000	N	N				108-95-2	
	Pyrene	410	0.41		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	410	0.41		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	410	0.41		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	410	0.41		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F12	Acenaphthene	330	0.33		U	U	43	N	N	1/31/2006	SW8270	55797-9	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E12	Acenaphthene	300	0.3		U	U	43	N	N	1/31/2006	SW8270	55797-10	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D12	Acenaphthene	350	0.35		U	U	43	N	N	1/31/2006	SW8270	55797-11	83-32-9	TPH, SVOCs
	Acenaphthylene	350	0.35		U	U	23	N	N				208-96-8	
	Anthracene	350	0.35		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	350	0.35		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	350	0.35		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	350	0.35		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	350	0.35		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	350	0.35		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	350	0.35		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	350	0.35		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	350	0.35		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	350	0.35		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	350	0.35		U	U	310	N	N				106-47-8	
	2-Chlorophenol	350	0.35		U	U	50	N	N				95-57-8	
	Chrysene	350	0.35		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	350	0.35		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	350	0.35		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	350	0.35		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	350	0.35		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	350	0.35		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	350	0.35		U	U	30	N	N				120-83-2	
	Diethyl phthalate	350	0.35		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	350	0.35		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	350	0.35		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	350	0.35		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	350	0.35		U	U	0.9	N	N				121-14-2	
	Fluoranthene	350	0.35		U	U	20	N	N				206-44-0	
	Fluorene	350	0.35		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	350	0.35		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	350	0.35		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	350	0.35		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	350	0.35		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	350	0.35		U	U	123	N	N				91-57-6	
	Naphthalene	350	0.35		U	U	54	N	N				91-20-3	
	Pentachlorophenol	350	0.35		U	U	5.3	N	N				87-86-5	
	Phenanthrene	350	0.35		U	U	40	N	N				85-01-8	
	Phenol	350	0.35		U	U	6000	N	N				108-95-2	
	Pyrene	350	0.35		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	350	0.35		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	350	0.35		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	350	0.35		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C11	Acenaphthene	330	0.33		U	U	43	N	N	1/31/2006	SW8270	55797-12	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D11	Acenaphthene	310	0.31		U	U	43	N	N	1/24/2006	SW8270	55797-13	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		375	0.375	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31	J	157	0.157	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31	J	283	0.283	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31	J	267	0.267	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		497	0.497	0.4	Y	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		807	0.807	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31	J	237	0.237	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		782	0.782	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K13	Acenaphthene	330	0.33		U	U	43	N	N	10/12/2005	SW8270	55033-1	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-M-14-S	Acenaphthene	330	0.33		U	U	43	N	N	10/12/2005	SW8270	55033-2	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K8	Acenaphthene	290	0.29		U	U	43	N	N	10/7/2005	SW8270	55033-3	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J13-S	Acenaphthene	310	0.31		U	U	43	N	N	10/7/2005	SW8270	55033-4	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K15-S	Acenaphthene	320	0.32		U	U	43	N	N	10/7/2005	SW8270	55033-5	83-32-9	TPH, SVOCs
	Acenaphthylene	320	0.32		U	U	23	N	N				208-96-8	
	Anthracene	320	0.32		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	320	0.32		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	320	0.32		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	320	0.32		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	320	0.32		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	320	0.32		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	320	0.32		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	320	0.32		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	320	0.32		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	320	0.32		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	320	0.32		U	U	310	N	N				106-47-8	
	2-Chlorophenol	320	0.32		U	U	50	N	N				95-57-8	
	Chrysene	320	0.32		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	320	0.32		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	320	0.32		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	320	0.32		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	320	0.32		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	320	0.32		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	320	0.32		U	U	30	N	N				120-83-2	
	Diethyl phthalate	320	0.32		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	320	0.32		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	320	0.32		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	320	0.32		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	320	0.32		U	U	0.9	N	N				121-14-2	
	Fluoranthene	320	0.32		U	U	20	N	N				206-44-0	
	Fluorene	320	0.32		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	320	0.32		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	320	0.32		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	320	0.32		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	320	0.32		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	320	0.32		U	U	123	N	N				91-57-6	
	Naphthalene	320	0.32		U	U	54	N	N				91-20-3	
	Pentachlorophenol	320	0.32		U	U	5.3	N	N				87-86-5	
	Phenanthrene	320	0.32		U	U	40	N	N				85-01-8	
	Phenol	320	0.32		U	U	6000	N	N				108-95-2	
	Pyrene	320	0.32		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	320	0.32		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	320	0.32		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	320	0.32		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K14	Acenaphthene	300	0.3		U	U	43	N	N	10/7/2005	SW8270	55033-6	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J9	Acenaphthene	300	0.3		U	U	43	N	N	10/12/2005	SW8270	55033-7	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K9	Acenaphthene	300	0.3		U	U	43	N	N	10/12/2005	SW8270	55033-8	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I9	Acenaphthene	300	0.3		U	U	43	N	N	10/12/2005	SW8270	55033-9	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K9-S	Acenaphthene	300	0.3		U	U	43	N	N	10/12/2005	SW8270	55033-10	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J10	Acenaphthene	290	0.29		U	U	43	N	N	10/12/2005	SW8270	55033-11	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K10	Acenaphthene	290	0.29		U	U	43	N	N	10/7/2005	SW8270	55033-12	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J11	Acenaphthene	300	0.3		U	U	43	N	N	10/7/2005	SW8270	55033-13	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K11	Acenaphthene	300	0.3		U	U	43	N	N	10/7/2005	SW8270	55033-14	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J12	Acenaphthene	340	0.34		U	U	43	N	N	10/7/2005	SW8270	55033-15	83-32-9	TPH, SVOCs
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-K12	Acenaphthene	370	0.37		U	U	43	N	N	10/7/2005	SW8270	55033-16	83-32-9	TPH, SVOCs
	Acenaphthylene	370	0.37		U	U	23	N	N				208-96-8	
	Anthracene	370	0.37		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	370	0.37		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	370	0.37		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	370	0.37		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	370	0.37		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	370	0.37		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	370	0.37		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	370	0.37		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	370	0.37		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	370	0.37		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	370	0.37		U	U	310	N	N				106-47-8	
	2-Chlorophenol	370	0.37		U	U	50	N	N				95-57-8	
	Chrysene	370	0.37		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	370	0.37		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	370	0.37		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	370	0.37		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	370	0.37		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	370	0.37		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	370	0.37		U	U	30	N	N				120-83-2	
	Diethyl phthalate	370	0.37		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	370	0.37		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	370	0.37		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	370	0.37		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	370	0.37		U	U	0.9	N	N				121-14-2	
	Fluoranthene	370	0.37		U	U	20	N	N				206-44-0	
	Fluorene	370	0.37		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	370	0.37		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	370	0.37		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	370	0.37		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	370	0.37		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	370	0.37		U	U	123	N	N				91-57-6	
	Naphthalene	370	0.37		U	U	54	N	N				91-20-3	
	Pentachlorophenol	370	0.37		U	U	5.3	N	N				87-86-5	
	Phenanthrene	370	0.37		U	U	40	N	N				85-01-8	
	Phenol	370	0.37		U	U	6000	N	N				108-95-2	
	Pyrene	370	0.37		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	370	0.37		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	370	0.37		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	370	0.37		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-J13	Acenaphthene	340	0.34		U	U	43	N	N	10/12/2005	SW8270	55033-17	83-32-9	TPH, SVOCs
	Acenaphthylene	340	0.34		U	U	23	N	N				208-96-8	
	Anthracene	340	0.34		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	340	0.34		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	340	0.34		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	340	0.34		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	340	0.34		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	340	0.34		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	340	0.34		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	340	0.34		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	340	0.34		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	340	0.34		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	340	0.34		U	U	310	N	N				106-47-8	
	2-Chlorophenol	340	0.34		U	U	50	N	N				95-57-8	
	Chrysene	340	0.34		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	340	0.34		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	340	0.34		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	340	0.34		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	340	0.34		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	340	0.34		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	340	0.34		U	U	30	N	N				120-83-2	
	Diethyl phthalate	340	0.34		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	340	0.34		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	340	0.34		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	340	0.34		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	340	0.34		U	U	0.9	N	N				121-14-2	
	Fluoranthene	340	0.34		U	U	20	N	N				206-44-0	
	Fluorene	340	0.34		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	340	0.34		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	340	0.34		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	340	0.34		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	340	0.34		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	340	0.34		U	U	123	N	N				91-57-6	
	Naphthalene	340	0.34		U	U	54	N	N				91-20-3	
	Pentachlorophenol	340	0.34		U	U	5.3	N	N				87-86-5	
	Phenanthrene	340	0.34		U	U	40	N	N				85-01-8	
	Phenol	340	0.34		U	U	6000	N	N				108-95-2	
	Pyrene	340	0.34		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	340	0.34		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	340	0.34		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	340	0.34		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G12	Acenaphthene	310	0.31		U	U	43	N	N	2/16/2006	SW8270	55866-1	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G11	Acenaphthene	290	0.29		U	U	43	N	N	2/16/2006	SW8270	55866-2	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G10	Acenaphthene	310	0.31		U	U	43	N	N	2/16/2006	SW8270	55866-3	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G9	Acenaphthene	290	0.29		U	U	43	N	N	2/16/2006	SW8270	55866-4	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F9	Acenaphthene	300	0.3		U	U	43	N	N	2/16/2006	SW8270	55866-5	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F8	Acenaphthene	300	0.3		U	U	43	N	N	2/16/2006	SW8270	55866-6	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F10	Acenaphthene	300	0.3		U	U	43	N	N	2/16/2006	SW8270	55866-7	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D10	Acenaphthene	280	0.28		U	U	43	N	N	2/28/2006	SW8270	55924-4	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D9	Acenaphthene	270	0.27		U	U	43	N	N	2/28/2006	SW8270	55924-5	83-32-9	TPH, SVOCs
	Acenaphthylene	270	0.27		U	U	23	N	N				208-96-8	
	Anthracene	270	0.27		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	270	0.27		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	270	0.27		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	270	0.27		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	270	0.27		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	270	0.27		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	270	0.27		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	270	0.27		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	270	0.27		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	270	0.27		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	270	0.27		U	U	310	N	N				106-47-8	
	2-Chlorophenol	270	0.27		U	U	50	N	N				95-57-8	
	Chrysene	270	0.27		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	270	0.27		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	270	0.27		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	270	0.27		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	270	0.27		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	270	0.27		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	270	0.27		U	U	30	N	N				120-83-2	
	Diethyl phthalate	270	0.27		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	270	0.27		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	270	0.27		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	270	0.27		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	270	0.27		U	U	0.9	N	N				121-14-2	
	Fluoranthene	270	0.27		U	U	20	N	N				206-44-0	
	Fluorene	270	0.27		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	270	0.27		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	270	0.27		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	270	0.27		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	270	0.27		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	270	0.27		U	U	123	N	N				91-57-6	
	Naphthalene	270	0.27		U	U	54	N	N				91-20-3	
	Pentachlorophenol	270	0.27		U	U	5.3	N	N				87-86-5	
	Phenanthrene	270	0.27		U	U	40	N	N				85-01-8	
	Phenol	270	0.27		U	U	6000	N	N				108-95-2	
	Pyrene	270	0.27		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	270	0.27		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	270	0.27		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	270	0.27		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D8	Acenaphthene	330	0.33		U	U	43	N	N	2/28/2006	SW8270	55924-6	83-32-9	TPH, SVOCs
	Acenaphthylene	330	0.33		U	U	23	N	N				208-96-8	
	Anthracene	330	0.33		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	330	0.33		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	330	0.33		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	330	0.33		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	330	0.33		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	330	0.33		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	330	0.33		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	330	0.33		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	330	0.33		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	330	0.33		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	330	0.33		U	U	310	N	N				106-47-8	
	2-Chlorophenol	330	0.33		U	U	50	N	N				95-57-8	
	Chrysene	330	0.33		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	330	0.33		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	330	0.33		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	330	0.33		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	330	0.33		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	330	0.33		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	330	0.33		U	U	30	N	N				120-83-2	
	Diethyl phthalate	330	0.33		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	330	0.33		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	330	0.33		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	330	0.33		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	330	0.33		U	U	0.9	N	N				121-14-2	
	Fluoranthene	330	0.33		U	U	20	N	N				206-44-0	
	Fluorene	330	0.33		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	330	0.33		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	330	0.33		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	330	0.33		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	330	0.33		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	330	0.33		U	U	123	N	N				91-57-6	
	Naphthalene	330	0.33		U	U	54	N	N				91-20-3	
	Pentachlorophenol	330	0.33		U	U	5.3	N	N				87-86-5	
	Phenanthrene	330	0.33		U	U	40	N	N				85-01-8	
	Phenol	330	0.33		U	U	6000	N	N				108-95-2	
	Pyrene	330	0.33		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	330	0.33		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	330	0.33		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	330	0.33		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E9	Acenaphthene	310	0.31		U	U	43	N	N	3/1/2006	SW8270	55927-1	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E10	Acenaphthene	310	0.31		U	U	43	N	N	3/2/2006	SW8270	55927-2	83-32-9	TPH, SVOCs
	Acenaphthylene	310	0.31		U	U	23	N	N				208-96-8	
	Anthracene	310	0.31		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	310	0.31		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	310	0.31		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	310	0.31		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	310	0.31		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	310	0.31		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	310	0.31		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	310	0.31		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	310	0.31		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	310	0.31		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	310	0.31		U	U	310	N	N				106-47-8	
	2-Chlorophenol	310	0.31		U	U	50	N	N				95-57-8	
	Chrysene	310	0.31		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	310	0.31		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	310	0.31		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	310	0.31		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	310	0.31		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	310	0.31		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	310	0.31		U	U	30	N	N				120-83-2	
	Diethyl phthalate	310	0.31		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	310	0.31		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	310	0.31		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	310	0.31		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	310	0.31		U	U	0.9	N	N				121-14-2	
	Fluoranthene	310	0.31		U	U	20	N	N				206-44-0	
	Fluorene	310	0.31		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	310	0.31		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	310	0.31		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	310	0.31		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	310	0.31		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	310	0.31		U	U	123	N	N				91-57-6	
	Naphthalene	310	0.31		U	U	54	N	N				91-20-3	
	Pentachlorophenol	310	0.31		U	U	5.3	N	N				87-86-5	
	Phenanthrene	310	0.31		U	U	40	N	N				85-01-8	
	Phenol	310	0.31		U	U	6000	N	N				108-95-2	
	Pyrene	310	0.31		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	310	0.31		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	310	0.31		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	310	0.31		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-F11	Acenaphthene	290	0.29		U	U	43	N	N	3/2/2006	SW8270	55927-3	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E8	Acenaphthene	300	0.3		U	U	43	N	N	3/2/2006	SW8270	55927-4	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-41
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	QUAL	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-E11	Acenaphthene	280	0.28		U	U	43	N	N	3/2/2006	SW8270	55927-5	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-42
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-C-STRAIGHTDIS-D3-A	Solid	1,2,3,4,6,7,8-HpCDD		94					10/7/2005	SW846 8290	54955-1	35822-46-9
	Solid	1,2,3,4,6,7,8-HpCDF	ND	1.1					10/7/2005	SW846 8290	54955-1	67562-39-4
	Solid	1,2,3,4,7,8,9-HpCDF	ND	0.43					10/7/2005	SW846 8290	54955-1	55673-89-7
	Solid	1,2,3,4,7,8-HxCDD	ND	0.79					10/7/2005	SW846 8290	54955-1	39227-28-6
	Solid	1,2,3,4,7,8-HxCDF	ND	0.37					10/7/2005	SW846 8290	54955-1	70648-26-9
	Solid	1,2,3,6,7,8-HxCDD	ND	0.78					10/7/2005	SW846 8290	54955-1	57653-85-7
	Solid	1,2,3,6,7,8-HxCDF	ND	0.34					10/7/2005	SW846 8290	54955-1	57117-44-9
	Solid	1,2,3,7,8,9-HxCDD	ND	1.6					10/7/2005	SW846 8290	54955-1	19408-74-3
	Solid	1,2,3,7,8,9-HxCDF	ND	0.43					10/7/2005	SW846 8290	54955-1	72918-21-9
	Solid	1,2,3,7,8-PeCDD	ND	0.65					10/7/2005	SW846 8290	54955-1	40321-76-4
	Solid	1,2,3,7,8-PeCDF	ND	0.38					10/7/2005	SW846 8290	54955-1	57117-41-6
	Solid	2,3,4,6,7,8-HxCDF	ND	0.37					10/7/2005	SW846 8290	54955-1	60851-34-5
	Solid	2,3,4,7,8-PeCDF	ND	0.37					10/7/2005	SW846 8290	54955-1	57117-31-4
	Solid	2,3,7,8-TCDD	ND	0.38					10/7/2005	SW846 8290	54955-1	1746-01-6
	Solid	2,3,7,8-TCDF	ND	0.29					10/7/2005	SW846 8290	54955-1	51207-31-9
	Solid	OCDD	E	13000					10/7/2005	SW846 8290	54955-1	3268-87-9
	Solid	OCDF	ND	0.68					10/7/2005	SW846 8290	54955-1	39001-02-0
	Solid	Total HpCDDs		210					10/7/2005	SW846 8290	54955-1	37871-00-4
	Solid	Total HpCDFs	ND	1.1					10/7/2005	SW846 8290	54955-1	38998-75-3
	Solid	Total HxCDDs		8.7					10/7/2005	SW846 8290	54955-1	34465-46-8
	Solid	Total HxCDFs	ND	0.43					10/7/2005	SW846 8290	54955-1	55684-94-1
	Solid	Total PeCDDs	ND	0.65					10/7/2005	SW846 8290	54955-1	36088-22-9
	Solid	Total PeCDFs	ND	0.88					10/7/2005	SW846 8290	54955-1	30402-15-4
	Solid	Total TCDDs	ND	0.38					10/7/2005	SW846 8290	54955-1	41903-57-5
	Solid	Total TCDFs	ND	0.29					10/7/2005	SW846 8290	54955-1	55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			3.1	3.9	N						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-42
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Confirmatory Dioxins/Furans Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	Result (ng/Kg)	Region 9 PRG-Residential (ng/kg)	Exceed Residential PRGs? (Y/N)	RIDEM Residential Criteria (ng/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-C-STRAIGHTDIS-C5	Solid	1,2,3,4,6,7,8-HpCDD		130					10/7/2005	SW846 8290	54955-2	35822-46-9
	Solid	1,2,3,4,6,7,8-HpCDF	ND	1.4					10/7/2005	SW846 8290	54955-2	67562-39-4
	Solid	1,2,3,4,7,8,9-HpCDF	ND	0.60					10/7/2005	SW846 8290	54955-2	55673-89-7
	Solid	1,2,3,4,7,8-HxCDD	ND	1.9					10/7/2005	SW846 8290	54955-2	39227-28-6
	Solid	1,2,3,4,7,8-HxCDF	ND	0.43					10/7/2005	SW846 8290	54955-2	70648-26-9
	Solid	1,2,3,6,7,8-HxCDD	ND	2.1					10/7/2005	SW846 8290	54955-2	57653-85-7
	Solid	1,2,3,6,7,8-HxCDF	ND	0.39					10/7/2005	SW846 8290	54955-2	57117-44-9
	Solid	1,2,3,7,8,9-HxCDD	ND	3.4					10/7/2005	SW846 8290	54955-2	19408-74-3
	Solid	1,2,3,7,8,9-HxCDF	ND	0.50					10/7/2005	SW846 8290	54955-2	72918-21-9
	Solid	1,2,3,7,8-PeCDD	ND	0.88					10/7/2005	SW846 8290	54955-2	40321-76-4
	Solid	1,2,3,7,8-PeCDF	ND	0.45					10/7/2005	SW846 8290	54955-2	57117-41-6
	Solid	2,3,4,6,7,8-HxCDF	ND	0.43					10/7/2005	SW846 8290	54955-2	60851-34-5
	Solid	2,3,4,7,8-PeCDF	ND	0.43					10/7/2005	SW846 8290	54955-2	57117-31-4
	Solid	2,3,7,8-TCDD	ND	0.39					10/7/2005	SW846 8290	54955-2	1746-01-6
	Solid	2,3,7,8-TCDF	ND	0.55					10/7/2005	SW846 8290	54955-2	51207-31-9
	Solid	OCDD	E	10000					10/7/2005	SW846 8290	54955-2	3268-87-9
	Solid	OCDF	ND	2.5					10/7/2005	SW846 8290	54955-2	39001-02-0
	Solid	Total HpCDDs		330					10/7/2005	SW846 8290	54955-2	37871-00-4
	Solid	Total HpCDFs	ND	1.4					10/7/2005	SW846 8290	54955-2	38998-75-3
	Solid	Total HxCDDs		24					10/7/2005	SW846 8290	54955-2	34465-46-8
	Solid	Total HxCDFs	ND	0.50					10/7/2005	SW846 8290	54955-2	55684-94-1
	Solid	Total PeCDDs	ND	0.88					10/7/2005	SW846 8290	54955-2	36088-22-9
	Solid	Total PeCDFs	ND	0.45					10/7/2005	SW846 8290	54955-2	30402-15-4
	Solid	Total TCDDs	ND	0.39					10/7/2005	SW846 8290	54955-2	41903-57-5
	Solid	Total TCDFs	ND	0.55					10/7/2005	SW846 8290	54955-2	55722-27-5
	2,3,7,8-TCDD Toxicity Equivalents*			3.5	3.9	N						

Note:

* 2,3,7,8-TCDD Toxicity Equivalents was calculated based on "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxin and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA/625/3-89/016, March 1989). 2,3,7,8-TCDD Equivalents for the sample was compared with EPA Region 9 PRG-Residential Criteria because corresponding RIDEM Residential Criteria were not available.

TABLE 7-43
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUATITATION LIMIT (mg/Kg)	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Lab ID#	ANALYTES RUN
TF4-C-STRAIGHTDIS-C7-1	Soil	TPH	22	U	500	N	N	11/4/2005	55258-1	TPH, SVOCS
TF4-C-STRAIGHTDIS-C7-1D	Soil	TPH	22	U	500	N	N	11/4/2005	55258-2	TPH, SVOCS
TF4-C-STRAIGHTDIS-C6-1	Soil	TPH	22	U	500	N	N	11/4/2005	55258-3	TPH, SVOCS
TF4-C-STRAIGHTDIS-B5-1	Soil	TPH	22	U	500	N	N	11/4/2005	55258-4	TPH, SVOCS
TF4-C-STRAIGHTDIS-C3-1	Soil	TPH	22	U	500	N	N	11/4/2005	55258-5	TPH, SVOCS
TF4-C-STRAIGHTDIS-D3-1	Soil	TPH	22	U	500	N	N	11/4/2005	55258-6	TPH, SVOCS
TF4-C-STRAIGHTDIS-I8-1	Soil	TPH	20	U	500	N	N	11/4/2005	55258-7	TPH, SVOCS
TF4-C-STRAIGHTDIS-G5-1	Soil	TPH	20	U	500	N	N	11/5/2005	55258-8	TPH, SVOCS
TF4-C-STRAIGHTDIS-F14-B1	Soil	TPH	22	U	500	N	N	2/21/2006	55885-1	TPH, SVOCs
TF4-C-STRAIGHTDIS-K17-B1	Soil	TPH	24	U	500	N	N	2/21/2006	55885-2	TPH, SVOCs
TF4-C-STRAIGHTDIS-F14-SW1	Soil	TPH	22	39	500	N	N	2/28/2006	55925-1	TPH
TF4-C-STRAIGHTDIS-F14-SW2	Soil	TPH	24	35	500	N	N	2/28/2006	55925-2	TPH
TF4-C-STRAIGHTDIS-F14-SW3	Soil	TPH	22	39	500	N	N	2/28/2006	55925-3	TPH
TF4-C-STRAIGHTDIS-F14-SW4	Soil	TPH	22	U	500	N	N	2/28/2006	55925-4	TPH
TF4-C-STRAIGHTDIS-K17-SW1	Soil	TPH	26	30	500	N	N	2/28/2006	55925-6	TPH
TF4-C-STRAIGHTDIS-K17-SW2	Soil	TPH	24	29	500	N	N	2/28/2006	55925-7	TPH
TF4-C-STRAIGHTDIS-K17-SW2-RX	Soil	TPH	24	38	500	N	N	3/30/2006	55925-7 RX	TPH
TF4-C-STRAIGHTDIS-K17-SW3	Soil	TPH	26	44	500	N	N	2/28/2006	55925-5	TPH

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C7-1	Acenaphthene	290	0.29		U	U	43	N	N	11/11/2005	SW8270	55298-3	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C7-1D	Acenaphthene	280	0.28		U	U	43	N	N	11/11/2005	SW8270	55298-4	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C6-1	Acenaphthene	280	0.28		U	U	43	N	N	11/11/2005	SW8270	55298-4	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-B5-1	Acenaphthene	290	0.29		U	U	43	N	N	11/11/2005	SW8270	55298-6	83-32-9	TPH, SVOCs
	Acenaphthylene	290	0.29		U	U	23	N	N				208-96-8	
	Anthracene	290	0.29		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	290	0.29		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	290	0.29		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	290	0.29		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	290	0.29		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	290	0.29		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	290	0.29		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	290	0.29		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	290	0.29		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	290	0.29		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	290	0.29		U	U	310	N	N				106-47-8	
	2-Chlorophenol	290	0.29		U	U	50	N	N				95-57-8	
	Chrysene	290	0.29		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	290	0.29		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	290	0.29		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	290	0.29		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	290	0.29		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	290	0.29		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	290	0.29		U	U	30	N	N				120-83-2	
	Diethyl phthalate	290	0.29		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	290	0.29		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	290	0.29		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	290	0.29		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	290	0.29		U	U	0.9	N	N				121-14-2	
	Fluoranthene	290	0.29		U	U	20	N	N				206-44-0	
	Fluorene	290	0.29		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	290	0.29		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	290	0.29		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	290	0.29		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	290	0.29		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	290	0.29		U	U	123	N	N				91-57-6	
	Naphthalene	290	0.29		U	U	54	N	N				91-20-3	
	Pentachlorophenol	290	0.29		U	U	5.3	N	N				87-86-5	
	Phenanthrene	290	0.29		U	U	40	N	N				85-01-8	
	Phenol	290	0.29		U	U	6000	N	N				108-95-2	
	Pyrene	290	0.29		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	290	0.29		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	290	0.29		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	290	0.29		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-C3-1	Acenaphthene	280	0.28		U	U	43	N	N	11/11/2005	SW8270	55298-7	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-D3-1	Acenaphthene	300	0.3		U	U	43	N	N	11/11/2005	SW8270	55298-8	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-I8-1	Acenaphthene	280	0.28		U	U	43	N	N	11/11/2005	SW8270	55298-9	83-32-9	TPH, SVOCs
	Acenaphthylene	280	0.28		U	U	23	N	N				208-96-8	
	Anthracene	280	0.28		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	280	0.28		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	280	0.28		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	280	0.28		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	280	0.28		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	280	0.28		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	280	0.28		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	280	0.28		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	280	0.28		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	280	0.28		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	280	0.28		U	U	310	N	N				106-47-8	
	2-Chlorophenol	280	0.28		U	U	50	N	N				95-57-8	
	Chrysene	280	0.28		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	280	0.28		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	280	0.28		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	280	0.28		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	280	0.28		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	280	0.28		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	280	0.28		U	U	30	N	N				120-83-2	
	Diethyl phthalate	280	0.28		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	280	0.28		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	280	0.28		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	280	0.28		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	280	0.28		U	U	0.9	N	N				121-14-2	
	Fluoranthene	280	0.28		U	U	20	N	N				206-44-0	
	Fluorene	280	0.28		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	280	0.28		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	280	0.28		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	280	0.28		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	280	0.28		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	280	0.28		U	U	123	N	N				91-57-6	
	Naphthalene	280	0.28		U	U	54	N	N				91-20-3	
	Pentachlorophenol	280	0.28		U	U	5.3	N	N				87-86-5	
	Phenanthrene	280	0.28		U	U	40	N	N				85-01-8	
	Phenol	280	0.28		U	U	6000	N	N				108-95-2	
	Pyrene	280	0.28		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	280	0.28		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	280	0.28		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	280	0.28		U	U	58	N	N				88-06-2	

TABLE 7-44
Tank Farm 4 Ruin 1 Straight Discharge Line Outfall
Re-excavation Confirmatory SVOC Analytical Data

SAMPLE ID	PARAMETER	QUAT (ppb)	QUAT (ppm)	Qualifier	RESULT (ppb)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS	ANALYTES RUN
TF4-C-STRAIGHTDIS-G5-1	Acenaphthene	300	0.3		U	U	43	N	N	11/11/2005	SW8270	55298-10	83-32-9	TPH, SVOCs
	Acenaphthylene	300	0.3		U	U	23	N	N				208-96-8	
	Anthracene	300	0.3		U	U	35	N	N				120-12-7	
	Benzo(a)anthracene	300	0.3		U	U	0.9	N	N				56-55-3	
	Benzo(a)pyrene	300	0.3		U	U	0.4	N	N				50-32-8	
	Benzo(b)fluoranthene	300	0.3		U	U	0.9	N	N				205-99-2	
	Benzo(g,h,i)perylene	300	0.3		U	U	0.8	N	N				191-24-2	
	Benzo(k)fluoranthene	300	0.3		U	U	0.9	N	N				207-08-9	
	1,1-Biphenyl	300	0.3		U	U	0.8	N	N				92-52-4	
	bis(2-Ethylhexyl)phthalate	300	0.3		U	U	46	N	N				117-81-7	
	bis(2-Chloroethyl)ether	300	0.3		U	U	0.6	N	N				111-44-4	
	bis(2-chloroisopropyl)ether	300	0.3		U	U	9.1	N	N				108-60-1	
	4-Chloroaniline	300	0.3		U	U	310	N	N				106-47-8	
	2-Chlorophenol	300	0.3		U	U	50	N	N				95-57-8	
	Chrysene	300	0.3		U	U	0.4	N	N				218-01-9	
	Dibenzo(a,h)anthracene	300	0.3		U	U	0.4	N	N				53-70-3	
	1,2-Dichlorobenzene	300	0.3		U	U	510	N	N				95-50-1	
	1,3-Dichlorobenzene	300	0.3		U	U	430	N	N				541-73-1	
	1,4-Dichlorobenzene	300	0.3		U	U	27	N	N				106-46-7	
	3,3'-Dichlorobenzidine	300	0.3		U	U	1.4	N	N				91-94-1	
	2,4-Dichlorophenol	300	0.3		U	U	30	N	N				120-83-2	
	Diethyl phthalate	300	0.3		U	U	340	N	N				84-66-2	
	2,4-Dimethyl phenol	300	0.3		U	U	1400	N	N				105-67-9	
	Dimethyl phthalate	300	0.3		U	U	1900	N	N				131-11-3	
	2,4-Dinitrophenol	300	0.3		U	U	160	N	N				51-28-5	
	2,4-Dinitrotoluene	300	0.3		U	U	0.9	N	N				121-14-2	
	Fluoranthene	300	0.3		U	U	20	N	N				206-44-0	
	Fluorene	300	0.3		U	U	28	N	N				86-73-7	
	Hexachlorobenzene	300	0.3		U	U	0.4	N	N				118-74-1	
	Hexachlorobutadiene	300	0.3		U	U	8.2	N	N				87-68-3	
	Hexachloroethane	300	0.3		U	U	46	N	N				67-72-1	
	Indeno(1,2,3-cd)pyrene	300	0.3		U	U	0.9	N	N				193-39-5	
	2-Methyl naphthalene	300	0.3		U	U	123	N	N				91-57-6	
	Naphthalene	300	0.3		U	U	54	N	N				91-20-3	
	Pentachlorophenol	300	0.3		U	U	5.3	N	N				87-86-5	
	Phenanthrene	300	0.3		U	U	40	N	N				85-01-8	
	Phenol	300	0.3		U	U	6000	N	N				108-95-2	
	Pyrene	300	0.3		U	U	13	N	N				129-00-0	
	1,2,4-Trichlorobenzene	300	0.3		U	U	96	N	N				120-82-1	
	2,4,5-Trichlorophenol	300	0.3		U	U	330	N	N				95-95-4	
	2,4,6- Trichlorophenol	300	0.3		U	U	58	N	N				88-06-2	

TABLE 7-45
Tank Farm 4 Ruin 1 Diagonal Line Discharge
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-R1-DIAGONAL_DIS	Soil	Total Petroleum Hydrocarbons (TPH)		72	500	N	N	2/10/2005	SW8015	53525-1	

TABLE 7-46
Tank Farm 4 Ruin 2 Outfall
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-R2-OUTFALL-1	Soil	TPH		61	500	N	N	3/18/2005	EPA8015	53645-8	

TABLE 7-47
Tank Farm 4 Ruin 2 Outfall
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-R2-OUTFALL-1	Soil	Acenaphthene	U	0.32	43	N	N	3/19/2005	SW8270	53645-8	83-32-9
		Acenaphthylene	U	0.32	23	N	N				208-96-8
		Anthracene	U	0.32	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.32	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.32	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.32	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.32	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.32	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.32	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.32	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.32	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.32	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.32	310	N	N				106-47-8
		2-Chlorophenol	U	0.32	50	N	N				95-57-8
		Chrysene	U	0.32	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.32	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.32	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.32	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.32	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.32	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.32	30	N	N				120-83-2
		Diethyl phthalate	U	0.32	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.32	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.32	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.32	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.32	0.9	N	N				121-14-2
		Fluoranthene	U	0.32	20	N	N				206-44-0
		Fluorene	U	0.32	28	N	N				86-73-7
		Hexachlorobenzene	U	0.32	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.32	8.2	N	N				87-68-3
		Hexachloroethane	U	0.32	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.32	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.32	123	N	N				91-57-6
		Naphthalene	U	0.32	54	N	N				91-20-3
		Pentachlorophenol	U	0.32	5.3	N	N				87-86-5
		Phenanthrene	U	0.32	40	N	N				85-01-8
		Phenol	U	0.32	6000	N	N				108-95-2
		Pyrene	U	0.32	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.32	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.32	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.32	58	N	N				88-06-2

TABLE 7-48
Tank Farm 4 Ruin 2 Drainage Swale
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-R2-SWALE1	Soil	Total Petroleum Hydrocarbons (TPH)	U	22	500	N	N	2/10/2005	SW8015	54113-11	
TF4-R2-SWALE2	Soil	Total Petroleum Hydrocarbons (TPH)		50	500	N	N	2/11/2005	SW8015	54113-12	
TF4-R2-SWALE3	Soil	Total Petroleum Hydrocarbons (TPH)		27	500	N	N	2/12/2005	SW8015	54113-13	

TABLE 7-49
Tank Farm 4 Buoy Sheds
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-BUOYSHD1-01	Soil	Lead		15.3	150	N	N		SW6010B	612463	7439-92-1
TF4-BUOYSHD1-02	Soil	Lead		17.7	150	N	N		SW6010B	612464	7439-92-1
TF4-BUOYSHD2-01	Soil	Lead		22.8	150	N	N		SW6010B	612465	7439-92-1
TF4-BUOYSHD2-02	Soil	Lead		33.9	150	N	N		SW6010B	612466	7439-92-1

TABLE 7-50
Tank Farm 4 MW-10
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/L)	RIDEM Residential Criteria (mg/L)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-MW10	Water	Total Petroleum Hydrocarbons (TPH)	U	0.3	N/A	N	N	2/7/2005	SW8015B	53501-1	
TF4-MW10D	Water	Total Petroleum Hydrocarbons (TPH)	U	0.3	N/A	N	N	2/7/2005	SW8015B	53501-2	

TABLE 7-51
Tank Farm 4 MW-10
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/L)	RIDEM Residential Criteria (mg/L)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-MW10	Water	Lead	U	0.0001	0.015	N	N	2/7/2005	SW6010B	607319	7439-92-1
TF4-MW10D	Water	Lead	U	0.0001	0.015	N	N	2/7/2005	SW6010B	607320	7439-92-1

TABLE 7-52
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Petroflag Summary Results

Sample ID	Soil Description (Dry / Moist / Saturated)	Date Analyzed	Dilution Factor	Petroflag Screening RF = 6 (ppm)
TF5-P-SHED-1	Dry	8/16/05	1	133
TF5-P-SHED-2	Dry	8/16/05	1	372
TF5-P-SHED-3	Dry	8/16/05	1	82
TF5-P-SHED-4	Dry	8/16/05	1	144
TF5-P-SHED-5	Dry	8/23/05	1	249
TF5-P-NONVEG-1	Dry	8/16/05	1	36
TF5-P-NONVEG-2	Dry	8/16/05	1	37
TF5-P-NONVEG-3	Dry	8/16/05	1	38
TF5-P-NONVEG-4	Dry	8/16/05	1	60

Notes:
DF=10g/5g=2

TABLE 7-53
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-1	Soil	TPH	24	154	500	N	N	8/16/2005	SW8015	54738-12	
TF5-L-SHED-2	Soil	TPH	24	329	500	N	N	8/16/2005	SW8015	54738-13	
TF5-L-SHED-4	Soil	TPH	22	112	500	N	N	8/16/2005	SW8015	54738-14	
TF5-L-SHED-5	Soil	TPH	24	161	500	N	N	8/24/2005	SW8015	54775-1	
TF5-L-NONVEG-4	Soil	TPH	22	64	500	N	N	8/26/2005	SW8015	54794-2	

TABLE 7-54
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
VOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL (ppm)	Result (mg/Kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-5B	SOIL	Acetone	0.0039	0.099	7800	N	N	8/30/2005	8260	635219	67-64-1
		Benzene	0.0039	U	2.5	N	N				71-43-2
		Bromodichloromethane	0.0039	U	10	N	N				75-27-4
		Bromoform	0.0039	U	81	N	N				75-25-2
		Bromomethane	0.0039	U	0.8	N	N				74-83-9
		Carbon tetrachloride	0.0039	U	1.5	N	N				56-23-5
		Chlorobenzene	0.0039	U	210	N	N				108-90-7
		Chloroform	0.0039	U	1.2	N	N				67-66-3
		Dibromochloromethane	0.0039	U	7.6	N	N				124-48-1
		Dibromochloropropane	0.0039	U	0.5	N	N				96-12-8
		1,1-Dichloroethane	0.0039	U	920	N	N				75-34-3
		1,1-Dichloroethene	0.0039	U	0.2	N	N				75-35-4
		1,2-Dichloroethane	0.0039	U	0.9	N	N				107-06-2
		cis-1,2-Dichloroethene	0.0039	U	630	N	N				156-59-2
		Trans-1,2- Dichloroethene	0.0039	U	1100	N	N				156-60-5
		1,2-Dichloropropane	0.0039	U	1.9	N	N				78-87-5
		Ethyl benzene	0.0039	U	71	N	N				100-41-4
		Ethylene dibromide	0.0039	U	0.01	N	N				
		Isopropyl benzene	0.0039	U	27	N	N				98-82-8
		Methyl ethyl ketone	0.0039	0.0098	10000	N	N				78-93-3
		Methyl isobutyl ketone	0.0039	U	1200	N	N				108-10-1
		Methyl-tert-butyl-ether	0.0039	U	390	N	N				1634-04-4
		Methylene chloride	0.0039	U	45	N	N				75-09-2
		Styrene	0.0039	U	13	N	N				100-42-5
		1,1,1,2,-Tetrachloroethane	0.0039	U	2.2	N	N				630-20-6
		1,1,2,2,-Tetrachloroethane	0.0039	U	1.3	N	N				79-34-5
		Tetrachloroethylene	0.0039	U	12	N	N				127-18-4
		Toluene	0.0039	U	190	N	N				108-88-3
		1,1,1-Trichloroethane	0.0039	U	540	N	N				71-55-6
		1,1,2-Trichloroethane	0.0039	U	3.6	N	N				79-00-5
		Trichloroethylene	0.0039	U	13	N	N				79-01-6
		Vinyl chloride	0.0039	U	0.02	N	N				75-01-4
		Xylenes (total)	0.0039	U	110	N	N				1330-20-7

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-1	Soil	Acenaphthene	0.3		U	43	N	N	8/26/2005	SW8270	54767-1	83-32-9
		Acenaphthylene	0.3		U	23	N	N				208-96-8
		Anthracene	0.3		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.3	J	0.226	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.3	J	0.158	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.3		0.374	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.3		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.3	J	0.244	0.9	N	N				207-08-9
		1,1-Biphenyl	0.3		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.3		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.3		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.3		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.3		U	310	N	N				106-47-8
		2-Chlorophenol	0.3		U	50	N	N				95-57-8
		Chrysene	0.3		0.376	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.3		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.3		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.3		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.3		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.3		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.3		U	30	N	N				120-83-2
		Diethyl phthalate	0.3		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.3		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.3		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.3		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.3		U	0.9	N	N				121-14-2
		Fluoranthene	0.3		0.676	20	N	N				206-44-0
		Fluorene	0.3		U	28	N	N				86-73-7
		Hexachlorobenzene	0.3		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.3		U	8.2	N	N				87-68-3
		Hexachloroethane	0.3		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.3	J	0.164	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.3		U	123	N	N				91-57-6
		Naphthalene	0.3		U	54	N	N				91-20-3
		Pentachlorophenol	0.3		U	5.3	N	N				87-86-5
		Phenanthrene	0.3		U	40	N	N				85-01-8
		Phenol	0.3		U	6000	N	N				108-95-2
		Pyrene	0.3		0.488	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.3		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.3		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.3		U	58	N	N				88-06-2

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-2	Soil	Acenaphthene	0.29		U	43	N	N	8/26/2005	SW8270	54767-2	83-32-9
		Acenaphthylene	0.29		U	23	N	N				208-96-8
		Anthracene	0.29	J	0.230	35	N	N				120-12-7
		Benzo(a)anthracene	0.29		0.697	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.29		0.508	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene	0.29		0.778	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.29		0.305	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.29		0.562	0.9	N	N				207-08-9
		1,1-Biphenyl	0.29		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.29		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.29		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.29		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.29		U	310	N	N				106-47-8
		2-Chlorophenol	0.29		U	50	N	N				95-57-8
		Chrysene	0.29		0.811	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	0.29		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.29		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.29		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.29		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.29		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.29		U	30	N	N				120-83-2
		Diethyl phthalate	0.29		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.29		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.29		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.29		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.29		U	0.9	N	N				121-14-2
		Fluoranthene	0.29		1.390	20	N	N				206-44-0
		Fluorene	0.29		U	28	N	N				86-73-7
		Hexachlorobenzene	0.29		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.29		U	8.2	N	N				87-68-3
		Hexachloroethane	0.29		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.29		0.393	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.29		U	123	N	N				91-57-6
		Naphthalene	0.29		U	54	N	N				91-20-3
		Pentachlorophenol	0.29		U	5.3	N	N				87-86-5
		Phenanthrene	0.29		0.543	40	N	N				85-01-8
		Phenol	0.29		U	6000	N	N				108-95-2
		Pyrene	0.29		1.050	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.29		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.29		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.29		U	58	N	N				88-06-2

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-4	Soil	Acenaphthene	0.3		U	43	N	N	8/26/2005	SW8270	54767-3	83-32-9
		Acenaphthylene	0.3		U	23	N	N				208-96-8
		Anthracene	0.3		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.3		0.338	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.3		0.303	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.3		0.329	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.3	J	0.186	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.3	J	0.255	0.9	N	N				207-08-9
		1,1-Biphenyl	0.3		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.3		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.3		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.3		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.3		U	310	N	N				106-47-8
		2-Chlorophenol	0.3		U	50	N	N				95-57-8
		Chrysene	0.3		0.383	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.3		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.3		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.3		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.3		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.3		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.3		U	30	N	N				120-83-2
		Diethyl phthalate	0.3		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.3		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.3		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.3		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.3		U	0.9	N	N				121-14-2
		Fluoranthene	0.3		0.746	20	N	N				206-44-0
		Fluorene	0.3		U	28	N	N				86-73-7
		Hexachlorobenzene	0.3		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.3		U	8.2	N	N				87-68-3
		Hexachloroethane	0.3		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.3	J	0.234	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.3		U	123	N	N				91-57-6
		Naphthalene	0.3		U	54	N	N				91-20-3
		Pentachlorophenol	0.3		U	5.3	N	N				87-86-5
		Phenanthrene	0.3	J	0.172	40	N	N				85-01-8
		Phenol	0.3		U	6000	N	N				108-95-2
		Pyrene	0.3		0.536	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.3		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.3		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.3		U	58	N	N				88-06-2

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NONVEG-4	Soil	Acenaphthene	0.29		U	43	N	N	8/30/2005	SW8270	54794-2	83-32-9
		Acenaphthylene	0.29		U	23	N	N				208-96-8
		Anthracene	0.29		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.29		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.29		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.29		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.29		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.29		U	0.9	N	N				207-08-9
		1,1-Biphenyl	0.29		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.29		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.29		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.29		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.29		U	310	N	N				106-47-8
		2-Chlorophenol	0.29		U	50	N	N				95-57-8
		Chrysene	0.29		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.29		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.29		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.29		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.29		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.29		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.29		U	30	N	N				120-83-2
		Diethyl phthalate	0.29		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.29		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.29		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.29		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.29		U	0.9	N	N				121-14-2
		Fluoranthene	0.29		U	20	N	N				206-44-0
		Fluorene	0.29		U	28	N	N				86-73-7
		Hexachlorobenzene	0.29		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.29		U	8.2	N	N				87-68-3
		Hexachloroethane	0.29		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.29		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.29		U	123	N	N				91-57-6
		Naphthalene	0.29		U	54	N	N				91-20-3
		Pentachlorophenol	0.29		U	5.3	N	N				87-86-5
		Phenanthrene	0.29		U	40	N	N				85-01-8
		Phenol	0.29		U	6000	N	N				108-95-2
		Pyrene	0.29		U	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.29		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.29		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.29		U	58	N	N				88-06-2

J=Estimated Value

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-5	Soil	Acenaphthene	0.29		U	43	N	N	8/30/2005	SW8270	54794-6	83-32-9
		Acenaphthylene	0.29		U	23	N	N				208-96-8
		Anthracene	0.29		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.29		0.389	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.29	J	0.280	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.29		0.453	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.29	J	0.146	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.29		0.392	0.9	N	N				207-08-9
		1,1-Biphenyl	0.29		U	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	0.29		U	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	0.29		U	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	0.29		U	9.1	N	N				108-60-1
		4-Chloroaniline	0.29		U	310	N	N				106-47-8
		2-Chlorophenol	0.29		U	50	N	N				95-57-8
		Chrysene	0.29		0.550	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	0.29		U	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	0.29		U	510	N	N				95-50-1
		1,3-Dichlorobenzene	0.29		U	430	N	N				541-73-1
		1,4-Dichlorobenzene	0.29		U	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	0.29		U	1.4	N	N				91-94-1
		2,4-Dichlorophenol	0.29		U	30	N	N				120-83-2
		Diethyl phthalate	0.29		U	340	N	N				84-66-2
		2,4-Dimethyl phenol	0.29		U	1400	N	N				105-67-9
		Dimethyl phthalate	0.29		U	1900	N	N				131-11-3
		2,4-Dinitrophenol	0.29		U	160	N	N				51-28-5
		2,4-Dinitrotoluene	0.29		U	0.9	N	N				121-14-2
		Fluoranthene	0.29		0.890	20	N	N				206-44-0
		Fluorene	0.29		U	28	N	N				86-73-7
		Hexachlorobenzene	0.29		U	0.4	N	N				118-74-1
		Hexachlorobutadiene	0.29		U	8.2	N	N				87-68-3
		Hexachloroethane	0.29		U	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	0.29	J	0.192	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.29		U	123	N	N				91-57-6
		Naphthalene	0.29		U	54	N	N				91-20-3
		Pentachlorophenol	0.29		U	5.3	N	N				87-86-5
		Phenanthrene	0.29	J	0.202	40	N	N				85-01-8
		Phenol	0.29		U	6000	N	N				108-95-2
		Pyrene	0.29		0.681	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	0.29		U	96	N	N				120-82-1
		2,4,5-Trichlorophenol	0.29		U	330	N	N				95-95-4
		2,4,6- Trichlorophenol	0.29		U	58	N	N				88-06-2

J=Estimated Value

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-6**	Soil	Acenaphthene	0.31		U	43	N	N	11/10/2005	SW8270	55270-6	83-32-9
		Acenaphthylene	0.31		U	23	N	N				208-96-8
		Anthracene	0.31		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.31	J	**0.215**	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.31	J	**0.159**	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.31		**0.360**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.31		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.31	J	**0.235**	0.9	N	N				207-08-9
		Chrysene	0.31		**0.345**	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.31		U	0.4	N	N				53-70-3
		Fluoranthene	0.31		**0.545**	20	N	N				206-44-0
		Fluorene	0.31		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.31	J	**0.171**	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.31		U	123	N	N				91-57-6
		Naphthalene	0.31		U	54	N	N				91-20-3
		Phenanthrene	0.31		U	40	N	N				85-01-8
		Pyrene	0.31		**0.448**	13	N	N				129-00-0

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-7**	Soil	Acenaphthene	0.31		U	43	N	N	11/10/2005	SW8270	55270-1	83-32-9
		Acenaphthylene	0.31		U	23	N	N				208-96-8
		Anthracene	0.31	J	**0.180**	35	N	N				120-12-7
		Benzo(a)anthracene	0.31		**1.040**	0.9	**Y**	N				56-55-3
		Benzo(a)pyrene	0.31		**0.597**	0.4	**Y**	N				50-32-8
		Benzo(b)fluoranthene	0.31		**1.560**	0.9	**Y**	N				205-99-2
		Benzo(g,h,i)perylene	0.31		**0.402**	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.31		**0.863**	0.9	N	N				207-08-9
		Chrysene	0.31		**1.310**	0.4	**Y**	N				218-01-9
		Dibenzo(a,h)anthracene	0.31	J	**0.172**	0.4	N	N				53-70-3
		Fluoranthene	0.31		**1.860**	20	N	N				206-44-0
		Fluorene	0.31		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.31		**0.578**	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.31		U	123	N	N				91-57-6
		Naphthalene	0.31		U	54	N	N				91-20-3
		Phenanthrene	0.31	J	**0.268**	40	N	N				85-01-8
		Pyrene	0.31		**1.900**	13	N	N				129-00-0

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-8**	Soil	Acenaphthene	0.3		U	43	N	N	11/10/2005	SW8270	55270-2	83-32-9
		Acenaphthylene	0.3		U	23	N	N				208-96-8
		Anthracene	0.3		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.3		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.3		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.3	J	**0.156**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.3		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.3		U	0.9	N	N				207-08-9
		Chrysene	0.3		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.3		U	0.4	N	N				53-70-3
		Fluoranthene	0.3	J	**0.250**	20	N	N				206-44-0
		Fluorene	0.3		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.3		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.3		U	123	N	N				91-57-6
		Naphthalene	0.3		U	54	N	N				91-20-3
		Phenanthrene	0.3		**U**	40	N	N				85-01-8
		Pyrene	0.3	J	**0.244**	13	N	N				129-00-0

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-9**	Soil	Acenaphthene	0.3		U	43	N	N	11/10/2005	SW8270	55270-3	83-32-9
		Acenaphthylene	0.3		U	23	N	N				208-96-8
		Anthracene	0.3		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.3		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.3		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.3		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.3		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.3		U	0.9	N	N				207-08-9
		Chrysene	0.3		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.3		U	0.4	N	N				53-70-3
		Fluoranthene	0.3		U	20	N	N				206-44-0
		Fluorene	0.3		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.3		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.3		U	123	N	N				91-57-6
		Naphthalene	0.3		U	54	N	N				91-20-3
		Phenanthrene	0.3		U	40	N	N				85-01-8
		Pyrene	0.3		U	13	N	N				129-00-0

TABLE 7-55
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-10**	Soil	Acenaphthene	0.3		U	43	N	N	11/10/2005	SW8270	55270-4	83-32-9
		Acenaphthylene	0.3		U	23	N	N				208-96-8
		Anthracene	0.3		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.3		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.3		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.3		U	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.3		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.3		U	0.9	N	N				207-08-9
		Chrysene	0.3		U	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.3		U	0.4	N	N				53-70-3
		Fluoranthene	0.3		U	20	N	N				206-44-0
		Fluorene	0.3		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.3		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.3		U	123	N	N				91-57-6
		Naphthalene	0.3		U	54	N	N				91-20-3
		Phenanthrene	0.3		U	40	N	N				85-01-8
		Pyrene	0.3		U	13	N	N				129-00-0

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-11**	Soil	Acenaphthene	0.32		U	43	N	N	11/10/2005	SW8270	55270-5	83-32-9
		Acenaphthylene	0.32		U	23	N	N				208-96-8
		Anthracene	0.32		U	35	N	N				120-12-7
		Benzo(a)anthracene	0.32		U	0.9	N	N				56-55-3
		Benzo(a)pyrene	0.32		U	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	0.32	**J**	**0.185**	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	0.32		U	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	0.32		U	0.9	N	N				207-08-9
		Chrysene	0.32	**J**	**0.220**	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	0.32		U	0.4	N	N				53-70-3
		Fluoranthene	0.32		**0.345**	20	N	N				206-44-0
		Fluorene	0.32		U	28	N	N				86-73-7
		Indeno(1,2,3-cd)pyrene	0.32		U	0.9	N	N				193-39-5
		2-Methyl naphthalene	0.32		U	123	N	N				91-57-6
		Naphthalene	0.32		U	54	N	N				91-20-3
		Phenanthrene	0.32		U	40	N	N				85-01-8
		Pyrene	0.32	**J**	**0.298**	13	N	N				129-00-0

** Run for PAHs (not entire SVOCs), as per 10/19/05 Meeting Minutes.

TABLE 7-56
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NONVEG-4	Soil	Antimony	B	0.97	10	N	N	8/27/2005	6010B	635220	7440-36-0
		Arsenic		3.9	7.0	N	N				7440-38-2
		Barium	B	16.8	5500	N	N				7440-39-3
		Beryllium	B	0.46	0.4	Y	N				7440-41-7
		Cadmium	U	0.04	39	N	N				7440-43-9
		Chromium		9.9	390	N	N				7440-47-3
		Copper	E	15.7	3100	N	N				7440-50-8
		Lead	E	16.1	150	N	N				7439-92-1
		Manganese	E	168	390	N	N		7471A		7439-96-5
		Mercury		0.06	23	N	N				7439-97-6
		Nickel	E	11.8	1000	N	N				7440-02-0
		Selenium	B	1.3	390	N	N				7782-49-2
		Silver	U	0.21	200	N	N				7440-22-4
		Thallium	B	1.9	5.5	N	N				7440-28-0
		Vanadium		16.1	550	N	N				7440-62-2
		Zinc	E	30.7	6000	N	N				7440-66-6
		Cyanide	U	0.49	200	N	N				57-12-5

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-5	Soil	Antimony		6.4	10	N	N	8/27/2005	6010B	635222	7440-36-0
		Arsenic		9.7	7.0	Y	N				7440-38-2
		Barium		36.9	5500	N	N				7440-39-3
		Beryllium	B	0.39	0.4	N	N				7440-41-7
		Cadmium		0.64	39	N	N				7440-43-9
		Chromium		18	390	N	N				7440-47-3
		Copper	E	26.7	3100	N	N				7440-50-8
		Lead	E	169	150	Y	N				7439-92-1
		Manganese	E	466	390	Y	N		7471A		7439-96-5
		Mercury		0.11	23	N	N				7439-97-6
		Nickel	E	8.4	1000	N	N				7440-02-0
		Selenium		4.6	390	N	N				7782-49-2
		Silver		0.26	200	N	N				7440-22-4
		Thallium		7.6	5.5	Y	N				7440-28-0
		Vanadium		22.4	550	N	N				7440-62-2
		Zinc	E	925	6000	N	N				7440-66-6
		Cyanide		0.56	200	N	N				57-12-5

TABLE 7-56
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-6	Soil	Antimony	J	1.8	10	N	N	11/13/2005	6010B	680-10269-6	7440-36-0
		Arsenic		8.6	7.0	Y	N				7440-38-2
		Barium		29	5500	N	N				7440-39-3
		Beryllium	J	0.27	0.4	N	N				7440-41-7
		Cadmium		1.4	39	N	N				7440-43-9
		Chromium		19	390	N	N				7440-47-3
		Copper		20	3100	N	N				7440-50-8
		Lead	B	160	150	Y	N				7439-92-1
		Manganese		220	390	N	N				7439-96-5
		Mercury		0.08	23	N	N		7471A		7439-97-6
		Nickel		11	1000	N	N				7440-02-0
		Selenium	U	1	390	N	N				7782-49-2
		Silver	U	0.11	200	N	N				7440-22-4
		Thallium	U	1.5	5.5	N	N				7440-28-0
		Vanadium		26	550	N	N				7440-62-2
		Zinc		590	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-7	Soil	Antimony	J	1.1	10	N	N	11/13/2005	6010B	680-10269-1	7440-36-0
		Arsenic		8.2	7.0	Y	N				7440-38-2
		Barium		25	5500	N	N				7440-39-3
		Beryllium	J	0.3	0.4	N	N				7440-41-7
		Cadmium		0.99	39	N	N				7440-43-9
		Chromium		14	390	N	N				7440-47-3
		Copper		20	3100	N	N				7440-50-8
		Lead		170	150	Y	N				7439-92-1
		Manganese		210	390	N	N				7439-96-5
		Mercury		0.1	23	N	N		7471A		7439-97-6
		Nickel		10	1000	N	N				7440-02-0
		Selenium	U	1.1	390	N	N				7782-49-2
		Silver	U	0.12	200	N	N				7440-22-4
		Thallium	U	1.6	5.5	N	N				7440-28-0
		Vanadium		27	550	N	N				7440-62-2
		Zinc		580	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

TABLE 7-56
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-8	Soil	Antimony	J	0.65	10	N	N	11/13/2005	6010B	680-10269-2	7440-36-0
		Arsenic		7.1	7.0	Y	N				7440-38-2
		Barium		28	5500	N	N				7440-39-3
		Beryllium	J	0.48	0.4	Y	N				7440-41-7
		Cadmium	U	0.26	39	N	N				7440-43-9
		Chromium		10	390	N	N				7440-47-3
		Copper		18	3100	N	N				7440-50-8
		Lead	B	96	150	N	N				7439-92-1
		Manganese		190	390	N	N				7439-96-5
		Mercury		0.08	23	N	N		7471A		7439-97-6
		Nickel		11	1000	N	N				7440-02-0
		Selenium	U	1.1	390	N	N				7782-49-2
		Silver	U	0.12	200	N	N				7440-22-4
		Thallium	U	1.6	5.5	N	N				7440-28-0
		Vanadium		23	550	N	N				7440-62-2
		Zinc		87	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-9	Soil	Antimony	J	0.89	10	N	N	11/13/2005	6010B	680-10269-3	7440-36-0
		Arsenic		7.7	7.0	Y	N				7440-38-2
		Barium		26	5500	N	N				7440-39-3
		Beryllium	J	0.38	0.4	N	N				7440-41-7
		Cadmium	U	0.26	39	N	N				7440-43-9
		Chromium		9.6	390	N	N				7440-47-3
		Copper		13	3100	N	N				7440-50-8
		Lead	B	95	150	N	N				7439-92-1
		Manganese		180	390	N	N				7439-96-5
		Mercury		0.066	23	N	N		7471A		7439-97-6
		Nickel		9.6	1000	N	N				7440-02-0
		Selenium	U	1	390	N	N				7782-49-2
		Silver	U	0.12	200	N	N				7440-22-4
		Thallium	U	1.5	5.5	N	N				7440-28-0
		Vanadium		26	550	N	N				7440-62-2
		Zinc		63	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

TABLE 7-56
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Metals Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-10	Soil	Antimony	J	0.57	10	N	N	11/13/2005	6010B	680-10269-4	7440-36-0
		Arsenic		6.6	7.0	N	N				7440-38-2
		Barium		23	5500	N	N				7440-39-3
		Beryllium	J	0.35	0.4	N	N				7440-41-7
		Cadmium	U	0.26	39	N	N				7440-43-9
		Chromium		8.7	390	N	N				7440-47-3
		Copper		12	3100	N	N				7440-50-8
		Lead	B	130	150	N	N				7439-92-1
		Manganese		150	390	N	N				7439-96-5
		Mercury		0.07	23	N	N		7471A		7439-97-6
		Nickel		9	1000	N	N				7440-02-0
		Selenium	U	1.1	390	N	N				7782-49-2
		Silver	U	0.12	200	N	N				7440-22-4
		Thallium	U	1.5	5.5	N	N				7440-28-0
		Vanadium		25	550	N	N				7440-62-2
		Zinc		61	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-11	Soil	Antimony		5.6	10	N	N	11/13/2005	6010B	680-10269-5	7440-36-0
		Arsenic		6.3	7.0	N	N				7440-38-2
		Barium		180	5500	N	N				7440-39-3
		Beryllium	J	0.33	0.4	N	N				7440-41-7
		Cadmium	U	0.27	39	N	N				7440-43-9
		Chromium		10	390	N	N				7440-47-3
		Copper		37	3100	N	N				7440-50-8
		Lead	B	130	150	N	N				7439-92-1
		Manganese		140	390	N	N		7471A		7439-96-5
		Mercury		0.089	23	N	N				7439-97-6
		Nickel		9.4	1000	N	N				7440-02-0
		Selenium	U	1.1	390	N	N				7782-49-2
		Silver	U	0.12	200	N	N				7440-22-4
		Thallium	U	1.6	5.5	N	N				7440-28-0
		Vanadium		27	550	N	N				7440-62-2
		Zinc		130	6000	N	N				7440-66-6
		Cyanide			200	N	N				57-12-5

"E"= Estimated value due to the presence of interference

"B"=Result is less than the reporting limit but greater than instrument detection limit

TABLE 7-57
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NONVEG-4	Soil	Aroclor 1016	U	0.017							
		Aroclor 1221	U	0.017							
		Aroclor 1232	U	0.017							
		Aroclor 1242	U	0.017							
		Aroclor 1248	U	0.017							
		Aroclor 1254	U	0.017							
		Aroclor 1260	U	0.017							
		Total PCBs	**U**	0.18	10	N	N	8/31/2005	EPA8082	54794-2	

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-5	Soil	Aroclor 1016	U	0.18							
		Aroclor 1221	U	0.18							
		Aroclor 1232	U	0.18							
		Aroclor 1242	U	0.18							
		Aroclor 1248	U	0.18							
		Aroclor 1254	U	0.18							
		Aroclor 1260	U	0.18							
		Total PCBs	**U**	0.18	10	N	N	8/31/2005	EPA8082	54794-6	

TABLE 7-58
Tank Farm 5 Corrugated Shed and Non-Vegetative Area
Pesticide Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-NONVEG-4	Soil	Aldrin	0.011	U	NA	NA	N	8/31/2005	EPA 8081	54794-2	309-00-2
		a-BHC	0.011	U	NA	NA	N				319-84-6
		b-BHC	0.011	U	NA	NA	N				319-85-7
		d-BHC	0.011	U	NA	NA	N				319-86-8
		g-BHC	0.011	U	NA	NA	N				58-89-9
		4,4'-DDD	0.011	U	NA	NA	N				72-54-8
		4,4'-DDE	0.011	0.156	NA	NA	N				72-55-9
		4,4'-DDT	0.011	0.13	NA	NA	N				50-29-3
		Dieldrin	0.011	U	0.04	N	N				60-57-1
		Endosulfan I	0.011	U	NA	NA	N				959-98-8
		Endosulfan II	0.011	U	NA	NA	N				33213-65-9
		Endosulfan sulfate	0.011	U	NA	NA	N				1031-07-8
		Endrin	0.011	U	NA	NA	N				72-20-8
		Endrin aldehyde	0.011	U	NA	NA	N				7421-93-4
		Endrin ketone	0.011	U	NA	NA	N				53494-70-5
		Heptachlor	0.011	U	NA	NA	N				76-44-8
		Heptachlor epoxide (B)	0.011	U	NA	NA	N				1024-57-3
		Methoxychlor	0.017	U	NA	NA	N				72-43-5
		Chlordane	0.036	U	0.50	N	N				
		Toxaphene	0.073	U	NA	NA	N				8001-35-2

SAMPLE ID	MATRIX	PARAMETER	QUAT (ppm)	RESULT (ppm)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue (Y/N)?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-L-SHED-5	Soil	Aldrin	0.12	U	NA	NA	**Y**	8/31/2005	EPA 8081	54794-6	309-00-2
		a-BHC	0.12	U	NA	NA	**Y**				319-84-6
		b-BHC	0.12	U	NA	NA	N				319-85-7
		d-BHC	0.12	U	NA	NA	N				319-86-8
		g-BHC	0.12	U	NA	NA	N				58-89-9
		4,4'-DDD	0.12	U	NA	NA	N				72-54-8
		4,4'-DDE	0.12	0.156	NA	NA	N				72-55-9
		4,4'-DDT	0.12	0.13	NA	NA	N				50-29-3
		Dieldrin	0.12	U	0.04	N	**Y**				60-57-1
		Endosulfan I	0.12	U	NA	NA	N				959-98-8
		Endosulfan II	0.12	U	NA	NA	N				33213-65-9
		Endosulfan sulfate	0.12	U	NA	NA	N				1031-07-8
		Endrin	0.12	U	NA	NA	N				72-20-8
		Endrin aldehyde	0.12	U	NA	NA	N				7421-93-4
		Endrin ketone	0.12	U	NA	NA	N				53494-70-5
		Heptachlor	0.12	U	NA	NA	**Y**				76-44-8
		Heptachlor epoxide (B)	0.12	U	NA	NA	**Y**				1024-57-3
		Methoxychlor	0.18	U	NA	NA	N				72-43-5
		Chlordane	0.4	U	0.50	N	N				
		Toxaphene	0.79	U	NA	NA	**Y**				8001-35-2

TABLE 7-59
Tank Farm 4 Fenceline Survey
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-1	Soil	Total Petroleum Hydrocarbons (TPH)		50	500	N	N	11/13/2004	SW8015B	598184	
TF4-Fence-2	Soil	Total Petroleum Hydrocarbons (TPH)		134	500	N	N	11/13/2004	SW8015B	598185	
TF4-Fence-3	Soil	Total Petroleum Hydrocarbons (TPH)		62	500	N	N	11/13/2004	SW8015B	598186	
TF4-Fence-4	Soil	Total Petroleum Hydrocarbons (TPH)	U	24	500	N	N	12/1/2004	SW8015B	598953	
TF4-Fence-5	Soil	Total Petroleum Hydrocarbons (TPH)		54	500	N	N	12/1/2004	SW8015B	598954	

TABLE 7-60
Tank Farm 4 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-1	Soil	Acenaphthene	U	0.3	43	N	N	11/18/2004	SW8270	53026-1	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-60
Tank Farm 4 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-2	Soil	Acenaphthene	U	0.33	43	N	N	11/18/2004	SW8270	53026-2	83-32-9
		Acenaphthylene	U	0.33	23	N	N				208-96-8
		Anthracene	U	0.33	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.33	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.33	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.33	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.33	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.33	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.33	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.33	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.33	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.33	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.33	310	N	N				106-47-8
		2-Chlorophenol	U	0.33	50	N	N				95-57-8
		Chrysene	U	0.33	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.33	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.33	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.33	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.33	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.33	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.33	30	N	N				120-83-2
		Diethyl phthalate	U	0.33	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.33	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.33	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.33	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.33	0.9	N	N				121-14-2
		Fluoranthene	U	0.33	20	N	N				206-44-0
		Fluorene	U	0.33	28	N	N				86-73-7
		Hexachlorobenzene	U	0.33	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.33	8.2	N	N				87-68-3
		Hexachloroethane	U	0.33	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.33	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.33	123	N	N				91-57-6
		Naphthalene	U	0.33	54	N	N				91-20-3
		Pentachlorophenol	U	0.33	5.3	N	N				87-86-5
		Phenanthrene	U	0.33	40	N	N				85-01-8
		Phenol	U	0.33	6000	N	N				108-95-2
		Pyrene	U	0.33	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.33	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.33	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.33	58	N	N				88-06-2

TABLE 7-60
Tank Farm 4 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-3	Soil	Acenaphthene	U	0.3	43	N	N	11/18/2004	SW8270	53026-3	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-60
Tank Farm 4 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-4	Soil	Acenaphthene	U	0.31	43	N	N	11/19/2004	SW8270	53046-1	83-32-9
		Acenaphthylene	U	0.31	23	N	N				208-96-8
		Anthracene	U	0.31	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.31	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.31	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.31	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.31	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.31	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.31	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.31	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.31	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.31	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.31	310	N	N				106-47-8
		2-Chlorophenol	U	0.31	50	N	N				95-57-8
		Chrysene	U	0.31	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.31	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.31	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.31	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.31	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.31	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.31	30	N	N				120-83-2
		Diethyl phthalate	U	0.31	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.31	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.31	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.31	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.31	0.9	N	N				121-14-2
		Fluoranthene	U	0.31	20	N	N				206-44-0
		Fluorene	U	0.31	28	N	N				86-73-7
		Hexachlorobenzene	U	0.31	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.31	8.2	N	N				87-68-3
		Hexachloroethane	U	0.31	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.31	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.31	123	N	N				91-57-6
		Naphthalene	U	0.31	54	N	N				91-20-3
		Pentachlorophenol	U	0.31	5.3	N	N				87-86-5
		Phenanthrene	U	0.31	40	N	N				85-01-8
		Phenol	U	0.31	6000	N	N				108-95-2
		Pyrene	U	0.31	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.31	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.31	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.31	58	N	N				88-06-2

TABLE 7-60
Tank Farm 4 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-5	Soil	Acenaphthene	U	0.33	43	N	N	11/19/2004	SW8270	53046-2	83-32-9
		Acenaphthylene	U	0.33	23	N	N				208-96-8
		Anthracene	U	0.33	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.33	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.33	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.33	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.33	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.33	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.33	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.33	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.33	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.33	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.33	310	N	N				106-47-8
		2-Chlorophenol	U	0.33	50	N	N				95-57-8
		Chrysene	U	0.33	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.33	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.33	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.33	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.33	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.33	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.33	30	N	N				120-83-2
		Diethyl phthalate	U	0.33	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.33	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.33	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.33	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.33	0.9	N	N				121-14-2
		Fluoranthene	U	0.33	20	N	N				206-44-0
		Fluorene	U	0.33	28	N	N				86-73-7
		Hexachlorobenzene	U	0.33	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.33	8.2	N	N				87-68-3
		Hexachloroethane	U	0.33	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.33	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.33	123	N	N				91-57-6
		Naphthalene	U	0.33	54	N	N				91-20-3
		Pentachlorophenol	U	0.33	5.3	N	N				87-86-5
		Phenanthrene	U	0.33	40	N	N				85-01-8
		Phenol	U	0.33	6000	N	N				108-95-2
		Pyrene	U	0.33	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.33	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.33	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.33	58	N	N				88-06-2

TABLE 7-61
Tank Farm 4 Fenceline Survey
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-1	Soil	Lead		259	150	Y	N	11/23/2004	SW6010B	598184	7439-92-1
TF4-Fence-2	Soil	Lead		758	150	Y	N	11/23/2004	SW6010B	598185	7439-92-1
TF4-Fence-3	Soil	Lead		591	150	Y	N	11/23/2004	SW6010B	598186	7439-92-1
TF4-Fence-4	Soil	Lead		408	150	Y	N	12/1/2004	SW6010B	598953	7439-92-1
TF4-Fence-5	Soil	Lead		934	150	Y	N	12/1/2004	SW6010B	598954	7439-92-1
TF4-FENCE-1A	Soil	Lead		136000	150	Y	N		SW6010B	611088	7439-92-1
TF4-FENCE-2A	Soil	Lead		144000	150	Y	N		SW6010B	611089	7439-92-1
TF4-FENCE-3A	Soil	Lead		135000	150	Y	N		SW6010B	611090	7439-92-1

TABLE 7-62
Tank Farm 4 Fenceline Survey
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF4-Fence-1	Soil	Total PCBs	U	0.018	10	N	N	11/17/2004	EPA 8082	598184	
TF4-Fence-2	Soil	Total PCBs	U	0.026	10	N	N	11/16/2004	EPA 8082	598185	
TF4-Fence-3	Soil	Total PCBs	U	0.018	10	N	N	11/16/2004	EPA 8082	598186	
TF4-Fence-4	Soil	Total PCBs	U	0.018	10	N	N	12/1/2004	EPA 8082	598953	
TF4-Fence-5	Soil	Total PCBs	U	0.02	10	N	N	12/1/2004	EPA 8082	598954	

TABLE 7-63
Tank Farm 5 Fenceline Survey
TPH Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-1	Soil	Total Petroleum Hydrocarbons (TPH)		108	500	N	N	11/13/2004	SW8015B	53026-4	
TF5-Fence-2	Soil	Total Petroleum Hydrocarbons (TPH)		161	500	N	N	11/13/2004	SW8015B	53026-5	
TF5-Fence-3	Soil	Total Petroleum Hydrocarbons (TPH)		155	500	N	N	11/13/2004	SW8015B	53026-6	
TF5-Fence-4	Soil	Total Petroleum Hydrocarbons (TPH)	U	108	500	N	N	11/13/2004	SW8015B	53026-7	
TF5-Fence-4D	Soil	Total Petroleum Hydrocarbons (TPH)	U	111	500	N	N	11/13/2004	SW8015B	53026-9	
TF5-Fence-5	Soil	Total Petroleum Hydrocarbons (TPH)		104	500	N	N	11/13/2004	SW8015B	53026-8	

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-1	Soil	Acenaphthene	U	0.29	43	N	N	11/18/2004	SW8270	53026-4	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-2	Soil	Acenaphthene	U	0.29	43	N	N	11/18/2004	SW8270	53026-5	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-3	Soil	Acenaphthene	U	0.3	43	N	N	11/18/2004	SW8270	53026-6	83-32-9
		Acenaphthylene	U	0.3	23	N	N				208-96-8
		Anthracene	U	0.3	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.3	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.3	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.3	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.3	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.3	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.3	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.3	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.3	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.3	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.3	310	N	N				106-47-8
		2-Chlorophenol	U	0.3	50	N	N				95-57-8
		Chrysene	U	0.3	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.3	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.3	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.3	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.3	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.3	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.3	30	N	N				120-83-2
		Diethyl phthalate	U	0.3	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.3	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.3	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.3	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.3	0.9	N	N				121-14-2
		Fluoranthene	U	0.3	20	N	N				206-44-0
		Fluorene	U	0.3	28	N	N				86-73-7
		Hexachlorobenzene	U	0.3	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.3	8.2	N	N				87-68-3
		Hexachloroethane	U	0.3	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.3	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.3	123	N	N				91-57-6
		Naphthalene	U	0.3	54	N	N				91-20-3
		Pentachlorophenol	U	0.3	5.3	N	N				87-86-5
		Phenanthrene	U	0.3	40	N	N				85-01-8
		Phenol	U	0.3	6000	N	N				108-95-2
		Pyrene	U	0.3	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.3	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.3	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.3	58	N	N				88-06-2

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-4	Soil	Acenaphthene	U	0.29	43	N	N	11/18/2004	SW8270	53026-7	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-4D	Soil	Acenaphthene	U	0.29	43	N	N	11/18/2004	SW8270	53026-9	83-32-9
		Acenaphthylene	U	0.29	23	N	N				208-96-8
		Anthracene	U	0.29	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.29	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.29	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.29	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.29	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.29	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.29	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.29	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.29	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.29	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.29	310	N	N				106-47-8
		2-Chlorophenol	U	0.29	50	N	N				95-57-8
		Chrysene	U	0.29	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.29	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.29	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.29	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.29	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.29	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.29	30	N	N				120-83-2
		Diethyl phthalate	U	0.29	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.29	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.29	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.29	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.29	0.9	N	N				121-14-2
		Fluoranthene	U	0.29	20	N	N				206-44-0
		Fluorene	U	0.29	28	N	N				86-73-7
		Hexachlorobenzene	U	0.29	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.29	8.2	N	N				87-68-3
		Hexachloroethane	U	0.29	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.29	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.29	123	N	N				91-57-6
		Naphthalene	U	0.29	54	N	N				91-20-3
		Pentachlorophenol	U	0.29	5.3	N	N				87-86-5
		Phenanthrene	U	0.29	40	N	N				85-01-8
		Phenol	U	0.29	6000	N	N				108-95-2
		Pyrene	U	0.29	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.29	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.29	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.29	58	N	N				88-06-2

TABLE 7-64
Tank Farm 5 Fenceline Survey
SVOC Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-5	Soil	Acenaphthene	U	0.27	43	N	N	11/18/2004	SW8270	53026-8	83-32-9
		Acenaphthylene	U	0.27	23	N	N				208-96-8
		Anthracene	U	0.27	35	N	N				120-12-7
		Benzo(a)anthracene	U	0.27	0.9	N	N				56-55-3
		Benzo(a)pyrene	U	0.27	0.4	N	N				50-32-8
		Benzo(b)fluoranthene	U	0.27	0.9	N	N				205-99-2
		Benzo(g,h,i)perylene	U	0.27	0.8	N	N				191-24-2
		Benzo(k)fluoranthene	U	0.27	0.9	N	N				207-08-9
		1,1-Biphenyl	U	0.27	0.8	N	N				92-52-4
		bis(2-Ethylhexyl)phthalate	U	0.27	46	N	N				117-81-7
		bis(2-Chloroethyl)ether	U	0.27	0.6	N	N				111-44-4
		bis(2-chloroisopropyl)ether	U	0.27	9.1	N	N				108-60-1
		4-Chloroaniline	U	0.27	310	N	N				106-47-8
		2-Chlorophenol	U	0.27	50	N	N				95-57-8
		Chrysene	U	0.27	0.4	N	N				218-01-9
		Dibenzo(a,h)anthracene	U	0.27	0.4	N	N				53-70-3
		1,2-Dichlorobenzene	U	0.27	510	N	N				95-50-1
		1,3-Dichlorobenzene	U	0.27	430	N	N				541-73-1
		1,4-Dichlorobenzene	U	0.27	27	N	N				106-46-7
		3,3'-Dichlorobenzidine	U	0.27	1.4	N	N				91-94-1
		2,4-Dichlorophenol	U	0.27	30	N	N				120-83-2
		Diethyl phthalate	U	0.27	340	N	N				84-66-2
		2,4-Dimethyl phenol	U	0.27	1400	N	N				105-67-9
		Dimethyl phthalate	U	0.27	1900	N	N				131-11-3
		2,4-Dinitrophenol	U	0.27	160	N	N				51-28-5
		2,4-Dinitrotoluene	U	0.27	0.9	N	N				121-14-2
		Fluoranthene	U	0.27	20	N	N				206-44-0
		Fluorene	U	0.27	28	N	N				86-73-7
		Hexachlorobenzene	U	0.27	0.4	N	N				118-74-1
		Hexachlorobutadiene	U	0.27	8.2	N	N				87-68-3
		Hexachloroethane	U	0.27	46	N	N				67-72-1
		Indeno(1,2,3-cd)pyrene	U	0.27	0.9	N	N				193-39-5
		2-Methyl naphthalene	U	0.27	123	N	N				91-57-6
		Naphthalene	U	0.27	54	N	N				91-20-3
		Pentachlorophenol	U	0.27	5.3	N	N				87-86-5
		Phenanthrene	U	0.27	40	N	N				85-01-8
		Phenol	U	0.27	6000	N	N				108-95-2
		Pyrene	U	0.27	13	N	N				129-00-0
		1,2,4-Trichlorobenzene	U	0.27	96	N	N				120-82-1
		2,4,5-Trichlorophenol	U	0.27	330	N	N				95-95-4
		2,4,6- Trichlorophenol	U	0.27	58	N	N				88-06-2

TABLE 7-65
Tank Farm 5 Fenceline Survey
Lead Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-1	Soil	Lead		137	150	N	N	11/23/2004	SW6010B	598187	7439-92-1
TF5-Fence-2	Soil	Lead		168	150	Y	N	11/23/2004	SW6010B	598188	7439-92-1
TF5-Fence-3	Soil	Lead		109	150	N	N	11/23/2004	SW6010B	598189	7439-92-1
TF5-Fence-4	Soil	Lead		149	150	N	N	11/23/2004	SW6010B	598190	7439-92-1
TF5-Fence-4D	Soil	Lead		139	150	N	N	11/23/2004	SW6010B	598192	7439-92-1
TF5-Fence-5	Soil	Lead		319	150	Y	N	11/23/2004	SW6010B	598191	7439-92-1
TF5-FENCE-1A	Soil	Lead		138000	150	Y	N		SW6010B	611340	7439-92-1

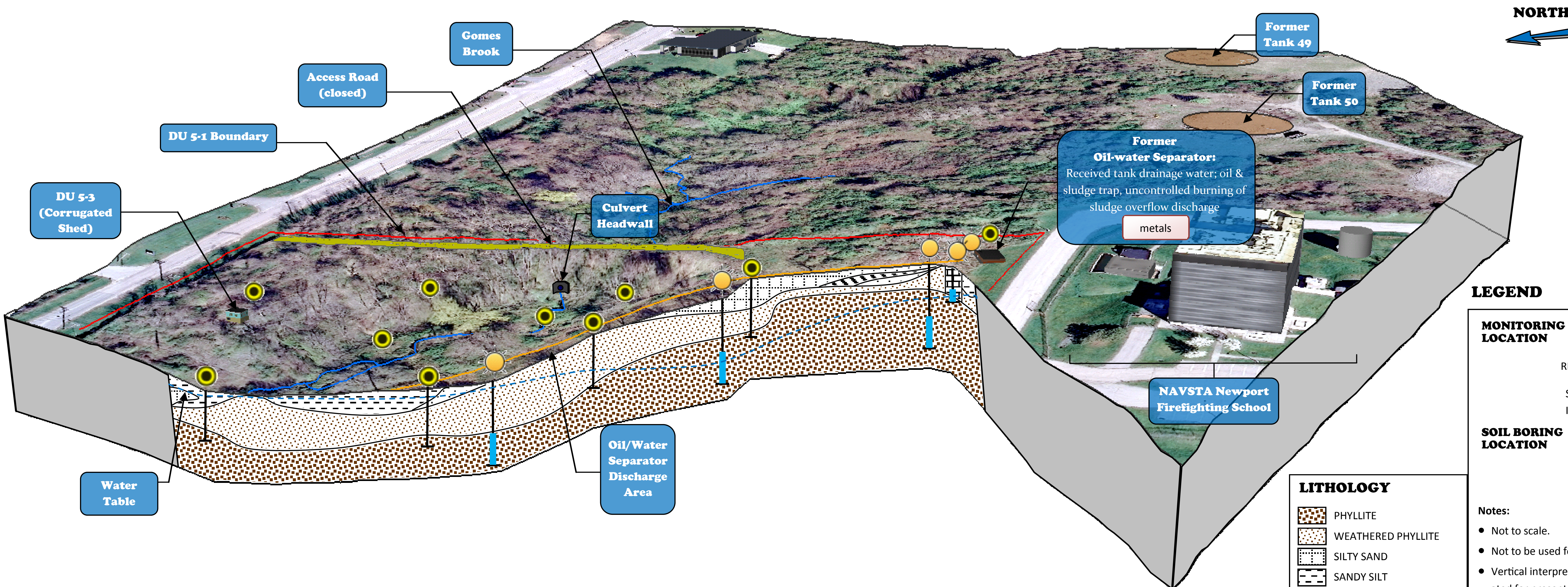
TABLE 7-66
Tank Farm 5 Fenceline Survey
PCB Analytical Data

SAMPLE ID	MATRIX	PARAMETER	QUAL	RESULT (mg/kg)	RIDEM Residential Criteria (mg/kg)	Exceed RIDEM Residential Criteria? (Y/N)	Reporting Limit Issue?	Date Analyzed	Method	Lab ID#	CAS NOS
TF5-Fence-1	Soil	Total PCBs	U	0.017	10	N	N	11/17/2004	EPA 8082	53026-4	
TF5-Fence-2	Soil	Total PCBs	U	0.018	10	N	N	11/17/2004	EPA 8082	53026-5	
TF5-Fence-3	Soil	Total PCBs	U	0.018	10	N	N	11/17/2004	EPA 8082	53026-6	
TF5-Fence-4	Soil	Total PCBs	U	0.017	10	N	N	11/17/2004	EPA 8082	53026-7	
TF5-Fence-4D	Soil	Total PCBs	U	0.017	10	N	N	11/17/2004	EPA 8082	53026-9	
TF5-Fence-5	Soil	Total PCBs	U	0.017	10	N	N	11/17/2004	EPA 8082	53026-8	

A3 - CONCEPTUAL SITE MODEL

NAVAL STATION NEWPORT

SITE 13, TANK FARM 5, DECISION UNIT 5-1



LEGEND

MONITORING WELL LOCATION

RISER PIPE

SCREENED INTERVAL

SOIL BORING LOCATION

LITHOLOGY

- PHYLLITE
- WEATHERED PHYLLITE
- SILTY SAND
- SANDY SILT
- SAND
- SILTY SAND WITH GRAVEL
- FILL

Notes:

- Not to scale.
- Not to be used for design.
- Vertical interpretation is exaggerated for presentation.
- Lithology interpreted from Figure 1-6 of the Feasibility Study Report for DU 5-1.

SITE RISKS* AND REMEDIATION GOALS

* Risk includes ILCR > 10^{-6} and/or HI > 1

SOIL

Exposure Scenario	COC	Surface Soil RG	Subsurface Soil RG
Construction Workers Exposed to Dust from Excavations (current use)	arsenic	17 mg/kg	24 mg/kg
Construction Workers Exposed to Dust from Excavations (current use)	manganese		585/1086 mg/kg[3]
Risk to Residents Living at the Site (potential future use)	arsenic	17 mg/kg	24 mg/kg
Industrial Workers Exposed to Surface Soil (potential future use); Restricted Recreational Users[1] Exposed to Surface Soil (current use)	arsenic	17 mg/kg	

GROUNDWATER

Exposure Scenario	COC	Groundwater RG
Risk to Residents Using GW for Residential Purposes (potential future use)	arsenic	N/A
	cobalt	3.3 µg/L
	iron	10,900 µg/L
	manganese	300 µg/L

Notes:

1. Restricted Recreational User exposure is similar to Industrial.
2. Federal Health Advisory.
3. RG adjusted based on manganese values for two soil types (Ne/Pm) for which background was calculated.

Acronyms

COC - Chemical of Concern

RG - Remediation Goal

N/A - Not Applicable, see ROD for details.

ILCR - Incremental Lifetime Cancer Risk

HI - Hazard Index

TETRA TECH

Naval Station Newport

Middletown, Rhode Island

CONCEPTUAL SITE MODEL

Site 13, Tank Farm 5, DU 5-1

Feasibility Study

File: O:\...Site 13\Category 1\ROD...	Scale: No Scale (perspective view)
Figure Number: A-3	Date: 11/1/2013

A4 - CHEMICAL DATA FROM THE DATA GAPS ASSESSMENT

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)									
1,1,1-TRICHLOROETHANE	8700000	38000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	7.4 UJ	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 U	5 UJ
1,1,2-TRICHLOROETHANE	1100	5300	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	7.4 U	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 UJ	5 UJ
1,1-DICHLOROETHANE	3300	17000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,1-DICHLOROETHENE	240000	1100000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	7.4 UJ	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 UJ	5 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	7.4 UJ	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 UJ	5 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	7.4 UJ	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 UJ	5 UJ
1,2-DIBROMOETHANE	34	170	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,2-DICHLOROBENZENE	1900000	9800000	7.4 UJ	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,2-DICHLOROETHANE	430	2200	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,2-DICHLOROPROPANE	890	4500	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,3-DICHLOROBENZENE			7.4 UJ	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
1,4-DICHLOROBENZENE	2400	12000	7.4 UJ	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
2-BUTANONE	28000000	200000000	7.4 UJ	6.4 UJ	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
2-HEXANONE	210000	1400000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
4-METHYL-2-PENTANONE	5300000	53000000	7.4 U	6.4 U	5.7 UJ	4.7 U	5 UJ	4.7 UJ	5 UJ
ACETONE	61000000	630000000	7.4 U	56	65 J	13	61 J	11 J	6 J
BENZENE	1100	5400	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
BROMOCHLOROMETHANE			7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
BROMODICHLOROMETHANE	270	1400	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
BROMOFORM	61000	220000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
BROMOMETHANE	7300	32000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
BTEX			7.4 U	6.4 U	1.8 J	4.7 U	5 UJ	4.7 U	5 UJ
CARBON DISULFIDE	820000	3700000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CARBON TETRACHLORIDE	610	3000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CHLOROBENZENE	290000	1400000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CHLORODIBROMOMETHANE	680	3300	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CHLOROETHANE	15000000	61000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CHLOROFORM	290	1500	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CHLOROMETHANE	120000	500000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
CYCLOHEXANE	7000000	29000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
DICHLORODIFLUOROMETHANE	180000	780000	7.4 U	6.4 U	5.7 UJ	4.7 UJ	5 UJ	4.7 U	5 UJ
ETHYLBENZENE	5400	27000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
ISOPROPYLBENZENE	2100000	11000000	7.4 U	6.4 U	5.7 U	6.2	5 UJ	4.7 U	5 UJ
M+P-XYLENES			7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
METHYL ACETATE	78000000	1E+09	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
METHYL CYCLOHEXANE			7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
METHYL TERT-BUTYL ETHER	43000	220000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
METHYLENE CHLORIDE	11000	53000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 UJ	5 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
O-XYLENE	3800000	19000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
STYRENE	6300000	36000000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TETRACHLOROETHENE	550	2600	7.4 U	6.4 U	300 U	230 UJ	5 UJ	4.7 U	340 U
TOLUENE	5000000	45000000	7.4 U	6.4 U	1.8 J	4.7 U	5 UJ	4.7 U	5 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TOTAL CHLORINATED ETHENES			7.4 U	6.4 U	64.6 U	49.8 UJ	5 UJ	4.7 U	72 UJ
TOTAL CHLORINATED VOCS			7.4 UJ	6.4 U	16.6 UJ	13 UJ	5 UJ	4.7 UJ	17.4 UJ
TOTAL XYLENES	630000	2700000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TRANS-1,2-DICHLOROETHENE	150000	690000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TRICHLOROETHENE	2800	14000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
VINYL CHLORIDE	60	1700	7.4 U	6.4 U	5.7 U	4.7 U	5 UJ	4.7 U	5 UJ
SEMIVOLATILES (UG/KG)									
1,1-BIPHENYL	3900000	51000000	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 U	420 UJ
1,2,4,5-TETRACHLOROBENZENE	18000	180000	4.9 U	4.7 U	3.9 UJ	3.9 UJ	4 UJ	3.9 UJ	4.2 UJ
1,4-DIOXANE	44000	160000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 U	420 UJ
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	4.9 U	4.7 U	3.9 UJ	3.9 UJ	4 UJ	3.9 U	4.2 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
2,4,5-TRICHLOROPHENOL	6100000	62000000	990 U	940 U	780 UJ	790 UJ	800 UJ	780 U	860 UJ
2,4,6-TRICHLOROPHENOL	44000	160000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
2,4-DICHLOROPHENOL	180000	1800000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
2,4-DIMETHYLPHENOL	1200000	12000000	4.9 UJ	4.7 UJ	3.9 UJ	3.9 UJ	390 UJ	390 U	4.2 UJ
2,4-DINITROPHENOL	120000	1200000	990 UJ	940 UJ	780 UJ	790 UJ	800 UJ	780 UJ	860 UJ
2,4-DINITROTOLUENE	1600	5500	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
2,6-DINITROTOLUENE	61000	620000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
2-CHLORONAPHTHALENE	6300000	82000000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
2-CHLOROPHENOL	390000	5100000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
2-METHYLNAPHTHALENE	310000	4100000	4.9 UJ	4.7 UJ	3.9 UJ	3.9 UJ	4 UJ	3.9 U	4.2 UJ
2-METHYLPHENOL	3100000	31000000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 UJ	4.2 U
2-NITROANILINE	610000	6000000	990 U	940 U	780 UJ	790 UJ	800 UJ	780 U	860 UJ
2-NITROPHENOL			490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
3,3'-DICHLOROBENZIDINE	1100	3800	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
3-NITROANILINE			990 U	940 U	780 UJ	790 UJ	800 UJ	780 U	860 UJ
4,6-DINITRO-2-METHYLPHENOL	4900	49000	990 UJ	940 UJ	780 UJ	790 UJ	800 UJ	780 UJ	860 UJ
4-BROMOPHENYL PHENYL ETHER			490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
4-CHLORO-3-METHYLPHENOL	6100000	62000000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
4-CHLOROANILINE	2400	8600	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 UJ	420 UJ
4-CHLOROPHENYL PHENYL ETHER			490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
4-METHYLPHENOL	310000	3100000	4.9 U	4.7 U	3.9 UJ	3.9 UJ	4 UJ	3.9 UJ	4.2 UJ
4-NITROANILINE	24000	86000	990 U	940 U	780 UJ	790 UJ	800 UJ	780 U	860 UJ
4-NITROPHENOL			990 U	940 U	780 U	790 U	800 UJ	780 U	860 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
ACENAPHTHENE	3400000	33000000	4.9 U	7.7	3.9 U	3.9 U	5.2 J	4.2	4.2 U
ACENAPHTHYLENE	3400000	33000000	4.9 U	12	3.9 U	3.9 U	26 J	12	7.6
ACETOPHENONE	7800000	100000000	490 U	470 UJ	390 UJ	390 UJ	390 UJ	390 U	420 UJ
ANTHRACENE	17000000	170000000	5.8	27	3.9 U	3.9 U	25 J	15	6.9
ATRAZINE	2100	7500	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
BENZALDEHYDE	7800000	100000000	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 UJ	420 UJ
BENZO(A)ANTHRACENE	150	2100	35	230	5.9	8.1	89 J	69	29
BENZO(A)PYRENE	15	210	42	300	7	8.9	92 J	76	33
BENZO(B)FLUORANTHENE	150	2100	76 J	530 J	10	15	130 J	130	52
BENZO(G,H,I)PERYLENE	1700000	17000000	39	270	6	7.4	63 J	57	25
BENZO(K)FLUORANTHENE	1500	21000	24 J	200 J	4.8 J	7.5 J	56 J	37	20 J
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
BIS(2-CHLOROETHYL)ETHER	210	1000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	490 U	470 U	390 U	390 U	58 J	390 U	420 U
BUTYL BENZYL PHTHALATE	260000	910000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
CAPROLACTAM	31000000	310000000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
CARBAZOLE			490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
CHRYSENE	15000	210000	44	300	8.9	12	110 J	84	39
DIBENZO(A,H)ANTHRACENE	15	210	8.9 J	57 J	3.9 U	3.9 U	21 J	19	7.4
DIBENZOFURAN	78000	1000000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
DIETHYL PHTHALATE	49000000	490000000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
DIMETHYL PHTHALATE			490 U	470 U	390 U	390 U	390 UJ	390 U	420 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
DI-N-BUTYL PHTHALATE	6100000	62000000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
DI-N-OCTYL PHTHALATE			490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
FLUORANTHENE	2300000	22000000	91	600	14	20	190 J	150	59
FLUORENE	2300000	22000000	4.9 U	11	3.9 U	3.9 U	9.7 J	5.5	4.2 U
HEXACHLOROBENZENE	300	1100	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
HEXACHLOROBUTADIENE	6200	22000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
HEXACHLOROCYCLOPENTADIENE	370000	3700000	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 UJ	420 UJ
HEXACHLOROETHANE	35000	120000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
HIGH MOLECULAR WEIGHT PAHS			463 J	3160 J	73.5 J	102 J	968 J	802	337 J
INDENO(1,2,3-CD)PYRENE	150	2100	33 J	240 J	4.9	6.4	57 J	50	21
ISOPHORONE	510000	1800000	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
LOW MOLECULAR WEIGHT PAHS			42.8 J	258 J	7.7 J	9.5 J	166 J	98.7	40.5 J
NAPHTHALENE	3600	18000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
NITROBENZENE	4800	24000	490 UJ	470 UJ	390 UJ	390 UJ	390 UJ	390 U	420 UJ
N-NITROSO-DI-N-PROPYLAMINE	69	250	490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
N-NITROSODIPHENYLAMINE	99000	350000	490 U	470 U	390 U	390 U	390 UJ	390 U	420 U
PENTACHLOROPHENOL	3000	9000	990 UJ	940 UJ	39 UJ	39 UJ	40 UJ	39 UJ	42 UJ
PHENANTHRENE	1700000	17000000	37	200	7.7	9.5	100 J	62	26
PHENOL	18000000	180000000	4.9 U	4.7 U	3.9 U	3.9 U	4 UJ	3.9 U	4.2 U
PYRENE	1700000	17000000	70	430	12	17	160 J	130	52
TOTAL CARCINOGENIC PAHS-HALFND	15	210	263 J	1860 J	43.4 J	59.8 J	555 J	465	201 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
TOTAL CARCINOGENIC PAHS-POS	15	210	263 J	1860 J	41.5 J	57.9 J	555 J	465	201 J
TOTAL CHLORINATED VOCS			490 U	470 U	390 UJ	390 UJ	390 UJ	390 U	420 UJ
TOTAL PAHS			506 J	3410 J	81.2 J	112 J	1130 J	901	378 J
PESTICIDES/PCBS (UG/KG)									
4,4'-DDD	2000	7200	4.8 U	5.1	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U
4,4'-DDE	1400	5100	4.8 U	5.5	3.9 U	3.8 U	3.9 U	6.6	4.3 U
4,4'-DDT	1700	7000	4.8 U	4.6 U	3.9 UJ	3.8 UJ	3.9 UJ	5.6 J	4.3 UJ
ALDRIN	29	100	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
ALPHA-BHC	77	270	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
ALPHA-CHLORDANE	1600	6500	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
AROCLOR-1016	3900	21000	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1221	140	540	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1232	140	540	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1242	220	740	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1248	220	740	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1254	220	740	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1260	220	740	48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1262			48 U	46 U	39 U	38 U	39 U	39 U	43 U
AROCLOR-1268			48 U	46 U	39 U	38 U	39 U	39 U	43 U
BETA-BHC	270	960	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
DELTA-BHC	77	270	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
DIELDRIN	30	110	4.8 U	4.6 U	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U
ENDOSULFAN I	370000	3700000	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
ENDOSULFAN II	370000	3700000	4.8 U	4.6 U	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
ENDOSULFAN SULFATE	370000	3700000	4.8 U	4.6 U	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U
ENDRIN	18000	180000	4.8 U	4.6 UJ	3.9 UJ	3.8 UJ	3.9 UJ	3.9 UJ	4.3 UJ
ENDRIN ALDEHYDE	18000	180000	4.8 U	4.6 U	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U
ENDRIN KETONE	18000	180000	4.8 U	4.6 U	3.9 U	3.8 U	3.9 U	3.9 U	4.3 U
GAMMA-BHC (LINDANE)	520	2100	2.5 U	2.4 U	2 UJ	2 UJ	2 UJ	2 UJ	2.2 UJ
GAMMA-CHLORDANE	1600	6500	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
HEPTACHLOR	110	380	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
HEPTACHLOR EPOXIDE	53	190	2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
METHOXYCHLOR	310000	3100000	25 U	24 U	20 UJ	20 UJ	20 UJ	20 UJ	22 UJ
TOTAL AROCLOR	220	740	48 U	46 U	39 U	38 U	39 U	39 U	43 U
TOTAL CHLORDANE			2.5 U	2.4 U	2 U	2 U	2 U	2 U	2.2 U
TOTAL DDD/DDE/DDT			4.8 U	10.6	3.9 UJ	3.8 UJ	3.9 UJ	12.2 J	4.3 UJ
TOXAPHENE	440	1600	250 U	240 U	200 U	200 U	200 U	200 U	220 U
METALS (MG/KG)									
ALUMINUM	77000	990000	5460	8860	6540	9740	6790	7590	7420
ANTIMONY	31	410	0.64 UJ	0.23 UJ	0.32 UJ	0.19 UJ	0.14 UJ	0.13 UJ	0.15 UJ
ARSENIC	0.39	1.6	5.6	13.7	7.1	13.8 J	34.6	5.6 J	43.7
BARIUM	15000	190000	18.6	23.7	9.5 J	11.2 J	10.2 J	19.3 J	19.8 J
BERYLLIUM	160	2000	0.35 J	0.53 J	0.35 J	0.33	0.52 J	0.48 J	0.47 J
CADMIUM	70	800	0.1 J	0.1 J	0.11 J	0.23 J	0.27	0.19	0.25
CALCIUM			1680 J	829 J	166 J	655 J	1710 J	489 J	1070 J
CHROMIUM	0.29	5.6	5.6	12.7	7.3	12.8	9.2	9.2	8.9
COBALT	23	300	5.2 J	9.2 J	2.2 J	13.2 J	10.9 J	5.8 J	12.3 J
COPPER	3100	41000	8.1	24.2	8.4	12.5	15.1	11.2	13.4
IRON	55000	720000	14100	23800	11500	33700	28400	17800	23700
LEAD	400	800	21	30.9	33.3 J	9.3 J	12.6 J	21.9 J	21.0 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
MAGNESIUM			1120 J	2290 J	824 J	2320 J	1710 J	1470 J	1450 J
MANGANESE	1800	23000	225	221	95.8 J	412 J	289 J	210 J	415 J
MERCURY	5.6	34	0.091 U	0.074 U	0.12	0.025 UJ	0.059 U	0.033 UJ	0.038 UJ
NICKEL	1500	20000	15.3	19.3	6.8 J	20.1 J	18.6 J	14.6 J	21.1 J
POTASSIUM			388 J	219 J	206 J	142 J	166 J	270 J	294 J
SELENIUM	390	5100	2.9 J	3.5 UJ	2.4 U	4.0	2.2 U	2.2 U	3.3
SILVER	390	5100	0.22 UJ	0.13 UJ	0.21 J	0.2 J	0.15 J	0.095 J	0.21 J
SODIUM			53.9 J	47.8 J	29.2 UJ	23.1 UJ	39.4 J	30.1 J	28.2 UJ
THALLIUM			1.5	1.7	0.65 J	2.4	1.9	1.3	2.3
VANADIUM	390	5200	12.2	16.5	24.0 J	19.0 J	10.9 J	13.1 J	17.8 J
ZINC	23000	310000	39.7	69.5	18.4 J	66.1 J	41.4 J	36.8 J	43.0 J
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	15000	60000	2380 J	2910 J	2060 J	6010 J	8000 J	5670 J	1930 J
1,2,3,4,6,7,8,9-OCDF	15000	60000	1.27 J	6.64 J	2.16 J	3.53 J	32	24.1	5.94
1,2,3,4,6,7,8-HPCDD	450	1800	37.6	43.7	49.4	60.2	141	76.8	26.2
1,2,3,4,6,7,8-HPCDF	450	1800	0.734 UJ	4.37	1.28 U	1.41 U	12	7.78	1.64 U
1,2,3,4,7,8,9-HPCDF	450	1800	0.188 U	0.429 J	0.103 U	0.121 U	0.86 J	0.484 J	0.145 U
1,2,3,4,7,8-HXCDD	45	180	0.194 U	0.437 J	0.634 J	0.434 J	1.22 J	0.694 J	0.2 J
1,2,3,4,7,8-HXCDF	45	180	0.159 J	1.59 J	0.425 J	0.312 J	1.05 J	0.606 J	0.243 J
1,2,3,6,7,8-HXCDD	45	180	0.676 J	0.962 J	1.05 J	0.805 J	3.63	1.69 J	0.478 J
1,2,3,6,7,8-HXCDF	45	180	0.137 U	0.685 J	0.223 J	0.141 J	0.732 J	0.405 J	0.0997 J
1,2,3,7,8,9-HXCDD	45	180	0.613 J	1.21 J	0.868 J	0.952 J	2.87 J	1.76 J	0.411 J
1,2,3,7,8,9-HXCDF	45	180	0.184 U	0.175 U	0.156 U	0.0925 U	0.154 U	0.0866 U	0.0923 U
1,2,3,7,8-PECDD	4.5	18	0.198 U	0.283 J	0.284 J	0.0881 U	0.388 J	0.245 J	0.0948 U
1,2,3,7,8-PECDF	150	600	0.155 U	0.621 J	0.124 U	0.0955 J	0.292 J	0.202 J	0.0865 U
2,3,4,6,7,8-HXCDF	45	180	0.157 U	0.779 J	0.188 J	0.0790 U	0.762 J	0.427 J	0.143 J

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TABLE A-4.1
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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-967-0001	TF5-SB-968-0001	TF5-SB-969-0001	TF5-SB-970-0001	TF5-SB-971-0001	TF5-SB-972-0001
LOCATION ID			TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB969	TF5-SB970	TF5-SB971	TF5-SB972
SAMPLE DATE			04/14/10	04/14/10	04/12/10	04/12/10	04/13/10	04/13/10	04/12/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
2,3,4,7,8-PECDF	15	60	0.154 U	0.519 J	0.123 U	0.0820 U	0.105 U	0.279 J	0.0859 U
2,3,7,8-TCDD	4.5	18	0.236 U	0.142 U	0.181 U	0.0963 U	0.159 U	0.120 U	0.196 U
2,3,7,8-TCDF	45	180	0.277 U	0.657 J	0.141 U	0.134 U	0.346 J	0.491 J	0.108 U
TEQ BIRD	4.5	18	0.36 J	2.36 J	0.752 J	0.841 J	2.47 J	2.14 J	0.324 J
TEQ BIRD HALFND	4.5	18	0.833 J	2.44 J	0.996 J	1.06 J	2.61 J	2.2 J	0.584 J
TEQ FISH	4.5	18	0.305 J	1.54 J	0.959 J	0.946 J	2.42 J	1.67 J	0.377 J
TEQ FISH HALFND	4.5	18	0.648 J	1.62 J	1.1 J	1.08 J	2.54 J	1.74 J	0.563 J
TEQ MAMMAL	4.5	18	1.24 J	2.45 J	1.74 J	2.67 J	5.41 J	3.5 J	1 J
TEQ MAMMAL HALFND	4.5	18	1.53 J	2.53 J	1.87 J	2.8 J	5.51 J	3.57 J	1.18 J
TOTAL HPCDD			89	96.9	137	133	268	157	60.8
TOTAL HPCDF			1.62 U	8.4	2.16 U	3.64	35.2	21.1	4.91
TOTAL HXCDD			5.44	11.4	13.5	8.85	22.7	13.4	3.65
TOTAL HXCDF			0.583 J	9.05	1.71 J	1.16 J	16.9	7.96	0.926 J
TOTAL PECDD			0.198 U	2.49 J	1.35 J	0.476 J	1.34 J	2.5 J	0.459 J
TOTAL PECDF			0.439 J	8.28	2.17 J	0.94 J	6.5	5.22	1.2 J
TOTAL TCDD			0.236 U	0.463 J	0.181 U	0.0963 U	0.159 U	0.53 J	0.196 U
TOTAL TCDF			0.277 U	7.79	0.937 J	0.134 U	2.91	1.42	0.479 J
PETROLEUM HYDROCARBONS (MG/KG)									
EXTRACTABLE PETROLEUM HYDROCARBONS			23 J	22 J	NA	NA	16 J	NA	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

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SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
VOLATILES (UG/KG)							
1,1,1-TRICHLOROETHANE	8700000	38000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,1,2,2-TETRACHLOROETHANE	560	2800	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 U
1,1,2-TRICHLOROETHANE	1100	5300	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 UJ
1,1-DICHLOROETHANE	3300	17000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,1-DICHLOROETHENE	240000	1100000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,2,3-TRICHLOROBENZENE	49000	490000	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	7.4 UJ	4.4 UJ	5 UJ	4.7 UJ	4.3 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 UJ
1,2-DIBROMOETHANE	34	170	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,2-DICHLOROBENZENE	1900000	9800000	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 U
1,2-DICHLOROETHANE	430	2200	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,2-DICHLOROPROPANE	890	4500	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
1,3-DICHLOROBENZENE			7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 U
1,4-DICHLOROBENZENE	2400	12000	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 U
2-BUTANONE	28000000	200000000	7.4 UJ	4.4 UJ	5 UJ	4.7 U	4.3 U
2-HEXANONE	210000	1400000	7.4 U	4.4 UJ	5 UJ	4.7 UJ	4.3 U
4-METHYL-2-PENTANONE	5300000	53000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 UJ
ACETONE	61000000	630000000	7.4 U	21 J	5 UJ	4.7 UJ	4.3 UJ
BENZENE	1100	5400	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
BROMOCHLOROMETHANE			7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
BROMODICHLOROMETHANE	270	1400	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
BROMOFORM	61000	220000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
BROMOMETHANE	7300	32000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
BTEX			7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CARBON DISULFIDE	820000	3700000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CARBON TETRACHLORIDE	610	3000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CHLOROBENZENE	290000	1400000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CHLORODIBROMOMETHANE	680	3300	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CHLOROETHANE	15000000	61000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CHLOROFORM	290	1500	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CHLOROMETHANE	120000	500000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CIS-1,2-DICHLOROETHENE	780000	10000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CIS-1,3-DICHLOROPROPENE	1700	8100	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
CYCLOHEXANE	7000000	29000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
DICHLORODIFLUOROMETHANE	180000	780000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
ETHYLBENZENE	5400	27000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
ISOPROPYLBENZENE	2100000	11000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
M+P-XYLENES			7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
METHYL ACETATE	78000000	1E+09	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
METHYL CYCLOHEXANE			7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
METHYL TERT-BUTYL ETHER	43000	220000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
METHYLENE CHLORIDE	11000	53000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 UJ

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
O-XYLENE	3800000	19000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
STYRENE	6300000	36000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TETRACHLOROETHENE	550	2600	7.4 U	320 UJ	5 UJ	4.7 U	4.3 U
TOLUENE	5000000	45000000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TOTAL 1,2-DICHLOROETHENE	700000	9200000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TOTAL CHLORINATED ETHENES			7.4 U	67.5 UJ	5 UJ	4.7 U	4.3 U
TOTAL CHLORINATED VOCS			7.4 UJ	16.1 UJ	5 UJ	4.7 UJ	4.3 UJ
TOTAL XYLENES	630000	2700000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TRANS-1,2-DICHLOROETHENE	150000	690000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TRANS-1,3-DICHLOROPROPENE	1700	8100	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TRICHLOROETHENE	2800	14000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
TRICHLOROFLUOROMETHANE	790000	3400000	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
VINYL CHLORIDE	60	1700	7.4 U	4.4 UJ	5 UJ	4.7 U	4.3 U
SEMIVOLATILES (UG/KG)							
1,1-BIPHENYL	3900000	51000000	490 UJ	370 UJ	410 U	400 UJ	370 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	4.9 U	3.7 UJ	4.1 UJ	4 U	3.7 UJ
1,4-DIOXANE	44000	160000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	490 UJ	370 UJ	410 U	400 UJ	370 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	4.9 U	3.7 UJ	4.1 UJ	4 U	3.7 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
2,4,5-TRICHLOROPHENOL	6100000	62000000	990 U	750 UJ	840 U	820 U	760 U
2,4,6-TRICHLOROPHENOL	44000	160000	490 U	370 UJ	410 U	400 U	370 U
2,4-DICHLOROPHENOL	180000	1800000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
2,4-DIMETHYLPHENOL	1200000	12000000	4.9 UJ	3.7 UJ	4.1 UJ	4 UJ	370 U
2,4-DINITROPHENOL	120000	1200000	990 UJ	750 UJ	840 UJ	820 UJ	760 UJ
2,4-DINITROTOLUENE	1600	5500	490 U	370 UJ	410 U	400 U	370 U
2,6-DINITROTOLUENE	61000	620000	490 U	370 UJ	410 U	400 U	370 U
2-CHLORONAPHTHALENE	6300000	82000000	490 U	370 UJ	410 U	400 U	370 U
2-CHLOROPHENOL	390000	5100000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
2-METHYLNAPHTHALENE	310000	4100000	4.9 UJ	3.7 UJ	4.1 U	4 UJ	3.7 U
2-METHYLPHENOL	3100000	31000000	4.9 U	3.7 U	4.1 UJ	4 U	3.7 UJ
2-NITROANILINE	610000	6000000	990 U	750 UJ	840 U	820 U	760 U
2-NITROPHENOL			490 U	370 UJ	410 U	400 U	370 U
3,3'-DICHLOROBENZIDINE	1100	3800	490 U	370 UJ	410 U	400 U	370 U
3-NITROANILINE			990 U	750 UJ	840 U	820 U	760 U
4,6-DINITRO-2-METHYLPHENOL	4900	49000	990 UJ	750 UJ	840 UJ	820 UJ	760 UJ
4-BROMOPHENYL PHENYL ETHER			490 U	370 UJ	410 U	400 U	370 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
4-CHLOROANILINE	2400	8600	490 UJ	370 UJ	410 UJ	400 UJ	370 UJ
4-CHLOROPHENYL PHENYL ETHER			490 U	370 UJ	410 U	400 U	370 U
4-METHYLPHENOL	310000	3100000	4.9 U	3.7 UJ	4.1 UJ	4 U	3.7 UJ
4-NITROANILINE	24000	86000	990 U	750 UJ	840 U	820 U	760 U
4-NITROPHENOL			990 U	750 UJ	840 U	820 U	760 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
ACENAPHTHENE	3400000	33000000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
ACENAPHTHYLENE	3400000	33000000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
ACETOPHENONE	7800000	100000000	490 U	370 UJ	410 U	400 UJ	370 U
ANTHRACENE	17000000	170000000	5.8	3.7 U	6.2	4.5	3.7 U
ATRAZINE	2100	7500	4.9 U	3.7 U	4.1 U	4 U	3.7 U
BENZALDEHYDE	7800000	100000000	490 UJ	370 UJ	410 UJ	73 J	370 UJ
BENZO(A)ANTHRACENE	150	2100	35	6.4	12	17	13
BENZO(A)PYRENE	15	210	42	6.4	13	21	14
BENZO(B)FLUORANTHENE	150	2100	76 J	10	18 J	28 J	21
BENZO(G,H,I)PERYLENE	1700000	17000000	39	4.4	27	18	11
BENZO(K)FLUORANTHENE	1500	21000	24 J	4.6 J	9.3	24 J	13
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	490 U	370 UJ	410 U	400 U	370 U
BIS(2-CHLOROETHYL)ETHER	210	1000	490 U	370 UJ	410 U	400 U	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	490 U	370 UJ	410 U	400 U	370 U
BUTYL BENZYL PHTHALATE	260000	910000	490 U	370 UJ	410 U	400 U	370 U
CAPROLACTAM	31000000	310000000	490 U	370 UJ	410 U	400 U	370 U
CARBAZOLE			490 U	370 UJ	410 U	400 U	370 U
CHRYSENE	15000	210000	44	8.4	15	24	18
DIBENZO(A,H)ANTHRACENE	15	210	8.9 J	3.7 U	4.3	4.4 J	3.7 U
DIBENZOFURAN	78000	1000000	490 U	370 UJ	410 U	400 U	370 U
DIETHYL PHTHALATE	49000000	490000000	490 U	370 UJ	410 U	400 U	370 U
DIMETHYL PHTHALATE			490 U	370 UJ	410 U	400 U	370 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
DI-N-BUTYL PHTHALATE	6100000	62000000	490 U	370 UJ	410 U	400 U	370 U
DI-N-OCTYL PHTHALATE			490 U	370 UJ	410 U	400 U	370 U
FLUORANTHENE	2300000	22000000	91	13	27	41	28
FLUORENE	2300000	22000000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
HEXACHLOROBENZENE	300	1100	4.9 U	3.7 U	4.1 U	4 U	3.7 U
HEXACHLOROBUTADIENE	6200	22000	490 U	370 UJ	410 U	400 U	370 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	490 UJ	370 UJ	410 UJ	400 UJ	370 UJ
HEXACHLOROETHANE	35000	120000	490 U	370 UJ	410 U	400 U	370 U
HIGH MOLECULAR WEIGHT PAHS			463 J	68.2 J	161 J	227 J	151
INDENO(1,2,3-CD)PYRENE	150	2100	33 J	4	13	16 J	9.7
ISOPHORONE	510000	1800000	490 U	370 UJ	410 U	400 U	370 U
LOW MOLECULAR WEIGHT PAHS			42.8 J	4.4 J	22.2	22.5 J	13
NAPHTHALENE	3600	18000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
NITROBENZENE	4800	24000	490 UJ	370 UJ	410 UJ	400 UJ	370 U
N-NITROSO-DI-N-PROPYLAMINE	69	250	490 U	370 UJ	410 U	400 U	370 U
N-NITROSODIPHENYLAMINE	99000	350000	490 U	370 UJ	410 U	400 U	370 U
PENTACHLOROPHENOL	3000	9000	990 UJ	37 UJ	41 UJ	820 UJ	37 UJ
PHENANTHRENE	1700000	17000000	37	4.4	16	18	13
PHENOL	18000000	180000000	4.9 U	3.7 U	4.1 U	4 U	3.7 U
PYRENE	1700000	17000000	70	11	22	34	23
TOTAL CARCINOGENIC PAHS-HALFND	15	210	263 J	41.6 J	84.6 J	134 J	90.6

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
TOTAL CARCINOGENIC PAHS-POS	15	210	263 J	39.8 J	84.6 J	134 J	88.7
TOTAL CHLORINATED VOCS			490 U	370 UJ	410 U	400 U	370 U
TOTAL PAHS			506 J	72.6 J	183 J	250 J	164
PESTICIDES/PCBS (UG/KG)							
4,4'-DDD	2000	7200	4.8 U	3.8 U	4.1 U	4 U	3.8 U
4,4'-DDE	1400	5100	4.8 U	3.8 U	4.1 U	4 U	3.8 U
4,4'-DDT	1700	7000	4.8 U	3.8 UJ	4.1 U	4 U	3.8 UJ
ALDRIN	29	100	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
ALPHA-BHC	77	270	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
ALPHA-CHLORDANE	1600	6500	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
AROCLOR-1016	3900	21000	48 U	38 U	41 U	40 U	38 U
AROCLOR-1221	140	540	48 U	38 U	41 U	40 U	38 U
AROCLOR-1232	140	540	48 U	38 U	41 U	40 U	38 U
AROCLOR-1242	220	740	48 U	38 U	41 U	40 U	38 U
AROCLOR-1248	220	740	48 U	38 U	41 U	40 U	38 U
AROCLOR-1254	220	740	48 U	39	41 U	40 U	38 U
AROCLOR-1260	220	740	48 U	38 U	41 U	40 U	38 U
AROCLOR-1262			48 U	38 U	41 U	40 U	38 U
AROCLOR-1268			48 U	38 U	41 U	40 U	38 U
BETA-BHC	270	960	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
DELTA-BHC	77	270	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
DIELDRIN	30	110	4.8 U	3.8 U	4.1 U	4 U	3.8 U
ENDOSULFAN I	370000	3700000	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
ENDOSULFAN II	370000	3700000	4.8 U	3.8 U	4.1 U	4 U	3.8 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
ENDOSULFAN SULFATE	370000	3700000	4.8 U	3.8 U	4.1 U	4 U	3.8 U
ENDRIN	18000	180000	4.8 U	3.8 UJ	4.1 U	4 UJ	3.8 UJ
ENDRIN ALDEHYDE	18000	180000	4.8 U	3.8 U	4.1 U	4 U	3.8 U
ENDRIN KETONE	18000	180000	4.8 U	3.8 U	4.1 U	4 U	3.8 U
GAMMA-BHC (LINDANE)	520	2100	2.5 U	1.9 UJ	2.1 U	2.1 U	1.9 UJ
GAMMA-CHLORDANE	1600	6500	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
HEPTACHLOR	110	380	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
HEPTACHLOR EPOXIDE	53	190	2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
METHOXYCHLOR	310000	3100000	25 U	19 UJ	21 U	21 U	19 UJ
TOTAL AROCLOR	220	740	48 U	39	41 U	40 U	38 U
TOTAL CHLORDANE			2.5 U	1.9 U	2.1 U	2.1 U	1.9 U
TOTAL DDD/DDE/DDT			4.8 U	3.8 UJ	4.1 U	4 U	3.8 UJ
TOXAPHENE	440	1600	250 U	190 U	210 U	210 U	190 U
METALS (MG/KG)							
ALUMINUM	77000	990000	5460	7940	7990 J	9530	7970
ANTIMONY	31	410	0.64 UJ	0.17 UJ	0.19 UJ	0.42 UJ	0.19 UJ
ARSENIC	0.39	1.6	5.6	27.8	17.5	7.2	4.3 J
BARIUM	15000	190000	18.6	16.9 J	14.5	11.4	18.6 J
BERYLLIUM	160	2000	0.35 J	0.49 J	0.39 J	0.55 J	0.50 J
CADMIUM	70	800	0.1 J	0.21 J	0.33	0.012 U	0.18 J
CALCIUM			1680 J	575 J	975 J	249 J	216 J
CHROMIUM	0.29	5.6	5.6	9.8	12 J	8.9	7.5
COBALT	23	300	5.2 J	11.1 J	11.6	4.1 J	4.0 J
COPPER	3100	41000	8.1	13.7	16.2	12.1	7.5
IRON	55000	720000	14100	25700	28900 J	17400	15000
LEAD	400	800	21	12.3 J	12.7 J	32.5	31.0 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.1
ANALYTICAL RESULTS - SURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
MAGNESIUM			1120 J	1700 J	2250 J	1230 J	1200 J
MANGANESE	1800	23000	225	384 J	462	140	157 J
MERCURY	5.6	34	0.091 U	0.030 UJ	0.019 J	0.042 UJ	0.036 UJ
NICKEL	1500	20000	15.3	19.5 J	22.6	10.4	8.2 J
POTASSIUM			388 J	206 J	185 J	205 J	207 J
SELENIUM	390	5100	2.9 J	3.6	4.2	3.3 J	2.1 U
SILVER	390	5100	0.22 UJ	0.18 J	0.21 J	0.1 UJ	0.12 J
SODIUM			53.9 J	29.2 UJ	20.3 J	19.3 J	22.7 UJ
THALLIUM			1.5	2.5	2.4	1.2	1.1
VANADIUM	390	5200	12.2	13.1 J	13.9	16.2	11.3 J
ZINC	23000	310000	39.7	39.7 J	51.9	28.8	26.6 J
DIOXINS/FURANS (NG/KG)							
1,2,3,4,6,7,8,9-OCDD	15000	60000	2380 J	7160 J	9650 J	6700 J	2660 J
1,2,3,4,6,7,8,9-OCDF	15000	60000	1.27 J	2.39 J	3.63 J	13 J	8.95
1,2,3,4,6,7,8-HPCDD	450	1800	37.6	74.7	94	132	57.9
1,2,3,4,6,7,8-HPCDF	450	1800	0.734 UJ	1.21 U	1.8 U	9.12	5.5
1,2,3,4,7,8,9-HPCDF	450	1800	0.188 U	0.0736 U	0.111 J	0.509 J	0.317 J
1,2,3,4,7,8-HXCDD	45	180	0.194 U	0.397 J	0.674 J	1.62 J	0.679 J
1,2,3,4,7,8-HXCDF	45	180	0.159 J	0.256 J	0.464 J	3.09 J	0.638 J
1,2,3,6,7,8-HXCDD	45	180	0.676 J	0.724 J	0.865 J	2.68 J	1.38 J
1,2,3,6,7,8-HXCDF	45	180	0.137 U	0.112 J	0.167 J	1.01 J	0.32 J
1,2,3,7,8,9-HXCDD	45	180	0.613 J	0.758 J	0.995 J	3.64	1.52 J
1,2,3,7,8,9-HXCDF	45	180	0.184 U	0.0894 U	0.07 J	0.0856 U	0.144 U
1,2,3,7,8-PECDD	4.5	18	0.198 U	0.257 J	0.287 J	0.813 J	0.264 J
1,2,3,7,8-PECDF	150	600	0.155 U	0.109 U	0.175 J	0.717 J	0.292 J
2,3,4,6,7,8-HXCDF	45	180	0.157 U	0.164 J	0.204 J	1.35 J	0.426 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0001	TF5-SB-973-0001	TF5-SB-974-0001	TF5-SB-975-0001	TF5-SB-976-0001
LOCATION ID			TF5-SB966	TF5-SB973	TF5-SB974	TF5-SB975	TF5-SB976
SAMPLE DATE			04/14/10	04/12/10	04/13/10	04/14/10	04/13/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			1 FT	1 FT	1 FT	1 FT	1 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM
2,3,4,7,8-PECDF	15	60	0.154 U	0.108 U	0.233 J	0.978 J	0.3 J
2,3,7,8-TCDD	4.5	18	0.236 U	0.119 U	0.107 J	0.104 U	0.172 U
2,3,7,8-TCDF	45	180	0.277 U	0.0942 U	0.517 J	0.842 J	0.551 J
TEQ BIRD	4.5	18	0.36 J	1.2 J	2.45 J	4.62 J	1.87 J
TEQ BIRD HALFND	4.5	18	0.833 J	1.38 J	2.46 J	4.68 J	1.96 J
TEQ FISH	4.5	18	0.305 J	1.31 J	2.05 J	3.7 J	1.35 J
TEQ FISH HALFND	4.5	18	0.648 J	1.42 J	2.06 J	3.75 J	1.44 J
TEQ MAMMAL	4.5	18	1.24 J	3.39 J	4.7 J	5.98 J	2.35 J
TEQ MAMMAL HALFND	4.5	18	1.53 J	3.49 J	4.71 J	6.04 J	2.45 J
TOTAL HPCDD			89	175	199	329	142
TOTAL HPCDF			1.62 U	2.46 J	1.99 U	15.9	11.3
TOTAL HXCDD			5.44	9.08	12.1	36.7	17.1
TOTAL HXCDF			0.583 J	0.803 J	2.95	13.4	5.91
TOTAL PECDD			0.198 U	0.94 J	2.76	7.49	2.13 J
TOTAL PECDF			0.439 J	0.834 J	3.55	12.2	4
TOTAL TCDD			0.236 U	0.119 U	0.0307 U	2.05	0.317 J
TOTAL TCDF			0.277 U	0.926 J	2.63	8.63	2.74
PETROLEUM HYDROCARBONS (MG/KG)							
EXTRACTABLE PETROLEUM HYDROCARBONS			23 J	NA	NA	NA	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)										
1,1,1-TRICHLOROETHANE	8700000	38000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UJ
1,1,2-TRICHLOROETHANE	1100	5300	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UJ
1,1-DICHLOROETHANE	3300	17000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,1-DICHLOROETHENE	240000	1100000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UR
1,2,4-TRICHLOROBENZENE	22000	99000	4.4 U	3.9 UJ	4.8 UJ	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UR
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UJ
1,2-DIBROMOETHANE	34	170	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,2-DICHLOROBENZENE	1900000	9800000	4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,2-DICHLOROETHANE	430	2200	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,2-DICHLOROPROPANE	890	4500	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,3-DICHLOROBENZENE			4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
1,4-DICHLOROBENZENE	2400	12000	4.4 U	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
2-BUTANONE	28000000	200000000	4.4 UJ	3.9 UJ	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
2-HEXANONE	210000	1400000	4.4 U	3.9 U	4.8 UJ	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
4-METHYL-2-PENTANONE	5300000	53000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UJ
ACETONE	61000000	630000000	7.8	8.7	19 J	5.4 J	3.4 UJ	32 J	4.3 UJ	44 J
BENZENE	1100	5400	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
BROMOCHLOROMETHANE			4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
BROMODICHLOROMETHANE	270	1400	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
BROMOFORM	61000	220000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
BROMOMETHANE	7300	32000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
BTEX			4.4 U	3.9 U	4.8 U	4.1 UJ	1 J	4.8 UJ	4.3 U	4.9 UJ
CARBON DISULFIDE	820000	3700000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	1.9 J	4.9 UJ
CARBON TETRACHLORIDE	610	3000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CHLOROBENZENE	290000	1400000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CHLORODIBROMOMETHANE	680	3300	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CHLOROETHANE	15000000	61000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CHLOROFORM	290	1500	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CHLOROMETHANE	120000	500000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
CYCLOHEXANE	7000000	29000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
DICHLORODIFLUOROMETHANE	180000	780000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 UJ	4.9 UJ
ETHYLBENZENE	5400	27000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
ISOPROPYLBENZENE	2100000	11000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
M+P-XYLENES			4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
METHYL ACETATE	78000000	1E+09	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
METHYL CYCLOHEXANE			4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
METHYL TERT-BUTYL ETHER	43000	220000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
METHYLENE CHLORIDE	11000	53000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
O-XYLENE	3800000	19000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
STYRENE	6300000	36000000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UR
TETRACHLOROETHENE	550	2600	4.4 U	3.9 U	4.8 U	240 U	240 U	150 UJ	110 UJ	4.9 UJ
TOLUENE	5000000	45000000	4.4 U	3.9 U	4.8 U	4.1 UJ	1 J	4.8 UJ	4.3 U	4.9 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
TOTAL CHLORINATED ETHENES			4.4 U	3.9 U	4.8 U	51.3 UJ	50.7 UJ	33.8 UJ	25.4 UJ	4.9 UJ
TOTAL CHLORINATED VOCS			4.4 U	3.9 UJ	4.8 UJ	12.8 UJ	12.2 UJ	10.2 UJ	8.21 UJ	4.9 UJ
TOTAL XYLENES	630000	2700000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
TRANS-1,2-DICHLOROETHENE	150000	690000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
TRICHLOROETHENE	2800	14000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
VINYL CHLORIDE	60	1700	4.4 U	3.9 U	4.8 U	4.1 UJ	3.4 UJ	4.8 UJ	4.3 U	4.9 UJ
SEMIVOLATILES (UG/KG)										
1,1-BIPHENYL	3900000	51000000	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.7 U	3.6 UJ	4 U	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ
1,4-DIOXANE	44000	160000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.7 U	3.6 UJ	4 U	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
2,4,5-TRICHLOROPHENOL	6100000	62000000	760 U	730 U	800 U	750 UJ	700 UJ	740 UJ	690 UJ	810 U
2,4,6-TRICHLOROPHENOL	44000	160000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
2,4-DICHLOROPHENOL	180000	1800000	3.7 UJ	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
2,4-DIMETHYLPHENOL	1200000	12000000	3.7 UJ	3.6 UJ	4 UJ	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	400 U
2,4-DINITROPHENOL	120000	1200000	760 UJ	730 UJ	800 UJ	750 UJ	700 UJ	740 UJ	690 UJ	810 UJ
2,4-DINITROTOLUENE	1600	5500	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
2,6-DINITROTOLUENE	61000	620000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
2-CHLORONAPHTHALENE	6300000	82000000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
2-CHLOROPHENOL	390000	5100000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
2-METHYLNAPHTHALENE	310000	4100000	3.7 U	3.6 UJ	4 UJ	3.7 UJ	3.4 UJ	4.3 J	3.4 UJ	4 U
2-METHYLPHENOL	3100000	31000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
2-NITROANILINE	610000	6000000	760 U	730 U	800 U	750 UJ	700 UJ	740 UJ	690 UJ	810 U
2-NITROPHENOL			370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
3,3'-DICHLOROBENZIDINE	1100	3800	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
3-NITROANILINE			760 U	730 U	800 U	750 UJ	700 UJ	740 UJ	690 UJ	810 U
4,6-DINITRO-2-METHYLPHENOL	4900	49000	760 UJ	730 UJ	800 UJ	750 UJ	700 UJ	740 UJ	690 UJ	810 UJ
4-BROMOPHENYL PHENYL ETHER			370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.7 UJ	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
4-CHLOROANILINE	2400	8600	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 UJ
4-CHLOROPHENYL PHENYL ETHER			370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
4-METHYLPHENOL	310000	3100000	3.7 U	3.6 UJ	4 U	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ
4-NITROANILINE	24000	86000	760 U	730 U	800 U	750 UJ	700 UJ	740 UJ	690 UJ	810 U
4-NITROPHENOL			760 U	730 U	800 U	750 U	700 U	740 U	690 U	810 U

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
ACENAPHTHENE	3400000	33000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ACENAPHTHYLENE	3400000	33000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ACETOPHENONE	7800000	100000000	370 U	360 U	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 U
ANTHRACENE	17000000	170000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ATRAZINE	2100	7500	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
BENZALDEHYDE	7800000	100000000	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 UJ
BENZO(A)ANTHRACENE	150	2100	3.7 U	3.6 UJ	9.6	3.7 U	3.4 U	6.1	3.4 U	4 U
BENZO(A)PYRENE	15	210	3.7 U	3.6 UJ	8.8	3.7 U	3.4 U	5.5	3.4 U	4 UJ
BENZO(B)FLUORANTHENE	150	2100	3.7 UJ	3.6 UJ	11 J	3.7 U	3.4 U	8	3.4 U	4 U
BENZO(G,H,I)PERYLENE	1700000	17000000	3.7 U	3.6 UJ	8.3	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
BENZO(K)FLUORANTHENE	1500	21000	3.7 U	3.6 UJ	9.9 J	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 U
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
BIS(2-CHLOROETHYL)ETHER	210	1000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
BUTYL BENZYL PHTHALATE	260000	910000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
CAPROLACTAM	31000000	310000000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
CARBAZOLE			370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
CHRYSENE	15000	210000	3.7 U	3.6 UJ	15	3.7 U	3.8	6.4	3.4 U	4 U
DIBENZO(A,H)ANTHRACENE	15	210	3.7 UJ	3.6 UJ	4 UJ	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
DIBENZOFURAN	78000	1000000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
DIETHYL PHTHALATE	49000000	490000000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
DIMETHYL PHTHALATE			370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
DI-N-BUTYL PHTHALATE	6100000	62000000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
DI-N-OCTYL PHTHALATE			370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
FLUORANTHENE	2300000	22000000	3.7 U	3.6 UJ	16	3.7 U	3.4 U	11	3.4 U	5.1
FLUORENE	2300000	22000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
HEXACHLOROBENZENE	300	1100	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
HEXACHLOROBUTADIENE	6200	22000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 UJ
HEXACHLOROETHANE	35000	120000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
HIGH MOLECULAR WEIGHT PAHS			3.7 UJ	3.6 UJ	98 J	3.7 UJ	7.4 J	48 J	4.3 J	9.8 J
INDENO(1,2,3-CD)PYRENE	150	2100	3.7 U	3.6 UJ	6.4 J	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
ISOPHORONE	510000	1800000	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
LOW MOLECULAR WEIGHT PAHS			3.7 U	3.6 UJ	4.9 J	3.7 UJ	3.4 UJ	17.9 J	8.9 J	4 U
NAPHTHALENE	3600	18000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	5.9	4.7	4 U
NITROBENZENE	4800	24000	370 UJ	360 UJ	400 UJ	370 UJ	340 UJ	360 UJ	340 UJ	400 U
N-NITROSO-DI-N-PROPYLAMINE	69	250	370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
N-NITROSODIPHENYLAMINE	99000	350000	370 U	360 U	400 U	370 U	340 U	360 U	340 U	400 U
PENTACHLOROPHENOL	3000	9000	760 UJ	730 UJ	800 UJ	37 UJ	34 UJ	36 UJ	34 UJ	810 U
PHENANTHRENE	1700000	17000000	3.7 U	3.6 UJ	4.9	3.7 U	3.4 U	7.7	4.2	4 U
PHENOL	18000000	180000000	3.7 U	3.6 UJ	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 UJ
PYRENE	1700000	17000000	3.7 U	3.6 UJ	13	3.7 U	3.6	11	4.3	4.7

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
TOTAL CARCINOGENIC PAHS-HALFND	15	210	3.7 UJ	3.6 UJ	62.7 J	3.7 UJ	14 J	31.4 J	3.4 UJ	4 UJ
TOTAL CARCINOGENIC PAHS-POS	15	210	3.7 UJ	3.6 UJ	60.7 J	3.7 UJ	3.8 J	26 J	3.4 UJ	4 UJ
TOTAL CHLORINATED VOCS			370 U	360 U	400 U	370 UJ	340 UJ	360 UJ	340 UJ	400 U
TOTAL PAHS			3.7 UJ	3.6 UJ	103 J	3.7 UJ	7.4 J	65.9 J	13.2 J	9.8 J
PESTICIDES/PCBS (UG/KG)										
4,4'-DDD	2000	7200	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
4,4'-DDE	1400	5100	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
4,4'-DDT	1700	7000	3.7 U	3.6 U	4 U	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ
ALDRIN	29	100	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
ALPHA-BHC	77	270	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 UJ	1.8 U	2 U
ALPHA-CHLORDANE	1600	6500	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 UJ	1.8 U	2 U
AROCLOR-1016	3900	21000	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1221	140	540	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1232	140	540	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1242	220	740	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1248	220	740	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1254	220	740	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1260	220	740	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1262			37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
AROCLOR-1268			37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
BETA-BHC	270	960	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
DELTA-BHC	77	270	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
DIELDRIN	30	110	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
ENDOSULFAN I	370000	3700000	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
ENDOSULFAN II	370000	3700000	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ENDOSULFAN SULFATE	370000	3700000	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ENDRIN	18000	180000	3.7 U	3.6 UJ	4 UJ	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ
ENDRIN ALDEHYDE	18000	180000	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
ENDRIN KETONE	18000	180000	3.7 U	3.6 U	4 U	3.7 U	3.4 U	3.6 U	3.4 U	4 U
GAMMA-BHC (LINDANE)	520	2100	1.9 U	1.8 U	2 U	1.9 UJ	1.8 UJ	1.9 UJ	1.8 UJ	2 UJ
GAMMA-CHLORDANE	1600	6500	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 UJ	1.8 U	2 U
HEPTACHLOR	110	380	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
HEPTACHLOR EPOXIDE	53	190	1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 U	1.8 U	2 U
METHOXYCHLOR	310000	3100000	19 U	18 U	20 U	19 UJ	18 UJ	19 UJ	18 UJ	20 UJ
TOTAL AROCLOR	220	740	37 U	36 U	40 U	37 U	34 U	36 U	34 U	40 U
TOTAL CHLORDANE			1.9 U	1.8 U	2 U	1.9 U	1.8 U	1.9 UJ	1.8 U	2 U
TOTAL DDD/DDE/DDT			3.7 U	3.6 U	4 U	3.7 UJ	3.4 UJ	3.6 UJ	3.4 UJ	4 UJ
TOXAPHENE	440	1600	190 U	180 U	200 U	190 U	180 U	190 U	180 U	200 U
METALS (MG/KG)										
ALUMINUM	77000	990000	9150	2250	6280	5130	876	7950	5020	7490
ANTIMONY	31	410	0.13 UJ	0.15 UJ	0.33 UJ	0.11 UJ	0.11 UJ	0.14 UJ	0.12 UJ	0.14 UJ
ARSENIC	0.39	1.6	46.1	30.7	11.9	11.6	52.5	12.4 J	9.7 J	19.8
BARIUM	15000	190000	5.4 J	2.2 J	8.1 J	8.6 J	6.3 J	9.7 J	1.4 J	17.1
BERYLLIUM	160	2000	0.33 J	0.22 J	0.33 J	0.31 J	0.14 J	0.31	0.11 J	0.39
CADMIUM	70	800	0.42	0.3	0.13 J	0.15 J	0.53	0.34	0.35	0.14 J
CALCIUM			4.6 UJ	1040 J	543 J	163 J	4.2 UJ	316 J	675 J	593 J
CHROMIUM	0.29	5.6	16.9	5.2 J	9.1	7.6	2.3	11.0	8.7	7.5
COBALT	23	300	24.4 J	19.3 J	8.9 J	8.3 J	18.2 J	15.1 J	15.5 J	6.3
COPPER	3100	41000	8.7 J	9.9 J	10.6 J	14	21.9	12.9	4.9	7.7

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
IRON	55000	720000	72100	65500	23000	19100	41600	30600	29100	20200
LEAD	400	800	1.7 J	1.1 J	7.9	6.4 J	3.5 J	10.7 J	1.1 J	11.8 J
MAGNESIUM			3110 J	1170 J	1960 J	1290 J	271 J	1890 J	1410 J	1080
MANGANESE	1800	23000	262	239	114	274 J	613 J	435 J	593 J	121
MERCURY	5.6	34	0.03 UJ	0.031 UJ	0.0065 U	0.021 UJ	0.0053 U	0.017 UJ	0.0057 U	0.0096 UJ
NICKEL	1500	20000	58.4	37.2	18.6	13.2 J	33.4 J	21.2 J	29.1 J	18.7
POTASSIUM			175 J	107 J	120 J	147 J	96.8 J	128 J	43.5 J	165 J
SELENIUM	390	5100	5 UJ	4.6 UJ	2.5 UJ	2.3	3.9	3.6	3.1	2.2 U
SILVER	390	5100	0.18 UJ	0.22 UJ	0.13 UJ	0.081 J	0.26 J	0.19 J	0.20 J	0.14 J
SODIUM			18.4 UJ	17.2 UJ	23.7 J	17.6 UJ	23.4 J	18.5 UJ	15.1 UJ	61.4
THALLIUM			1.9	1.8	1.1	1.7	3.3	2.5	3.3	1.0
VANADIUM	390	5200	9.7 J	3.8 J	10.1	7.4 J	0.45 J	14.4 J	14.0 J	10.3
ZINC	23000	310000	111	109	42.6	30.3 J	58.2 J	71.2 J	72.2 J	30.2
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON			NA	19000	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)										
PH			NA	5.1	NA	NA	NA	NA	NA	NA
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	15000	60000	24.9	NA	1170 J	16200 J	NA	7970 J	NA	1140 J
1,2,3,4,6,7,8,9-OCDF	15000	60000	0.183 U	NA	0.159 U	0.333 J	NA	2.7 J	NA	0.409 J
1,2,3,4,6,7,8-HPCDD	450	1800	0.82 U	NA	13.5	138	NA	82.3	NA	25.1
1,2,3,4,6,7,8-HPCDF	450	1800	0.0676 U	NA	0.256 U	0.324 U	NA	1.24 U	NA	0.237 UJ
1,2,3,4,7,8,9-HPCDF	450	1800	0.0939 U	NA	0.104 U	0.142 U	NA	0.136 U	NA	0.0961 U
1,2,3,4,7,8-HXCDD	45	180	0.0922 U	NA	0.0941 J	0.484 J	NA	0.395 J	NA	0.294 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
1,2,3,4,7,8-HXCDF	45	180	0.0668 U	NA	0.0665 U	0.0763 U	NA	0.254 J	NA	0.0706 U
1,2,3,6,7,8-HXCDD	45	180	0.0828 U	NA	0.203 J	0.63 J	NA	0.888 J	NA	0.374 J
1,2,3,6,7,8-HXCDF	45	180	0.0632 U	NA	0.0628 U	0.0721 U	NA	0.11 J	NA	0.0671 U
1,2,3,7,8,9-HXCDD	45	180	0.0877 U	NA	0.249 J	0.868 J	NA	0.709 J	NA	0.438 J
1,2,3,7,8,9-HXCDF	45	180	0.0850 U	NA	0.0844 U	0.0970 U	NA	0.111 U	NA	0.0941 U
1,2,3,7,8-PECDD	4.5	18	0.102 U	NA	0.0917 U	0.139 U	NA	0.112 U	NA	0.0865 U
1,2,3,7,8-PECDF	150	600	0.0985 U	NA	0.0758 U	0.111 U	NA	0.108 U	NA	0.0863 U
2,3,4,6,7,8-HXCDF	45	180	0.0726 U	NA	0.0721 U	0.0828 U	NA	0.0963 J	NA	0.0978 U
2,3,4,7,8-PECDF	15	60	0.0976 U	NA	0.0752 U	0.110 U	NA	0.107 U	NA	0.0825 U
2,3,7,8-TCDD	4.5	18	0.129 U	NA	0.103 U	0.186 U	NA	0.182 U	NA	0.122 U
2,3,7,8-TCDF	45	180	0.158 U	NA	0.133 U	0.224 U	NA	0.222 U	NA	0.169 U
TEQ BIRD	4.5	18	0.00249	NA	0.162 J	1.88 J	NA	1.03 J	NA	0.201 J
TEQ BIRD HALFND	4.5	18	0.273	NA	0.383 J	2.23 J	NA	1.35 J	NA	0.454 J
TEQ FISH	4.5	18	0.00249	NA	0.182 J	2.02 J	NA	1.14 J	NA	0.294 J
TEQ FISH HALFND	4.5	18	0.188	NA	0.32 J	2.23 J	NA	1.33 J	NA	0.444 J
TEQ MAMMAL	4.5	18	0.00747	NA	0.541 J	6.44 J	NA	3.46 J	NA	0.704 J
TEQ MAMMAL HALFND	4.5	18	0.179	NA	0.673 J	6.65 J	NA	3.65 J	NA	0.848 J
TOTAL HPCDD			0.82 J	NA	28.2	259	NA	173	NA	63.4
TOTAL HPCDF			0.0676 U	NA	0.256 U	0.324 U	NA	2.42 J	NA	0.0679 U
TOTAL HXCDD			0.0828 U	NA	1.67 J	5.33	NA	6.33	NA	5.59
TOTAL HXCDF			0.0632 U	NA	0.335 J	0.138 J	NA	0.972 J	NA	0.0671 U
TOTAL PECDD			0.102 U	NA	0.0917 U	1.87 J	NA	0.112 U	NA	0.25 J
TOTAL PECDF			0.0976 U	NA	0.0752 U	0.110 U	NA	0.994 J	NA	0.0825 U
TOTAL TCDD			0.158 U	NA	0.103 U	0.186 U	NA	0.182 U	NA	0.122 U
TOTAL TCDF			0.129 U	NA	0.285 J	0.224 U	NA	0.222 U	NA	0.169 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-966-0608	TF5-SB-967-0204	TF5-SB-968-0204	TF5-SB-968-0810	TF5-SB-969-0204	TF5-SB-969-0810	TF5-SB-970-0204
LOCATION ID			TF5-SB966	TF5-SB966	TF5-SB967	TF5-SB968	TF5-SB968	TF5-SB969	TF5-SB969	TF5-SB970
SAMPLE DATE			04/14/10	04/14/10	04/14/10	04/12/10	04/12/10	04/12/10	04/12/10	04/13/10
TOP DEPTH			4 FT	6 FT	2 FT	2 FT	8 FT	2 FT	8 FT	2 FT
BOTTOM DEPTH			6 FT	8 FT	4 FT	4 FT	10 FT	4 FT	10 FT	4 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
PETROLEUM HYDROCARBONS (MG/KG)										
EXTRACTABLE PETROLEUM HYDROCARBONS			14 U	13 UJ	35 J	NA	NA	NA	NA	15 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)										
1,1,1-TRICHLOROETHANE	8700000	38000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
1,1,2-TRICHLOROETHANE	1100	5300	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
1,1-DICHLOROETHANE	3300	17000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,1-DICHLOROETHENE	240000	1100000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
1,2-DIBROMOETHANE	34	170	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,2-DICHLOROBENZENE	1900000	9800000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,2-DICHLOROETHANE	430	2200	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,2-DICHLOROPROPANE	890	4500	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,3-DICHLOROBENZENE			4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
1,4-DICHLOROBENZENE	2400	12000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
2-BUTANONE	28000000	200000000	4.4 UJ	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
2-HEXANONE	210000	1400000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
4-METHYL-2-PENTANONE	5300000	53000000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
ACETONE	61000000	630000000	7.8	5.7 J	4.5 UJ	3.5 J	4.1 UJ	4.2 UJ	8.72 J	4.4 UJ
BENZENE	1100	5400	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
BROMOCHLOROMETHANE			4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
BROMODICHLOROMETHANE	270	1400	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
BROMOFORM	61000	220000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
BROMOMETHANE	7300	32000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
BTEX			4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	1.78 J	4.4 UJ
CARBON DISULFIDE	820000	3700000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CARBON TETRACHLORIDE	610	3000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CHLOROBENZENE	290000	1400000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CHLORODIBROMOMETHANE	680	3300	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CHLOROETHANE	15000000	61000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CHLOROFORM	290	1500	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CHLOROMETHANE	120000	500000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
CYCLOHEXANE	7000000	29000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
DICHLORODIFLUOROMETHANE	180000	780000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 UJ	4.2 UJ	4.8 UJ	4.4 UJ
ETHYLBENZENE	5400	27000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
ISOPROPYLBENZENE	2100000	11000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
M+P-XYLENES			4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
METHYL ACETATE	78000000	1E+09	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
METHYL CYCLOHEXANE			4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
METHYL TERT-BUTYL ETHER	43000	220000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
METHYLENE CHLORIDE	11000	53000	4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
O-XYLENE	3800000	19000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
STYRENE	6300000	36000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TETRACHLOROETHENE	550	2600	4.4 U	4.6 UJ	4.5 U	4.9 UJ	240 U	310 UJ	270 UJ	9 UJ
TOLUENE	5000000	45000000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	1.78 J	4.4 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TOTAL CHLORINATED ETHENES			4.4 U	4.6 UJ	4.5 U	4.9 UJ	51.3 U	65.4 UJ	57.8 UJ	5.32 UJ
TOTAL CHLORINATED VOCS			4.4 U	4.6 UJ	4.5 UJ	4.9 UJ	12.8 UJ	15.5 UJ	14.6 UJ	4.57 UJ
TOTAL XYLENES	630000	2700000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TRANS-1,2-DICHLOROETHENE	150000	690000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TRICHLOROETHENE	2800	14000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
VINYL CHLORIDE	60	1700	4.4 U	4.6 UJ	4.5 U	4.9 UJ	4.1 U	4.2 UJ	4.8 UJ	4.4 UJ
SEMIVOLATILES (UG/KG)										
1,1-BIPHENYL	3900000	51000000	370 UJ	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.7 U	3.6 UJ	4 UJ	3.9 UJ	3.7 UJ	3.6 UJ	3.8 UJ	3.7 UJ
1,4-DIOXANE	44000	160000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	370 UJ	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.7 U	3.6 UJ	4 U	3.9 U	3.7 UJ	3.6 UJ	3.8 UJ	3.7 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
2,4,5-TRICHLOROPHENOL	6100000	62000000	760 U	740 U	805 U	790 U	750 UJ	730 UJ	780 UJ	760 UJ
2,4,6-TRICHLOROPHENOL	44000	160000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
2,4-DICHLOROPHENOL	180000	1800000	3.7 UJ	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
2,4-DIMETHYLPHENOL	1200000	12000000	3.7 UJ	3.6 UJ	202 UJ	390 U	3.7 UJ	3.6 UJ	3.8 UJ	3.7 UJ
2,4-DINITROPHENOL	120000	1200000	760 UJ	740 UJ	805 UJ	790 UJ	750 UJ	730 UJ	780 UJ	760 UJ
2,4-DINITROTOLUENE	1600	5500	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
2,6-DINITROTOLUENE	61000	620000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
2-CHLORONAPHTHALENE	6300000	82000000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
2-CHLOROPHENOL	390000	5100000	3.7 U	3.6 U	5.15 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
2-METHYLNAPHTHALENE	310000	4100000	3.7 U	3.6 U	4 U	3.9 U	3.7 UJ	3.6 UJ	3.8 UJ	3.7 UJ
2-METHYLPHENOL	3100000	31000000	3.7 U	3.6 UJ	4 UJ	3.9 UJ	3.7 U	3.6 U	3.8 U	3.7 UJ
2-NITROANILINE	610000	6000000	760 U	740 U	805 U	790 U	750 UJ	730 UJ	780 UJ	760 UJ
2-NITROPHENOL			370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
3,3'-DICHLOROBENZIDINE	1100	3800	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
3-NITROANILINE			760 U	740 U	805 U	790 U	750 UJ	730 UJ	780 UJ	760 UJ
4,6-DINITRO-2-METHYLPHENOL	4900	49000	760 UJ	740 UJ	805 UJ	790 UJ	750 UJ	730 UJ	780 UJ	760 UJ
4-BROMOPHENYL PHENYL ETHER			370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.7 UJ	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
4-CHLOROANILINE	2400	8600	370 UJ	360 UJ	400 UJ	390 UJ	370 UJ	360 UJ	380 UJ	370 UJ
4-CHLOROPHENYL PHENYL ETHER			370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
4-METHYLPHENOL	310000	3100000	3.7 U	3.6 UJ	4.9 J	3.9 UJ	3.7 UJ	3.6 UJ	3.8 UJ	3.7 UJ
4-NITROANILINE	24000	86000	760 U	740 U	805 U	790 U	750 UJ	730 UJ	780 UJ	760 UJ
4-NITROPHENOL			760 U	740 U	805 U	790 U	750 U	730 U	780 U	760 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
ACENAPHTHENE	3400000	33000000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
ACENAPHTHYLENE	3400000	33000000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
ACETOPHENONE	7800000	100000000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
ANTHRACENE	17000000	170000000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
ATRAZINE	2100	7500	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
BENZALDEHYDE	7800000	100000000	370 UJ	360 UJ	400 UJ	390 UJ	370 UJ	360 UJ	380 UJ	370 UJ
BENZO(A)ANTHRACENE	150	2100	3.7 U	3.6 U	11.5	3.9 U	3.7 U	3.6 U	6.55	3.7 UJ
BENZO(A)PYRENE	15	210	3.7 U	3.6 U	11	3.9 U	3.7 U	3.6 U	6.5	3.7 UJ
BENZO(B)FLUORANTHENE	150	2100	3.7 UJ	3.6 UJ	19	3.9 U	3.7 U	3.6 U	10	3.7 UJ
BENZO(G,H,I)PERYLENE	1700000	17000000	3.7 U	3.6 U	8	3.9 U	3.7 U	3.6 U	4.5	3.7 UJ
BENZO(K)FLUORANTHENE	1500	21000	3.7 U	3.6 U	7.5	3.9 U	3.7 UJ	3.6 UJ	4.65 J	3.7 UJ
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
BIS(2-CHLOROETHYL)ETHER	210	1000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	370 U	52 J	130 J	390 U	370 U	360 U	380 U	370 U
BUTYL BENZYL PHTHALATE	260000	910000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
CAPROLACTAM	31000000	310000000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
CARBAZOLE			370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
CHRYSENE	15000	210000	3.7 U	3.6 U	15.5 J	3.9 U	3.7 U	3.6 U	8.75	3.7 UJ
DIBENZO(A,H)ANTHRACENE	15	210	3.7 UJ	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
DIBENZOFURAN	78000	1000000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
DIETHYL PHTHALATE	49000000	490000000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
DIMETHYL PHTHALATE			370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
DI-N-BUTYL PHTHALATE	6100000	62000000	370 U	360 U	280 J	390 U	370 U	360 U	380 U	370 U
DI-N-OCTYL PHTHALATE			370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
FLUORANTHENE	2300000	22000000	3.7 U	3.6 U	21.5	3.9 U	3.7 U	3.6 U	14.5	3.7 UJ
FLUORENE	2300000	22000000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
HEXACHLOROBENZENE	300	1100	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
HEXACHLOROBUTADIENE	6200	22000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
HEXACHLOROCYCLOPENTADIENE	370000	3700000	370 UJ	360 UJ	400 UJ	390 UJ	370 UJ	360 UJ	380 UJ	370 UJ
HEXACHLOROETHANE	35000	120000	370 U	360 U	400 U	390 U	370 UJ	360 U	380 UJ	370 UJ
HIGH MOLECULAR WEIGHT PAHS			3.7 UJ	3.6 UJ	120 J	3.9 U	3.7 UJ	3.6 UJ	70.6 J	3.7 UJ
INDENO(1,2,3-CD)PYRENE	150	2100	3.7 U	3.6 U	7.25	3.9 U	3.7 U	3.6 U	3.1	3.7 UJ
ISOPHORONE	510000	1800000	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
LOW MOLECULAR WEIGHT PAHS			3.7 U	3.6 U	12.5	3.9 U	3.7 UJ	3.6 UJ	6.65 J	3.7 UJ
NAPHTHALENE	3600	18000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
NITROBENZENE	4800	24000	370 UJ	360 UJ	400 UJ	390 U	370 UJ	360 UJ	380 UJ	370 UJ
N-NITROSO-DI-N-PROPYLAMINE	69	250	370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
N-NITROSODIPHENYLAMINE	99000	350000	370 U	360 U	400 U	390 U	370 U	360 U	380 U	370 U
PENTACHLOROPHENOL	3000	9000	760 UJ	36 UJ	40 UJ	39 UJ	37 UJ	36 UJ	38 UJ	37 UJ
PHENANTHRENE	1700000	17000000	3.7 U	3.6 U	12.5	3.9 U	3.7 U	3.6 U	6.65	3.7 UJ
PHENOL	18000000	180000000	3.7 U	3.6 U	4 U	3.9 U	3.7 U	3.6 U	3.8 U	3.7 UJ
PYRENE	1700000	17000000	3.7 U	3.6 U	18.5	3.9 U	3.7 U	3.6 U	13	3.7 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
TOTAL CARCINOGENIC PAHS-HALFND	15	210	3.7 UJ	3.6 UJ	73.8 J	3.9 U	3.7 UJ	3.6 UJ	41.4 J	3.7 UJ
TOTAL CARCINOGENIC PAHS-POS	15	210	3.7 UJ	3.6 UJ	71.8 J	3.9 U	3.7 UJ	3.6 UJ	38.6 J	3.7 UJ
TOTAL CHLORINATED VOCS			370 U	360 U	400 U	390 U	370 UJ	360 UJ	380 UJ	370 UJ
TOTAL PAHS			3.7 UJ	3.6 UJ	132 J	3.9 U	3.7 UJ	3.6 UJ	77.2 J	3.7 UJ
PESTICIDES/PCBS (UG/KG)										
4,4'-DDD	2000	7200	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
4,4'-DDE	1400	5100	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
4,4'-DDT	1700	7000	3.7 U	3.6 U	3.9 UJ	3.9 UJ	3.7 UJ	3.6 UJ	3.85 UJ	3.7 UJ
ALDRIN	29	100	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
ALPHA-BHC	77	270	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
ALPHA-CHLORDANE	1600	6500	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
AROCLOR-1016	3900	21000	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1221	140	540	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1232	140	540	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1242	220	740	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1248	220	740	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1254	220	740	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1260	220	740	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1262			37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
AROCLOR-1268			37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
BETA-BHC	270	960	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
DELTA-BHC	77	270	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
DIELDRIN	30	110	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
ENDOSULFAN I	370000	3700000	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
ENDOSULFAN II	370000	3700000	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
ENDOSULFAN SULFATE	370000	3700000	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
ENDRIN	18000	180000	3.7 U	3.6 U	3.9 UJ	3.9 UJ	3.7 UJ	3.6 UJ	3.85 UJ	3.7 UJ
ENDRIN ALDEHYDE	18000	180000	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
ENDRIN KETONE	18000	180000	3.7 U	3.6 U	3.9 U	3.9 U	3.7 U	3.6 U	3.85 U	3.7 U
GAMMA-BHC (LINDANE)	520	2100	1.9 U	1.9 U	2 UJ	2 UJ	1.9 UJ	1.9 UJ	2 UJ	1.9 UJ
GAMMA-CHLORDANE	1600	6500	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
HEPTACHLOR	110	380	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
HEPTACHLOR EPOXIDE	53	190	1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
METHOXYCHLOR	310000	3100000	19 U	19 U	20 UJ	20 UJ	19 UJ	19 UJ	20 UJ	19 UJ
TOTAL AROCLOR	220	740	37 U	36 U	39 U	39 U	37 U	36 U	38.5 U	37 U
TOTAL CHLORDANE			1.9 U	1.9 U	2 U	2 U	1.9 U	1.9 U	2 U	1.9 U
TOTAL DDD/DDE/DDT			3.7 U	3.6 U	3.9 UJ	3.9 UJ	3.7 UJ	3.6 UJ	3.85 UJ	3.7 UJ
TOXAPHENE	440	1600	190 U	190 U	200 U	200 U	190 U	190 U	200 U	190 U
METALS (MG/KG)										
ALUMINUM	77000	990000	9150	2490 J	7730 J	14000	7340	1200	7320	4110
ANTIMONY	31	410	0.13 UJ	0.13 UJ	0.275 UJ	0.11 UJ	0.17 UJ	0.77 UJ	0.15 UJ	0.19 UJ
ARSENIC	0.39	1.6	46.1	67.2	6.4 J	20.6 J	29.6	50.7	42.3	31.9
BARIUM	15000	190000	5.4 J	8	20 J	7.3 J	13.5 J	10.3 J	17.6 J	3.4 J
BERYLLIUM	160	2000	0.33 J	0.29 J	0.5 J	0.33 J	0.38 J	0.35 J	0.525 J	0.31 J
CADMIUM	70	800	0.42	0.86	0.215 J	0.75	0.22 J	0.61	0.24 J	0.23
CALCIUM			4.6 UJ	1230 J	602 J	576 J	257 J	5.7 UJ	858 J	183 J
CHROMIUM	0.29	5.6	16.9	7.9 J	9.95 J	21.7	11.7	3.6	9.05	9.8
COBALT	23	300	24.4 J	32.8	7.55 J	12.4 J	14.6 J	19.5 J	13 J	19.5 J
COPPER	3100	41000	8.7 J	18.1	12	12.8	18.5	34.7	14.2	35.8

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
IRON	55000	720000	72100	63200 J	22800 J	59800	31100	52000	26600	30900
LEAD	400	800	1.7 J	8.3 J	11.1 J	2.5 J	5.4 J	2.8 J	10.2 J	8.1 J
MAGNESIUM			3110 J	601 J	1570 J	4870 J	2030 J	172 J	1560 J	1220 J
MANGANESE	1800	23000	262	4220	200 J	716 J	407 J	1560 J	462 J	215 J
MERCURY	5.6	34	0.03 UJ	0.0058 U	0.0148 J	0.0056 U	0.018 UJ	0.0053 U	0.0275 UJ	0.0066 UJ
NICKEL	1500	20000	58.4	72.5	17.2 J	33.7 J	24.9 J	39.4 J	22.4 J	21.8 J
POTASSIUM			175 J	137 J	289 J	107 J	210 J	106 J	220	159 J
SELENIUM	390	5100	5 UJ	7	3.55	3.2	3.6	4.8	3.25	3.4
SILVER	390	5100	0.18 UJ	0.65 J	0.11 J	0.2 J	0.17 J	0.37 J	0.17 J	0.23 J
SODIUM			18.4 UJ	28.4 J	28.8 J	30.9 J	24.1 UJ	25.9 UJ	26 UJ	15.6 UJ
THALLIUM			1.9	0.18 U	1.2	3.8	2.5	7.4	2.55	1.7
VANADIUM	390	5200	9.7 J	6.7 J	12.5 J	25.0 J	10.4 J	4.1 J	12.4 J	9.5 J
ZINC	23000	310000	111	123	40.5 J	72.8 J	52.7 J	87.5 J	39.9 J	41.1 J
MISCELLANEOUS PARAMETERS (MG/KG)										
TOTAL ORGANIC CARBON			NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)										
PH			NA	NA	NA	NA	NA	NA	NA	NA
DIOXINS/FURANS (NG/KG)										
1,2,3,4,6,7,8,9-OCDD	15000	60000	24.9	NA	4010 J	NA	13700 J	NA	6540 J	NA
1,2,3,4,6,7,8,9-OCDF	15000	60000	0.183 U	NA	0.746 J	NA	0.344 J	NA	1.25 J	NA
1,2,3,4,6,7,8-HPCDD	450	1800	0.82 U	NA	30.6 J	NA	126	NA	47 J	NA
1,2,3,4,6,7,8-HPCDF	450	1800	0.0676 U	NA	1.48 J	NA	0.224 UJ	NA	0.838 U	NA
1,2,3,4,7,8,9-HPCDF	450	1800	0.0939 U	NA	0.183 J	NA	0.0894 U	NA	0.0896 U	NA
1,2,3,4,7,8-HXCDD	45	180	0.0922 U	NA	0.184 J	NA	0.391 J	NA	0.284 J	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
1,2,3,4,7,8-HXCDF	45	180	0.0668 U	NA	0.351 J	NA	0.0815 U	NA	0.21 J	NA
1,2,3,6,7,8-HXCDD	45	180	0.0828 U	NA	0.258 J	NA	0.705 J	NA	0.44 J	NA
1,2,3,6,7,8-HXCDF	45	180	0.0632 U	NA	0.15 J	NA	0.0770 U	NA	0.104 J	NA
1,2,3,7,8,9-HXCDD	45	180	0.0877 U	NA	0.329 J	NA	0.678 J	NA	0.457 J	NA
1,2,3,7,8,9-HXCDF	45	180	0.0850 U	NA	0.0497 U	NA	0.104 U	NA	0.093 U	NA
1,2,3,7,8-PECDD	4.5	18	0.102 U	NA	0.0622 U	NA	0.118 U	NA	0.109 J	NA
1,2,3,7,8-PECDF	150	600	0.0985 U	NA	0.0552 U	NA	0.0899 U	NA	0.112 U	NA
2,3,4,6,7,8-HXCDF	45	180	0.0726 U	NA	0.051 J	NA	0.0884 U	NA	0.112 J	NA
2,3,4,7,8-PECDF	15	60	0.0976 U	NA	0.0534 U	NA	0.0892 U	NA	0.111 U	NA
2,3,7,8-TCDD	4.5	18	0.129 U	NA	0.0942 U	NA	0.134 U	NA	0.132 U	NA
2,3,7,8-TCDF	45	180	0.158 U	NA	0.0872 U	NA	0.200 U	NA	0.175 J	NA
TEQ BIRD	4.5	18	0.00249	NA	0.544 J	NA	1.59 J	NA	1 J	NA
TEQ BIRD HALFND	4.5	18	0.273	NA	0.702 J	NA	1.88 J	NA	1.23 J	NA
TEQ FISH	4.5	18	0.00249	NA	0.598 J	NA	1.71 J	NA	0.978 J	NA
TEQ FISH HALFND	4.5	18	0.188	NA	0.7 J	NA	1.88 J	NA	1.12 J	NA
TEQ MAMMAL	4.5	18	0.00747	NA	1.66 J	NA	5.55 J	NA	2.68 J	NA
TEQ MAMMAL HALFND	4.5	18	0.179	NA	1.75 J	NA	5.72 J	NA	2.82 J	NA
TOTAL HPCDD			0.82 J	NA	67.4 J	NA	236	NA	103	NA
TOTAL HPCDF			0.0676 U	NA	1.72	NA	0.246 U	NA	1.56 J	NA
TOTAL HXCDD			0.0828 U	NA	2.83	NA	4.03	NA	3.13 J	NA
TOTAL HXCDF			0.0632 U	NA	0.74 J	NA	0.13 J	NA	0.989 J	NA
TOTAL PECDD			0.102 U	NA	0.242 J	NA	0.118 U	NA	1.1 J	NA
TOTAL PECDF			0.0976 U	NA	0.393 J	NA	0.0892 U	NA	0.586 J	NA
TOTAL TCDD			0.158 U	NA	0.11 J	NA	0.134 U	NA	0.132 U	NA
TOTAL TCDF			0.129 U	NA	0.114 J	NA	0.200 U	NA	0.297 J	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-970-0810	TF5-SB-971-0204-AVG	TF5-SB-971-0810	TF5-SB-972-0204	TF5-SB-972-0810	TF5-SB-973-0204-AVG	TF5-SB-973-0810
LOCATION ID			TF5-SB966	TF5-SB970	TF5-SB971	TF5-SB971	TF5-SB972	TF5-SB972	TF5-SB973	TF5-SB973
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/13/10	04/12/10	04/12/10	04/12/10	04/12/10
TOP DEPTH			4 FT	8 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	10 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM	NM
PETROLEUM HYDROCARBONS (MG/KG)										
EXTRACTABLE PETROLEUM HYDROCARBONS			14 U	13 UJ	NA	NA	NA	NA	NA	NA

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)									
1,1,1-TRICHLOROETHANE	8700000	38000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,1,2,2-TETRACHLOROETHANE	560	2800	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,1,2-TRICHLOROETHANE	1100	5300	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	4.4 U	4.3 UJ	4.3 UJ	4.2 U	5.2 U	4.6 UJ	4.1 UJ
1,1-DICHLOROETHANE	3300	17000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,1-DICHLOROETHENE	240000	1100000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,2,3-TRICHLOROBENZENE	49000	490000	4.4 U	4.3 UJ	4.3 UJ	4.2 U	5.2 U	4.6 UJ	4.1 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	4.4 U	4.3 UJ	4.3 UJ	4.2 UJ	5.2 UJ	4.6 UJ	4.1 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	4.4 U		4.3 UJ	4.2 U	5.2 U	4.6 UJ	4.1 UJ
1,2-DIBROMOETHANE	34	170	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,2-DICHLOROBENZENE	1900000	9800000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,2-DICHLOROETHANE	430	2200	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,2-DICHLOROPROPANE	890	4500	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,3-DICHLOROBENZENE			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
1,4-DICHLOROBENZENE	2400	12000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
2-BUTANONE	28000000	200000000	4.4 UJ	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
2-HEXANONE	210000	1400000	4.4 U	4.3 U	4.3 UJ	4.2 UJ	5.2 UJ	4.6 U	4.1 U
4-METHYL-2-PENTANONE	5300000	53000000	4.4 U	4.3 UJ	4.3 UJ	4.2 U	5.2 U	4.6 UJ	4.1 UJ
ACETONE	61000000	630000000	7.8	7.3 J	17.4 J	4.2 UJ	5.2 UJ	4.6 UJ	4.1 UJ
BENZENE	1100	5400	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
BROMOCHLOROMETHANE			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
BROMODICHLOROMETHANE	270	1400	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
BROMOFORM	61000	220000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
BROMOMETHANE	7300	32000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
BTEX			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CARBON DISULFIDE	820000	3700000	4.4 U	4 J	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CARBON TETRACHLORIDE	610	3000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CHLOROBENZENE	290000	1400000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CHLORODIBROMOMETHANE	680	3300	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CHLOROETHANE	15000000	61000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CHLOROFORM	290	1500	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CHLOROMETHANE	120000	500000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CIS-1,2-DICHLOROETHENE	780000	10000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CIS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
CYCLOHEXANE	7000000	29000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
DICHLORODIFLUOROMETHANE	180000	780000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
ETHYLBENZENE	5400	27000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
ISOPROPYLBENZENE	2100000	11000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
M+P-XYLENES			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
METHYL ACETATE	78000000	1E+09	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
METHYL CYCLOHEXANE			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
METHYL TERT-BUTYL ETHER	43000	220000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
METHYLENE CHLORIDE	11000	53000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 UJ	4.1 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
O-XYLENE	3800000	19000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
STYRENE	6300000	36000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TETRACHLOROETHENE	550	2600	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TOLUENE	5000000	45000000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TOTAL 1,2-DICHLOROETHENE	700000	9200000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TOTAL CHLORINATED ETHENES			4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TOTAL CHLORINATED VOCS			4.4 U	4.3 UJ	4.3 UJ	4.2 UJ	5.2 UJ	4.6 UJ	4.1 UJ
TOTAL XYLENES	630000	2700000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TRANS-1,2-DICHLOROETHENE	150000	690000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TRANS-1,3-DICHLOROPROPENE	1700	8100	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TRICHLOROETHENE	2800	14000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
TRICHLOROFLUOROMETHANE	790000	3400000	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
VINYL CHLORIDE	60	1700	4.4 U	4.3 U	4.3 UJ	4.2 U	5.2 U	4.6 U	4.1 U
SEMIVOLATILES (UG/KG)									
1,1-BIPHENYL	3900000	51000000	370 UJ	420 UJ	370 U	360 UJ	350 UJ	370 U	370 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.7 U	4.2 UJ	3.7 UJ	3.6 U	3.5 U	3.7 UJ	3.7 UJ
1,4-DIOXANE	44000	160000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	370 UJ	420 UJ	370 U	360 UJ	350 UJ	370 U	370 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.7 U	4.2 UJ	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
2,4,5-TRICHLOROPHENOL	6100000	62000000	760 U	860 UJ	745 U	730 U	710 U	750 U	750 U
2,4,6-TRICHLOROPHENOL	44000	160000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
2,4-DICHLOROPHENOL	180000	1800000	3.7 UJ	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
2,4-DIMETHYLPHENOL	1200000	12000000	3.7 UJ	4.2 UJ	3.7 UJ	3.6 UJ	3.5 UJ	370 U	370 U
2,4-DINITROPHENOL	120000	1200000	760 UJ	860 UJ	745 UJ	730 UJ	710 UJ	750 UJ	750 UJ
2,4-DINITROTOLUENE	1600	5500	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
2,6-DINITROTOLUENE	61000	620000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
2-CHLORONAPHTHALENE	6300000	82000000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
2-CHLOROPHENOL	390000	5100000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
2-METHYLNAPHTHALENE	310000	4100000	3.7 U	4.2 U	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
2-METHYLPHENOL	3100000	31000000	3.7 U	4.2 UJ	3.7 UJ	3.6 U	3.5 U	3.7 UJ	3.7 UJ
2-NITROANILINE	610000	6000000	760 U	860 UJ	745 U	730 U	710 U	750 U	750 U
2-NITROPHENOL			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
3,3'-DICHLOROBENZIDINE	1100	3800	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
3-NITROANILINE			760 U	860 UJ	745 U	730 U	710 U	750 U	750 U
4,6-DINITRO-2-METHYLPHENOL	4900	49000	760 UJ	860 UJ	745 UJ	730 UJ	710 UJ	750 UJ	750 UJ
4-BROMOPHENYL PHENYL ETHER			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.7 UJ	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
4-CHLOROANILINE	2400	8600	370 UJ	420 UJ	370 UJ	360 UJ	350 UJ	370 UJ	370 UJ
4-CHLOROPHENYL PHENYL ETHER			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
4-METHYLPHENOL	310000	3100000	3.7 U	4.2 UJ	3.7 UJ	3.6 U	3.5 U	3.7 UJ	3.7 UJ
4-NITROANILINE	24000	86000	760 U	860 UJ	745 U	730 U	710 U	750 U	750 U
4-NITROPHENOL			760 U	860 UJ	745 U	730 U	710 U	750 U	750 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
ACENAPHTHENE	3400000	33000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
ACENAPHTHYLENE	3400000	33000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
ACETOPHENONE	7800000	100000000	370 U	420 UJ	370 U	360 UJ	350 UJ	370 U	370 U
ANTHRACENE	17000000	170000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
ATRAZINE	2100	7500	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
BENZALDEHYDE	7800000	100000000	370 UJ	420 UJ	370 UJ	360 UJ	350 UJ	370 UJ	370 UJ
BENZO(A)ANTHRACENE	150	2100	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
BENZO(A)PYRENE	15	210	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
BENZO(B)FLUORANTHENE	150	2100	3.7 UJ	5.2 J	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
BENZO(G,H,I)PERYLENE	1700000	17000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
BENZO(K)FLUORANTHENE	1500	21000	3.7 U	4.2 U	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
BIS(2-CHLOROETHYL)ETHER	210	1000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
BUTYL BENZYL PHTHALATE	260000	910000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
CAPROLACTAM	31000000	310000000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
CARBAZOLE			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
CHRYSENE	15000	210000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
DIBENZO(A,H)ANTHRACENE	15	210	3.7 UJ	4.2 U	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
DIBENZOFURAN	78000	1000000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
DIETHYL PHTHALATE	49000000	490000000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
DIMETHYL PHTHALATE			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
DI-N-BUTYL PHTHALATE	6100000	62000000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
DI-N-OCTYL PHTHALATE			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
FLUORANTHENE	2300000	22000000	3.7 U	6.6	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
FLUORENE	2300000	22000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
HEXACHLOROBENZENE	300	1100	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
HEXACHLOROBUTADIENE	6200	22000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	370 UJ	420 UJ	370 UJ	360 UJ	350 UJ	370 UJ	370 UJ
HEXACHLOROETHANE	35000	120000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
HIGH MOLECULAR WEIGHT PAHS			3.7 UJ	17.1 J	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
INDENO(1,2,3-CD)PYRENE	150	2100	3.7 U	4.2 U	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
ISOPHORONE	510000	1800000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
LOW MOLECULAR WEIGHT PAHS			3.7 U	4.2 U	3.7 UJ	3.6 UJ	4.9 J	3.7 U	3.7 U
NAPHTHALENE	3600	18000	3.7 U	4.2 U	3.7 UJ	3.6 U	4.9	3.7 U	3.7 U
NITROBENZENE	4800	24000	370 UJ	420 UJ	370 UJ	360 UJ	350 UJ	370 U	370 U
N-NITROSO-DI-N-PROPYLAMINE	69	250	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
N-NITROSODIPHENYLAMINE	99000	350000	370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
PENTACHLOROPHENOL	3000	9000	760 UJ	42 UJ	37 UJ	730 UJ	710 UJ	37 UJ	37 UJ
PHENANTHRENE	1700000	17000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
PHENOL	18000000	180000000	3.7 U	4.2 U	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U
PYRENE	1700000	17000000	3.7 U	5.3	3.7 UJ	3.6 U	3.5 U	3.7 U	3.7 U

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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
TOTAL CARCINOGENIC PAHS-HALFND	15	210	3.7 UJ	17.8 J	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
TOTAL CARCINOGENIC PAHS-POS	15	210	3.7 UJ	5.2 J	3.7 UJ	3.6 UJ	3.5 UJ	3.7 U	3.7 U
TOTAL CHLORINATED VOCS			370 U	420 UJ	370 U	360 U	350 U	370 U	370 U
TOTAL PAHS			3.7 UJ	17.1 J	3.7 UJ	3.6 UJ	4.9 J	3.7 U	3.7 U
PESTICIDES/PCBS (UG/KG)									
4,4'-DDD	2000	7200	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
4,4'-DDE	1400	5100	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
4,4'-DDT	1700	7000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 UJ	3.7 UJ
ALDRIN	29	100	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
ALPHA-BHC	77	270	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
ALPHA-CHLORDANE	1600	6500	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
AROCLOR-1016	3900	21000	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1221	140	540	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1232	140	540	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1242	220	740	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1248	220	740	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1254	220	740	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1260	220	740	37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1262			37 U	42 U	37 U	36 U	35 U	37 U	37 U
AROCLOR-1268			37 U	42 U	37 U	36 U	35 U	37 U	37 U
BETA-BHC	270	960	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
DELTA-BHC	77	270	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
DIELDRIN	30	110	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U

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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
ENDOSULFAN I	370000	3700000	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
ENDOSULFAN II	370000	3700000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
ENDOSULFAN SULFATE	370000	3700000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
ENDRIN	18000	180000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 UJ	3.7 UJ
ENDRIN ALDEHYDE	18000	180000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
ENDRIN KETONE	18000	180000	3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 U	3.7 U
GAMMA-BHC (LINDANE)	520	2100	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 UJ	1.9 UJ
GAMMA-CHLORDANE	1600	6500	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
HEPTACHLOR	110	380	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
HEPTACHLOR EPOXIDE	53	190	1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
METHOXYCHLOR	310000	3100000	19 U	22 U	19 U	19 U	18 U	19 UJ	19 UJ
TOTAL AROCLOR	220	740	37 U	42 U	37 U	36 U	35 U	37 U	37 U
TOTAL CHLORDANE			1.9 U	2.2 U	1.9 U	1.9 U	1.8 U	1.9 U	1.9 U
TOTAL DDD/DDE/DDT			3.7 U	4.2 U	3.7 U	3.6 U	3.5 U	3.7 UJ	3.7 UJ
TOXAPHENE	440	1600	190 U	220 U	190 U	190 U	180 U	190 U	190 U
METALS (MG/KG)									
ALUMINUM	77000	990000	9150	5970 J	9320 J	9090	2580	7470	5270
ANTIMONY	31	410	0.13 UJ	0.18 UJ	0.155 UJ	0.14 UJ	0.13 UJ	0.16 UJ	0.11 UJ
ARSENIC	0.39	1.6	46.1	20.6	26.2	23.7	46.7	3.5 J	8.1
BARIUM	15000	190000	5.4 J	12.9	4.2 J	8	6.3 J	17.1 J	13.3 J
BERYLLIUM	160	2000	0.33 J	0.42 J	0.28 J	0.45 J	0.28 J	0.48 J	0.48 J
CADMIUM	70	800	0.42	0.22 J	0.48	0.24	0.31	0.18 J	0.31
CALCIUM			4.6 UJ	518 J	2200 J	5.1 UJ	527 J	150 J	72.5 J
CHROMIUM	0.29	5.6	16.9	8.3 J	16.2 J	16	11.8	9.1	10.3
COBALT	23	300	24.4 J	9.2	30	15.7 J	23 J	9.0 J	10.7 J
COPPER	3100	41000	8.7 J	11.3	19.9	18 J	32.7	12.5	18.1

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

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DU5-1_2010
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SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
IRON	55000	720000	72100	20900 J	48200 J	55500	51200	18500	29400
LEAD	400	800	1.7 J	15.3 J	5.5 J	8 J	7.8 J	4.3 J	5.4 J
MAGNESIUM			3110 J	1460 J	3280 J	2560 J	862 J	2240 J	1450 J
MANGANESE	1800	23000	262	183	162	306	778	300 J	387 J
MERCURY	5.6	34	0.03 UJ	0.012 J	0.00565 U	0.0089 UJ	0.0058 U	0.018 UJ	0.012 UJ
NICKEL	1500	20000	58.4	15.1	41.4	26.8	48	13.9 J	19.9 J
POTASSIUM			175 J	141 J	158 J	137 J	127 J	313 J	374 J
SELENIUM	390	5100	5 UJ	3.5	4.4	4.5 UJ	5.5 UJ	2.3 U	2.8
SILVER	390	5100	0.18 UJ	0.15 J	0.25 J	0.12 UJ	0.21 UJ	0.069 U	0.13 J
SODIUM			18.4 UJ	20.6 J	17.6 UJ	10.7 UJ	14.6 UJ	18.9 UJ	32.1 J
THALLIUM			1.9	1	1.25	2.2	4.7	1.9	2.3
VANADIUM	390	5200	9.7 J	10.3	11.4 J	14.5 J	10.8 J	9.4 J	12.0 J
ZINC	23000	310000	111	35.7	74	58.8	75.3	32.8 J	41.7 J
MISCELLANEOUS PARAMETERS (MG/KG)									
TOTAL ORGANIC CARBON			NA	NA	NA	NA	5000 U	NA	NA
MISCELLANEOUS PARAMETERS (S.U.)									
PH			NA	NA	NA	NA	5.5	NA	NA
DIOXINS/FURANS (NG/KG)									
1,2,3,4,6,7,8,9-OCDD	15000	60000	24.9	4560 J	NA	17000 J	NA	21200 J	NA
1,2,3,4,6,7,8,9-OCDF	15000	60000	0.183 U	0.796 J	NA	0.864 UJ	NA	0.708 J	NA
1,2,3,4,6,7,8-HPCDD	450	1800	0.82 U	58.9	NA	146 J	NA	106	NA
1,2,3,4,6,7,8-HPCDF	450	1800	0.0676 U	0.324 U	NA	0.491 U	NA	0.178 U	NA
1,2,3,4,7,8,9-HPCDF	450	1800	0.0939 U	0.0388 U	NA	0.126 U	NA	0.0454 U	NA
1,2,3,4,7,8-HXCDD	45	180	0.0922 U	0.369 J	NA	0.438 J	NA	0.252 J	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
1,2,3,4,7,8-HXCDF	45	180	0.0668 U	0.0983 J	NA	0.144 J	NA	0.0113 U	NA
1,2,3,6,7,8-HXCDD	45	180	0.0828 U	0.785 J	NA	0.604 J	NA	0.132 J	NA
1,2,3,6,7,8-HXCDF	45	180	0.0632 U	0.067 J	NA	0.114 J	NA	0.0108 U	NA
1,2,3,7,8,9-HXCDD	45	180	0.0877 U	0.981 J	NA	1.21 J	NA	0.213 J	NA
1,2,3,7,8,9-HXCDF	45	180	0.0850 U	0.0282 U	NA	0.110 U	NA	0.0141 U	NA
1,2,3,7,8-PECDD	4.5	18	0.102 U	0.176 J	NA	0.0790 U	NA	0.0598 J	NA
1,2,3,7,8-PECDF	150	600	0.0985 U	0.0304 U	NA	0.0798 U	NA	0.0285 U	NA
2,3,4,6,7,8-HXCDF	45	180	0.0726 U	0.0242 U	NA	0.0939 U	NA	0.0121 U	NA
2,3,4,7,8-PECDF	15	60	0.0976 U	0.0300 U	NA	0.0761 U	NA	0.0282 U	NA
2,3,7,8-TCDD	4.5	18	0.129 U	0.0382 U	NA	0.0976 U	NA	0.0360 U	NA
2,3,7,8-TCDF	45	180	0.158 U	0.0594 U	NA	0.140 U	NA	0.0682 U	NA
TEQ BIRD	4.5	18	0.00249	0.832 J	NA	2.02 J	NA	2.32 J	NA
TEQ BIRD HALFND	4.5	18	0.273	0.902 J	NA	2.23 J	NA	2.39 J	NA
TEQ FISH	4.5	18	0.00249	0.91 J	NA	2.11 J	NA	2.42 J	NA
TEQ FISH HALFND	4.5	18	0.188	0.943 J	NA	2.24 J	NA	2.45 J	NA
TEQ MAMMAL	4.5	18	0.00747	2.36 J	NA	6.81 J	NA	7.54 J	NA
TEQ MAMMAL HALFND	4.5	18	0.179	2.39 J	NA	6.93 J	NA	7.57 J	NA
TOTAL HPCDD			0.82 J	122	NA	271 J	NA	189	NA
TOTAL HPCDF			0.0676 U	0.501 U	NA	0.491 U	NA	0.178 U	NA
TOTAL HXCDD			0.0828 U	9.92	NA	8.5 U	NA	1.77 J	NA
TOTAL HXCDF			0.0632 U	0.389 J	NA	0.542 J	NA	0.0108 U	NA
TOTAL PECDD			0.102 U	1.34 J	NA	4.32	NA	2.74	NA
TOTAL PECDF			0.0976 U	0.594 J	NA	0.0761 U	NA	0.0282 U	NA
TOTAL TCDD			0.158 U	0.0382 U	NA	0.0976 U	NA	0.142 J	NA
TOTAL TCDF			0.129 U	0.0594 U	NA	0.140 U	NA	0.0682 U	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.2
ANALYTICAL RESULTS - SUBSURFACE SOIL
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SB-966-0406	TF5-SB-974-0204	TF5-SB-974-0810-AVG	TF5-SB-975-0204	TF5-SB-975-0810	TF5-SB-976-0204	TF5-SB-976-0810
LOCATION ID			TF5-SB966	TF5-SB974	TF5-SB974	TF5-SB975	TF5-SB975	TF5-SB976	TF5-SB976
SAMPLE DATE			04/14/10	04/13/10	04/13/10	04/14/10	04/14/10	04/13/10	04/13/10
TOP DEPTH			4 FT	2 FT	8 FT	2 FT	8 FT	2 FT	8 FT
BOTTOM DEPTH			6 FT	4 FT	10 FT	4 FT	10 FT	4 FT	10 FT
SACODE			NORMAL	NORMAL	AVG	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
PETROLEUM HYDROCARBONS (MG/KG)									
EXTRACTABLE PETROLEUM HYDROCARBONS			14 U	NA	NA	NA	NA	NA	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
VOLATILES (UG/L)								
1,1,1-TRICHLOROETHANE	9100	200	1 U	1 U	NA	1 U	NA	1 U
1,1,2,2-TETRACHLOROETHANE	0.067		1 U	1 U	NA	1 U	NA	1 U
1,1,2-TRICHLOROETHANE	0.24	5	1 U	1 U	NA	1 U	NA	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	59000		1 UJ	1 U	NA	1 U	NA	1 UJ
1,1-DICHLOROETHANE	2.4		1 U	1 U	NA	1 U	NA	1 U
1,1-DICHLOROETHENE	340	7	1 U	1 U	NA	1 U	NA	1 U
1,2,3-TRICHLOROBENZENE	29		1.2 J	1 U	NA	1 U	NA	1 UJ
1,2,4-TRICHLOROBENZENE	2.3	70	1 UJ	1 U	NA	1 U	NA	1 UJ
1,2-DIBROMO-3-CHLOROPROPANE	0.00032	0.2	1 U	1 UJ	NA	1 UJ	NA	1 U
1,2-DIBROMOETHANE	0.0065	0.05	1 U	1 U	NA	1 U	NA	1 U
1,2-DICHLOROBENZENE	370	600	1 U	1 U	NA	1 U	NA	1 U
1,2-DICHLOROETHANE	0.15	5	1 U	1 U	NA	1 U	NA	1 U
1,2-DICHLOROPROPANE	0.39	5	1 U	1 U	NA	1 U	NA	1 U
1,3-DICHLOROBENZENE			1 U	1 U	NA	1 U	NA	1 U
1,4-DICHLOROBENZENE	0.43	75	1 U	1 U	NA	1 U	NA	1 U
2-BUTANONE	7100		5 U	5 U	NA	5 U	NA	5 U
2-HEXANONE	47		5 U	5 UJ	NA	5 UJ	NA	5 U
4-METHYL-2-PENTANONE	2000		5 U	5 U	NA	5 U	NA	5 U
ACETONE	22000		5 U	5 U	NA	5 U	NA	5 U
BENZENE	0.41	5	1 U	1 U	NA	1 U	NA	1.2
BROMOCHLOROMETHANE			1 U	1 U	NA	1 U	NA	1 U
BROMODICHLOROMETHANE	0.12	80	1 U	1 U	NA	1 U	NA	1 U
BROMOFORM	8.5	80	1 U	1 U	NA	1 U	NA	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
BROMOMETHANE	8.7		1 UJ	1 U	NA	1 U	NA	1 UJ
BTEX			1 U	1 U	NA	1 U	NA	1.2
CARBON DISULFIDE	1000		1 U	1 U	NA	1 U	NA	1 U
CARBON TETRACHLORIDE	0.44	5	1 U	1 U	NA	1 U	NA	1 U
CHLOROBENZENE	91	100	1 U	1 U	NA	1 U	NA	1 U
CHLORODIBROMOMETHANE	0.15	80	1 U	1 U	NA	1 U	NA	1 U
CHLOROETHANE	21000		1 U	1 U	NA	1 U	NA	1 U
CHLOROFORM	0.19	80	1 U	1 U	NA	1 U	NA	1 U
CHLOROMETHANE	190		1 U	1 U	NA	1 U	NA	1 U
CIS-1,2-DICHLOROETHENE	370	70	1 U	1 U	NA	1 U	NA	2
CIS-1,3-DICHLOROPROPENE	0.43		1 U	1 U	NA	1 U	NA	1 U
CYCLOHEXANE	13000		1 U	1 U	NA	1 U	NA	1 U
DICHLORODIFLUOROMETHANE	390		1 UJ	1 U	NA	1 U	NA	1 UJ
ETHYLBENZENE	1.5	700	1 U	1 U	NA	1 U	NA	1 U
ISOPROPYLBENZENE	680		1 U	1 U	NA	1 U	NA	1 U
M+P-XYLENES		10000	1 U	1 U	NA	1 U	NA	1 U
METHYL ACETATE	37000		1 U	1 U	NA	1 U	NA	1 U
METHYL CYCLOHEXANE			1 U	1 U	NA	1 U	NA	1 U
METHYL TERT-BUTYL ETHER	12		1 U	1 U	NA	1 U	NA	1 U
METHYLENE CHLORIDE	4.8	5	1 U	1 U	NA	1 U	NA	1 U
O-XYLENE	1200	10000	1 U	1 U	NA	1 U	NA	1 U
STYRENE	1600	100	1 U	1 U	NA	1 U	NA	1 U
TETRACHLOROETHENE	0.11	5	1 U	1 UJ	NA	1 UJ	NA	1 U
TOLUENE	2300	1000	1 U	1 U	NA	1 U	NA	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
TOTAL 1,2-DICHLOROETHENE	330		1 U	1 U	NA	1 U	NA	2
TOTAL CHLORINATED ETHENES			1 U	1 UJ	NA	1 UJ	NA	2
TOTAL CHLORINATED VOCS			1.2 J	1 UJ	NA	1 UJ	NA	2 J
TOTAL XYLENES	200	10000	1 U	1 U	NA	1 U	NA	1 U
TRANS-1,2-DICHLOROETHENE	110	100	1 U	1 U	NA	1 U	NA	1 U
TRANS-1,3-DICHLOROPROPENE			1 U	1 U	NA	1 U	NA	1 U
TRICHLOROETHENE	2	5	1 U	1 U	NA	1 U	NA	1 U
TRICHLOROFLUOROMETHANE	1300		1 U	1 U	NA	1 U	NA	1 U
VINYL CHLORIDE	0.016	2	1 U	1 U	NA	1 U	NA	1 U
SEMIVOLATILES (UG/L)								
1,1-BIPHENYL	1800		10 U	10 U	NA	10 U	10 U	NA
1,2,4,5-TETRACHLOROBENZENE	11		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
1,4-DIOXANE	6.1		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2,2'-OXYBIS(1-CHLOROPROPANE)	0.32		10 U	10 U	NA	10 U	10 U	NA
2,3,4,6-TETRACHLOROPHENOL	1100		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2,4,5-TRICHLOROPHENOL	3700		20 U	20 U	NA	20 U	20 U	NA
2,4,6-TRICHLOROPHENOL	6.1		10 U	10 U	NA	10 U	10 U	NA
2,4-DICHLOROPHENOL	110		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2,4-DIMETHYLPHENOL	730		0.1 UJ	0.1 UJ	NA	0.1 UJ	0.1 UJ	NA
2,4-DINITROPHENOL	73		20 UJ	20 UJ	NA	20 UJ	20 UJ	NA
2,4-DINITROTOLUENE	0.22		10 U	10 U	NA	10 U	10 U	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
2,6-DINITROTOLUENE	37		10 U	10 U	NA	10 U	10 U	NA
2-CHLORONAPHTHALENE	2900		10 U	10 U	NA	10 U	10 U	NA
2-CHLOROPHENOL	180		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2-METHYLNAPHTHALENE	150		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2-METHYLPHENOL	1800		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
2-NITROANILINE	370		20 U	20 U	NA	20 U	20 U	NA
2-NITROPHENOL			10 U	10 U	NA	10 U	10 U	NA
3,3'-DICHLOROBENZIDINE	0.15		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
3-NITROANILINE			20 U	20 U	NA	20 UJ	20 UJ	NA
4,6-DINITRO-2-METHYLPHENOL	2.9		20 UJ	20 UJ	NA	20 U	20 U	NA
4-BROMOPHENYL PHENYL ETHER			10 U	10 U	NA	10 U	10 U	NA
4-CHLORO-3-METHYLPHENOL	3700		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
4-CHLOROANILINE	0.34		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
4-CHLOROPHENYL PHENYL ETHER			10 U	10 U	NA	10 U	10 U	NA
4-METHYLPHENOL	180		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
4-NITROANILINE	3.4		20 U	20 U	NA	20 U	20 U	NA
4-NITROPHENOL			20 U	20 U	NA	20 U	20 U	NA
ACENAPHTHENE	2200		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
ACENAPHTHYLENE	2200		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
ACETOPHENONE	3700		10 U	10 U	NA	10 U	10 U	NA
ANTHRACENE	11000		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
ATRAZINE	0.29	3	0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
BENZALDEHYDE	3700		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
BENZO(A)ANTHRACENE	0.029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
BENZO(A)PYRENE	0.0029	0.2	0.1 U	0.1 U	NA	0.1 U	0.1 U	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
BENZO(B)FLUORANTHENE	0.029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
BENZO(G,H,I)PERYLENE	1100		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
BENZO(K)FLUORANTHENE	0.29		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
BIS(2-CHLOROETHOXY)METHANE	110		10 U	10 U	NA	10 U	10 U	NA
BIS(2-CHLOROETHYL)ETHER	0.012		10 U	10 U	NA	10 U	10 U	NA
BIS(2-ETHYLHEXYL)PHTHALATE	4.8	6	10 U	10 U	NA	10 U	10 U	NA
BUTYL BENZYL PHTHALATE	35		10 U	10 U	NA	10 U	10 U	NA
CAPROLACTAM	18000		1.7 J	4.9 J	NA	160 J	25 J	NA
CARBAZOLE			10 U	10 U	NA	10 U	10 U	NA
CHRYSENE	2.9		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
DIBENZO(A,H)ANTHRACENE	0.0029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
DIBENZOFURAN	37		10 U	10 U	NA	10 U	10 U	NA
DIETHYL PHTHALATE	29000		10 U	10 U	NA	10 U	10 U	NA
DIMETHYL PHTHALATE			10 U	10 U	NA	10 U	10 U	NA
DI-N-BUTYL PHTHALATE	3700		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
DI-N-OCTYL PHTHALATE			10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
FLUORANTHENE	1500		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
FLUORENE	1500		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
HEXACHLOROBENZENE	0.042	1	0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
HEXACHLOROBUTADIENE	0.86		10 U	10 U	NA	10 U	10 U	NA
HEXACHLOROCYCLOPENTADIENE	220	50	10 UR	10 UR	NA	10 UR	10 UR	NA
HEXACHLOROETHANE	4.8		10 U	10 U	NA	10 U	10 U	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
HIGH MOLECULAR WEIGHT PAHS			0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
INDENO(1,2,3-CD)PYRENE	0.029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
ISOPHORONE	71		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
LOW MOLECULAR WEIGHT PAHS			0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
NAPHTHALENE	0.14		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
NITROBENZENE	0.12		10 UJ	10 UJ	NA	10 UJ	10 UJ	NA
N-NITROSO-DI-N-PROPYLAMINE	0.0096		10 U	10 U	NA	10 U	10 U	NA
N-NITROSODIPHENYLAMINE	14		10 U	10 U	NA	10 U	10 U	NA
PENTACHLOROPHENOL	0.56	1	1 UJ	1 UJ	NA	1 UJ	1 UJ	NA
PHENANTHRENE	1100		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
PHENOL	11000		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
PYRENE	1100		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
TOTAL CARCINOGENIC PAHS-HALFND	0.0029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
TOTAL CARCINOGENIC PAHS-POS	0.0029		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
TOTAL CHLORINATED VOCS			10 U	10 U	NA	10 U	10 U	NA
TOTAL PAHS			0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
PESTICIDES/PCBS (UG/L)								
4,4'-DDD	0.28		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
4,4'-DDE	0.2		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
4,4'-DDT	0.2		0.1 U	0.1 U	NA	0.1 U	0.1 U	NA
ALDRIN	0.004		0.05 U	0.05 U	NA	0.05 U	0.05 U	NA
ALPHA-BHC	0.011		0.05 U	0.05 U	NA	0.05 U	0.05 U	NA
ALPHA-CHLORDANE	0.19	2	0.05 U	0.05 U	NA	0.05 U	0.05 U	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510		TF5-MW-916-0510		TF5-MW-923-0510		TF5-MW-923-051810		TF5-MW-924-0510		TF5-MW-924-051810	
LOCATION ID			TF5-MW-915		TF5-MW-916		TF5-MW-923		TF5-MW-923		TF5-MW-924		TF5-MW-924	
SAMPLE DATE			05/17/10		05/17/10		05/13/10		05/18/10		05/14/10		05/18/10	
SACODE			NORMAL		NORMAL		NORMAL		NORMAL		NORMAL		NORMAL	
QC TYPE			NM		NM		NM		NM		NM		NM	
AROCLOR-1016	0.96	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1221	0.0068	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1232	0.0068	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1242	0.034	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1248	0.034	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1254	0.034	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1260	0.034	0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1262		0.5	1	U	1	U	NA		1	U	1	U	NA	
AROCLOR-1268		0.5	1	U	1	U	NA		1	U	1	U	NA	
BETA-BHC	0.037		0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
DELTA-BHC	0.011		0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
DIELDRIN	0.0042		0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
ENDOSULFAN I	220		0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
ENDOSULFAN II	220		0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
ENDOSULFAN SULFATE	220		0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
ENDRIN	11	2	0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
ENDRIN ALDEHYDE	11		0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
ENDRIN KETONE	11		0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
GAMMA-BHC (LINDANE)	0.061	0.2	0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
GAMMA-CHLORDANE	0.19	2	0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
HEPTACHLOR	0.015	0.4	0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
HEPTACHLOR EPOXIDE	0.0074	0.2	0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
METHOXYCHLOR	180	40	0.5	U	0.5	U	NA		0.5	U	0.5	U	NA	
TOTAL AROCLOR		0.5	1	U	1	U	NA		1	U	1	U	NA	
TOTAL CHLORDANE			0.05	U	0.05	U	NA		0.05	U	0.05	U	NA	
TOTAL DDD/DDE/DDT			0.1	U	0.1	U	NA		0.1	U	0.1	U	NA	
TOXAPHENE	0.061	3	5	U	5	U	NA		5	U	5	U	NA	
METALS (UG/L)														

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
ALUMINUM	37000		38.5 UJ	1480	53.5 UJ	NA	35.7 UJ	NA
ANTIMONY	15	6	0.049 UJ	0.336 UJ	0.062 UJ	NA	0.061 UJ	NA
ARSENIC	0.045	10	8.8	0.59 J	0.911 J	NA	1.1	NA
BARIUM	7300	2000	9.9	69.3	15.1	NA	6.8	NA
BERYLLIUM	73	4	0.045 U	0.188 J	0.166 J	NA	0.045 U	NA
CADMIUM	18	5	0.054 U	0.183 J	0.074 J	NA	0.054 U	NA
CALCIUM			20400	11800	12900	NA	28200	NA
CHROMIUM	0.043	100	0.991 UJ	3.2 U	0.938 UJ	NA	1.3 UJ	NA
COBALT	11		10.6	14.3	19	NA	0.427 J	NA
COPPER	1500	1300	0.361 J	5.8	0.374 J	NA	1	NA
IRON	26000		17500	2260	24300	NA	225	NA
LEAD		15	0.162 U	1.7	0.162 U	NA	0.162 U	NA
MAGNESIUM			16500	7620	16700	NA	19600	NA
MANGANESE	880		1580	498	2510	NA	82.4	NA
MERCURY	0.57	2	0.056 U	0.056 U	0.056 U	NA	0.056 U	NA
NICKEL	730		27.4	43.4	57.8	NA	14.5	NA
POTASSIUM			520 J	2440	1130	NA	2150	NA
SELENIUM	180	50	0.123 U	0.667 J	0.123 U	NA	0.185 J	NA
SILVER	180		0.009 UJ	0.01 UJ	0.009 UJ	NA	0.008 U	NA
SODIUM			9520	29200	11200	NA	27600	NA
THALLIUM		2	0.204 U	0.204 U	0.204 U	NA	0.204 U	NA
VANADIUM	180		0.331 UJ	1.2 J	0.331 UJ	NA	0.331 UJ	NA
ZINC	11000		45 UJ	24.4 UJ	81.7 J	NA	16.6 UJ	NA
DISSOLVED METALS (UG/L)								
ALUMINUM	37000		NA	446	36.7 UJ	NA	NA	NA
ANTIMONY	15	6	NA	0.333 UJ	0.044 U	NA	NA	NA
ARSENIC	0.045	10	NA	0.236 U	0.794 J	NA	NA	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.3
ANALYTICAL RESULTS - GROUNDWATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-MW-915-0510	TF5-MW-916-0510	TF5-MW-923-0510	TF5-MW-923-051810	TF5-MW-924-0510	TF5-MW-924-051810
LOCATION ID			TF5-MW-915	TF5-MW-916	TF5-MW-923	TF5-MW-923	TF5-MW-924	TF5-MW-924
SAMPLE DATE			05/17/10	05/17/10	05/13/10	05/18/10	05/14/10	05/18/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
BARIUM	7300	2000	NA	53.8	15.1	NA	NA	NA
BERYLLIUM	73	4	NA	0.107 J	0.16 J	NA	NA	NA
CADMIUM	18	5	NA	0.084 J	0.054 U	NA	NA	NA
CALCIUM			NA	12700	12900	NA	NA	NA
CHROMIUM	0.043	100	NA	0.99 UJ	0.509 UJ	NA	NA	NA
COBALT	11		NA	9.3	18.3	NA	NA	NA
COPPER	1500	1300	NA	3.7	0.45 J	NA	NA	NA
IRON	26000		NA	128 J	23500	NA	NA	NA
LEAD		15	NA	0.162 U	0.162 U	NA	NA	NA
MAGNESIUM			NA	8720	16800	NA	NA	NA
MANGANESE	880		NA	333	2520	NA	NA	NA
MERCURY	0.57	2	NA	0.056 U	0.056 U	NA	NA	NA
NICKEL	730		NA	32.3	55.5	NA	NA	NA
POTASSIUM			NA	2250	1130	NA	NA	NA
SELENIUM	180	50	NA	0.573 J	0.123 U	NA	NA	NA
SILVER	180		NA	0.011 UJ	0.012 UJ	NA	NA	NA
SODIUM			NA	26700	11400	NA	NA	NA
THALLIUM		2	NA	0.204 U	0.204 U	NA	NA	NA
VANADIUM	180		NA	0.331 U	0.331 U	NA	NA	NA
ZINC	11000		NA	19.6 UJ	78.7	NA	NA	NA

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;
U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
VOLATILES (UG/L)									
1,1,1-TRICHLOROETHANE	9100	200	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	0.067		1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	0.24	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	59000		1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	2.4		1 U	1 U	1 U	1 UJ	1 U	1 U	1 U
1,1-DICHLOROETHENE	340	7	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	29		1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	2.3	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0003	0.2	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMOETHANE	0.0065	0.05	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	370	600	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	0.15	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	0.39	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE			1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	0.43	75	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	7100		5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2-HEXANONE	47		5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	2000		5 U	5 U	5 U	5 U	5 U	5 U	5 U
ACETONE	22000		5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
BENZENE	0.41	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOCHLOROMETHANE			1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	0.12	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BROMOFORM	8.5	80	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
BROMOMETHANE	8.7		1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
BTEX			1 U	1 U	1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	1000		1 U	1 U	1 U	1 UJ	1 U	1 U	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
CARBON TETRACHLORIDE	0.44	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	91	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	0.15	80	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	21000		1 U	1 U	1 U	1 U	1 U	1 U	1 U
CHLOROFORM	0.19	80	1 U	1 U	1 U	1 U	1	1 U	1 U
CHLOROMETHANE	190		1 U	1 U	1 U	1 U	1 U	1 U	3.8 U
CIS-1,2-DICHLOROETHENE	370	70	1 U	1 U	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	0.43		1 U	1 U	1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	13000		1 U	1 U	1 U	1 U	1 U	1 U	1 U
DICHLORODIFLUOROMETHANE	390		1 U	1 U	1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	1.5	700	1 U	1 U	1 U	1 U	1 U	1 U	1 U
ISOPROPYLBENZENE	680		1 U	1 U	1 U	1 U	1 U	1 U	1 U
M+P-XYLENES		10000	1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	37000		1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
METHYL CYCLOHEXANE			1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	12		1 U	1 U	1 U	1 U	1 U	1 U	1 U
METHYLENE CHLORIDE	4.8	5	1 U	1 U	1 U	1 UJ	1 U	1 U	1 U
O-XYLENE	1200	10000	1 U	1 U	1 U	1 U	1 U	1 U	1 U
STYRENE	1600	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	0.11	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOLUENE	2300	1000	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL 1,2-DICHLOROETHENE	330		1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED ETHENES			1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED VOCS			1 U	1 U	1 U	1 UJ	1 U	1 U	1.1 U
TOTAL XYLENES	200	10000	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	110	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE			1 U	1 U	1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	2	5	1 U	1 U	1 U	1 U	1 U	1 U	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
TRICHLOROFLUOROMETHANE	1300		1 U	1 U	1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	0.016	2	1 U	1 U	1 U	1 U	1 U	1 U	1 U
SEMIVOLATILES (UG/L)									
1,1-BIPHENYL	1800		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
1,2,4,5-TETRACHLOROBENZENE	11		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,4-DIOXANE	6.1		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.32		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,3,4,6-TETRACHLOROPHENOL	1100		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4,5-TRICHLOROPHENOL	3700		20 U	20 U	20 U	20 U	20 U	20 U	20 U
2,4,6-TRICHLOROPHENOL	6.1		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	110		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4-DIMETHYLPHENOL	730		0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
2,4-DINITROPHENOL	73		20 U	20 U	20 U	20 U	20 U	20 U	20 U
2,4-DINITROTOLUENE	0.22		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	37		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
2-CHLORONAPHTHALENE	2900		10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	180		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-METHYLNAPHTHALENE	150		0.1 U	0.1 U	0.1 U	0.25	0.1 U	3.3	0.1 U
2-METHYLPHENOL	1800		0.1 U	0.1 U	0.1 U	0.1 U		0.1 U	0.1 U
2-NITROANILINE	370		20 U	20 U	20 U	20 U	20 U	20 U	20 U
2-NITROPHENOL			10 U	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	0.15		10 U	10 U	10 U	10 U	10 U	10 U	10 U
3-NITROANILINE			20 U	20 U	20 U	20 U	20 U	20 U	20 U
4,6-DINITRO-2-METHYLPHENOL	2.9		20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-BROMOPHENYL PHENYL ETHER			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
4-CHLORO-3-METHYLPHENOL	3700		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-CHLOROANILINE	0.34		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
4-CHLOROPHENYL PHENYL ETHER			10 U	10 U	10 U	10 U	10 U	10 U	10 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
4-METHYLPHENOL	180		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-NITROANILINE	3.4		20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-NITROPHENOL			20 U	20 U	20 U	20 U	20 U	20 U	20 U
ACENAPHTHENE	2200		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.36	0.1 U
ACENAPHTHYLENE	2200		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.82	0.1 U
ACETOPHENONE	3700		10 U	10 U	10 U	10 U	10 U	10 U	10 U
ANTHRACENE	11000		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U
ATRAZINE	0.29	3	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
BENZALDEHYDE	3700		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
BENZO(A)ANTHRACENE	0.029		0.1 UJ	0.13 J	0.1 UJ	0.2 J	0.18 J	0.16 J	0.1 UJ
BENZO(A)PYRENE	0.0029	0.2	0.1 U	0.1 U	0.1 U	0.13	0.16	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.029		0.1 U	0.11	0.1 U	0.13	0.25	0.1 U	0.1 U
BENZO(G,H,I)PERYLENE	1100		0.1 U	0.1 U	0.1 U	0.1 U	0.13	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.29		0.1 U	0.1 U	0.1 U	0.1 U	0.15	0.1 U	0.1 U
BIS(2-CHLOROETHOXY)METHANE	110		10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	0.012		10 U	10 U	10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4.8	6	10 U	10 U	10 U	10 U	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	35		10 U	10 U	10 U	10 U	10 U	10 U	10 U
CAPROLACTAM	18000		10 U	10 U	10 U	10 U	10 U	10 U	10 U
CARBAZOLE			10 U	10 U	10 U	10 U	10 U	10 U	10 U
CHRYSENE	2.9		0.1 U	0.1 U	0.1 U	0.15	0.18	0.11	0.1 U
DIBENZO(A,H)ANTHRACENE	0.0029		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
DIBENZOFURAN	37		10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIETHYL PHTHALATE	29000		10 U	10 U	10 U	10 U	10 U	10 U	10 U
DIMETHYL PHTHALATE			10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	3700		10 U	10 U	10 U	10 U	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
FLUORANTHENE	1500		0.1 U	0.17	0.1 U	0.29	0.36	0.26	0.1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
FLUORENE	1500		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	1.3	0.1 U
HEXACHLOROBENZENE	0.042	1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HEXACHLOROBUTADIENE	0.86		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
HEXACHLOROCYCLOPENTADIENE	220	50	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
HEXACHLOROETHANE	4.8		10 U	10 U	10 U	10 U	10 U	10 U	10 U
HIGH MOLECULAR WEIGHT PAHS			0.1 UJ	0.54 J	0.1 UJ	1.2 J	1.8 J	0.77 J	0.1 UJ
INDENO(1,2,3-CD)PYRENE	0.029		0.1 U	0.1 U	0.1 U	0.1 U	0.11	0.1 U	0.1 U
ISOPHORONE	71		10 U	10 U	10 U	10 U	10 U	10 U	10 U
LOW MOLECULAR WEIGHT PAHS			0.11	0.12	0.14	1.27	0.15	8.49	0.1 U
NAPHTHALENE	0.14		0.1 U	0.1 U	0.1 U	0.59	0.1 U	1.5	0.1 U
NITROBENZENE	0.12		10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	0.0096		10 U	10 U	10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	14		10 U	10 U	10 U	10 U	10 U	10 U	10 U
PENTACHLOROPHENOL	0.56	1	1 U	1 U	1 U	1 U	1 U	1 U	1 U
PHENANTHRENE	1100		0.11	0.12	0.14	0.43	0.15	1.1	0.1 U
PHENOL	11000		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
PYRENE	1100		0.1 U	0.13	0.1 U	0.3	0.28	0.24	0.1 U
TOTAL CARCINOGENIC PAHS-HALFND	0.0029		0.1 UJ	0.49 J	0.1 UJ	0.76 J	1.08 J	0.52 J	0.1 UJ
TOTAL CARCINOGENIC PAHS-POS	0.0029		0.1 UJ	0.24 J	0.1 UJ	0.61 J	1.03 J	0.27 J	0.1 UJ
TOTAL CHLORINATED VOCS			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
TOTAL PAHS			0.11 J	0.66 J	0.14 J	2.47 J	1.95 J	9.26 J	0.1 UJ
PESTICIDES/PCBS (UG/L)									
4,4'-DDD	0.28		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.2		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.2		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ALDRIN	0.004		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.011		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
ALPHA-CHLORDANE	0.19	2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
AROCLOR-1016	0.96	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1221	0.0068	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1232	0.0068	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1242	0.034	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1248	0.034	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1254	0.034	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1260	0.034	0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1262		0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
AROCLOR-1268		0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
BETA-BHC	0.037		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DELTA-BHC	0.011		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
DIELDRIN	0.0042		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN I	220		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ENDOSULFAN II	220		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDOSULFAN SULFATE	220		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN	11	2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN ALDEHYDE	11		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ENDRIN KETONE	11		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
GAMMA-BHC (LINDANE)	0.061	0.2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
GAMMA-CHLORDANE	0.19	2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR	0.015	0.4	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
HEPTACHLOR EPOXIDE	0.0074	0.2	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
METHOXYCHLOR	180	40	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ	0.5 UJ
TOTAL AROCLOR		0.5	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TOTAL CHLORDANE			0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
TOTAL DDD/DDE/DDT			0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
TOXAPHENE	0.061	3	5 U	5 U	5 U	5 U	5 U	5 U	5 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-915-0310	TF5-SW-916-0310	TF5-SW-917-0310	TF5-SW-918-0310	TF5-SW-919-0310	TF5-SW-920-0310
LOCATION ID			TF5-SW-914	TF5-SW-915	TF5-SW-916	TF5-SW-917	TF5-SW-918	TF5-SW-919	TF5-SW-920
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM	NM
METALS (UG/L)									
ALUMINUM	37000		58.9 UJ	281 U	55.9 UJ	68.2 UJ	852	71.8 UJ	74.9 UJ
ANTIMONY	15	6	0.136 UJ	0.106 UJ	0.094 UJ	0.074 UJ	0.134 UJ	0.127 UJ	0.113 UJ
ARSENIC	0.045	10	0.297 J	0.236 U	0.297 J	0.236 U	0.236 U	0.299 J	0.262 J
BARIUM	7300	2000	9.4	7.9	8.9	10.2	11	8.1	9.1
BERYLLIUM	73	4	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U
CADMIUM	18	5	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U
CALCIUM			15200	17700	15200	14700	17300	11400	15100
CHROMIUM	0.043	100	0.975 UJ	0.917 UJ	0.953 UJ	1.1 UJ	0.893 UJ	0.959 UJ	1 UJ
COBALT	11		0.3 J	0.405 J	0.309 J	0.274 J	0.517 J	0.564 J	0.303 J
COPPER	1500	1300	1.9	3.3	1.9	1.1	0.9 J	1.4	2
IRON	26000		222 U	504	174 UJ	197 UJ	2930	592	270
LEAD		15	0.233 J	0.533 J	0.248 J	0.391 J	0.247 J	0.352 J	0.285 J
MAGNESIUM			6280	8250	6510	5250	5690	7340	6320
MANGANESE	880		28.2 UJ	12.6 UJ	22.8 UJ	18.2 UJ	48.3 UJ	76.7 U	30.7 UJ
MERCURY	0.57	2	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
NICKEL	730		2.8	4.8	2.9	4.6	5.4	1.6	2.7
POTASSIUM			2230	1520	2170	2130	2760	1170	2170
SELENIUM	180	50	0.243 J	0.224 J	0.178 J	0.256 J	0.221 J	0.168 J	0.206 J
SILVER	180		0.008 U	0.011 UJ	0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
SODIUM			30100	39600	29200	32900	35000	22500	29900
THALLIUM		2	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U
VANADIUM	180		0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ
ZINC	11000		39.2 UJ	21.1 UJ	35.6 UJ	22.7 UJ	34.6 UJ	34 UJ	37.2 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
VOLATILES (UG/L)							
1,1,1-TRICHLOROETHANE	9100	200	1 U	1 U	1 U	1 U	1 U
1,1,2,2-TETRACHLOROETHANE	0.067		1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROETHANE	0.24	5	1 U	1 U	1 U	1 U	1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	59000		1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHANE	2.4		1 U	1 U	1 U	1 U	1 U
1,1-DICHLOROETHENE	340	7	1 U	1 U	1 U	1 U	1 U
1,2,3-TRICHLOROBENZENE	29		1 U	1 U	1 U	1 U	1 U
1,2,4-TRICHLOROBENZENE	2.3	70	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMO-3-CHLOROPROPANE	0.0003	0.2	1 U	1 U	1 U	1 U	1 U
1,2-DIBROMOETHANE	0.0065	0.05	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROBENZENE	370	600	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROETHANE	0.15	5	1 U	1 U	1 U	1 U	1 U
1,2-DICHLOROPROPANE	0.39	5	1 U	1 U	1 U	1 U	1 U
1,3-DICHLOROBENZENE			1 U	1 U	1 U	1 U	1 U
1,4-DICHLOROBENZENE	0.43	75	1 U	1 U	1 U	1 U	1 U
2-BUTANONE	7100		5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
2-HEXANONE	47		5 U	5 U	5 U	5 U	5 U
4-METHYL-2-PENTANONE	2000		5 U	5 U	5 U	5 U	5 U
ACETONE	22000		5 UJ	5 UJ	5 UJ	5 UJ	5 UJ
BENZENE	0.41	5	1 U	1 U	1 U	1 U	1 U
BROMOCHLOROMETHANE			1 U	1 U	1 U	1 U	1 U
BROMODICHLOROMETHANE	0.12	80	1 U	1 U	1 U	1 U	1 U
BROMOFORM	8.5	80	1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
BROMOMETHANE	8.7		1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
BTEX			1 U	1 U	1 U	1 U	1 U
CARBON DISULFIDE	1000		1 U	1 U	1 U	1 U	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
CARBON TETRACHLORIDE	0.44	5	1 U	1 U	1 U	1 U	1 U
CHLOROBENZENE	91	100	1 U	1 U	1 U	1 U	1 U
CHLORODIBROMOMETHANE	0.15	80	1 U	1 U	1 U	1 U	1 U
CHLOROETHANE	21000		1 U	1 U	1 U	1 U	1 U
CHLOROFORM	0.19	80	1 U	1 U	1 U	1 U	1 U
CHLOROMETHANE	190		1 U	5.3 U	4.7 U	1 U	1 U
CIS-1,2-DICHLOROETHENE	370	70	1 U	1 U	1 U	1 U	1 U
CIS-1,3-DICHLOROPROPENE	0.43		1 U	1 U	1 U	1 U	1 U
CYCLOHEXANE	13000		1 U	1 U	1 U	1 U	1 U
DICHLORODIFLUOROMETHANE	390		1 U	1 U	1 U	1 U	1 U
ETHYLBENZENE	1.5	700	1 U	1 U	1 U	1 U	1 U
ISOPROPYLBENZENE	680		1 U	1 U	1 U	1 U	1 U
M+P-XYLENES		10000	1 U	1 U	1 U	1 U	1 U
METHYL ACETATE	37000		1 UJ	1 UJ	1 UJ	1 UJ	1 UJ
METHYL CYCLOHEXANE			1 U	1 U	1 U	1 U	1 U
METHYL TERT-BUTYL ETHER	12		1 U	1 U	1 U	1 U	1 U
METHYLENE CHLORIDE	4.8	5	1 U	1 U	1 U	1 U	1 U
O-XYLENE	1200	10000	1 U	1 U	1 U	1 U	1 U
STYRENE	1600	100	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	0.11	5	1 U	1 U	1 U	1 U	1 U
TOLUENE	2300	1000	1 U	1 U	1 U	1 U	1 U
TOTAL 1,2-DICHLOROETHENE	330		1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED ETHENES			1 U	1 U	1 U	1 U	1 U
TOTAL CHLORINATED VOCS			1 U	1.16 U	1.14 U	1 U	1 U
TOTAL XYLENES	200	10000	1 U	1 U	1 U	1 U	1 U
TRANS-1,2-DICHLOROETHENE	110	100	1 U	1 U	1 U	1 U	1 U
TRANS-1,3-DICHLOROPROPENE			1 U	1 U	1 U	1 U	1 U
TRICHLOROETHENE	2	5	1 U	1 U	1 U	1 U	1 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
TRICHLOROFLUOROMETHANE	1300		1 U	1 U	1 U	1 U	1 U
VINYL CHLORIDE	0.016	2	1 U	1 U	1 U	1 U	1 U
SEMIVOLATILES (UG/L)							
1,1-BIPHENYL	1800		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
1,2,4,5-TETRACHLOROBENZENE	11		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
1,4-DIOXANE	6.1		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,2'-OXYBIS(1-CHLOROPROPANE)	0.32		10 U	10 U	10 U	10 U	10 U
2,3,4,6-TETRACHLOROPHENOL	1100		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4,5-TRICHLOROPHENOL	3700		20 U	20 U	20 U	20 U	20 U
2,4,6-TRICHLOROPHENOL	6.1		10 U	10 U	10 U	10 U	10 U
2,4-DICHLOROPHENOL	110		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2,4-DIMETHYLPHENOL	730		0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
2,4-DINITROPHENOL	73		20 U	20 U	20 U	20 U	20 U
2,4-DINITROTOLUENE	0.22		10 U	10 U	10 U	10 U	10 U
2,6-DINITROTOLUENE	37		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
2-CHLORONAPHTHALENE	2900		10 U	10 U	10 U	10 U	10 U
2-CHLOROPHENOL	180		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-METHYLNAPHTHALENE	150		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-METHYLPHENOL	1800		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
2-NITROANILINE	370		20 U	20 U	20 U	20 U	20 U
2-NITROPHENOL			10 U	10 U	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	0.15		10 U	10 U	10 U	10 U	10 U
3-NITROANILINE			20 U	20 U	20 U	20 U	20 U
4,6-DINITRO-2-METHYLPHENOL	2.9		20 U	20 U	20 U	20 U	20 U
4-BROMOPHENYL PHENYL ETHER			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
4-CHLORO-3-METHYLPHENOL	3700		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-CHLOROANILINE	0.34		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
4-CHLOROPHENYL PHENYL ETHER			10 U	10 U	10 U	10 U	10 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
4-METHYLPHENOL	180		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4-NITROANILINE	3.4		20 U	20 U	20 U	20 U	20 U
4-NITROPHENOL			20 U	20 U	20 U	20 U	20 U
ACENAPHTHENE	2200		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ACENAPHTHYLENE	2200		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ACETOPHENONE	3700		10 U	10 U	10 U	10 U	10 U
ANTHRACENE	11000		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ATRAZINE	0.29	3	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ
BENZALDEHYDE	3700		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
BENZO(A)ANTHRACENE	0.029		0.1 UJ	0.1 UJ	0.1 UJ	0.11 J	0.13 J
BENZO(A)PYRENE	0.0029	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(B)FLUORANTHENE	0.029		0.1 U	0.1 U	0.1 U	0.1 U	0.14
BENZO(G,H,I)PERYLENE	1100		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BENZO(K)FLUORANTHENE	0.29		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
BIS(2-CHLOROETHOXY)METHANE	110		10 U	10 U	10 U	10 U	10 U
BIS(2-CHLOROETHYL)ETHER	0.012		10 U	10 U	10 U	10 U	10 U
BIS(2-ETHYLHEXYL)PHTHALATE	4.8	6	10 U	10 U	10 U	10 U	10 U
BUTYL BENZYL PHTHALATE	35		10 U	10 U	10 U	10 U	10 U
CAPROLACTAM	18000		10 U	10 U	10 U	10 U	10 U
CARBAZOLE			10 U	10 U	10 U	10 U	10 U
CHRYSENE	2.9		0.1 U	0.1 U	0.1 U	0.1 U	0.11
DIBENZO(A,H)ANTHRACENE	0.0029		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
DIBENZOFURAN	37		10 U	10 U	10 U	10 U	10 U
DIETHYL PHTHALATE	29000		10 U	10 U	10 U	10 U	10 U
DIMETHYL PHTHALATE			10 U	10 U	10 U	10 U	10 U
DI-N-BUTYL PHTHALATE	3700		10 U	10 U	10 U	10 U	10 U
DI-N-OCTYL PHTHALATE			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
FLUORANTHENE	1500		0.1 U	0.1 U	0.1 U	0.12	0.24

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
FLUORENE	1500		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HEXACHLOROBENZENE	0.042	1	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
HEXACHLOROBUTADIENE	0.86		10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
HEXACHLOROCYCLOPENTADIENE	220	50	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
HEXACHLOROETHANE	4.8		10 U	10 U	10 U	10 U	10 U
HIGH MOLECULAR WEIGHT PAHS			0.1 UJ	0.1 UJ	0.1 UJ	0.23 J	0.79 J
INDENO(1,2,3-CD)PYRENE	0.029		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ISOPHORONE	71		10 U	10 U	10 U	10 U	10 U
LOW MOLECULAR WEIGHT PAHS			0.11	0.11	0.13	0.075	0.13
NAPHTHALENE	0.14		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
NITROBENZENE	0.12		10 U	10 U	10 U	10 U	10 U
N-NITROSO-DI-N-PROPYLAMINE	0.0096		10 U	10 U	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	14		10 U	10 U	10 U	10 U	10 U
PENTACHLOROPHENOL	0.56	1	1 U	1 U	1 U	1 U	1 U
PHENANTHRENE	1100		0.11	0.11	0.13	0.075	0.13
PHENOL	11000		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
PYRENE	1100		0.1 U	0.1 U	0.1 U	0.1 U	0.17
TOTAL CARCINOGENIC PAHS-HALFND	0.0029		0.1 UJ	0.1 UJ	0.1 UJ	0.41 J	0.58 J
TOTAL CARCINOGENIC PAHS-POS	0.0029		0.1 UJ	0.1 UJ	0.1 UJ	0.11 J	0.38 J
TOTAL CHLORINATED VOCS			10 UJ	10 UJ	10 UJ	10 UJ	10 UJ
TOTAL PAHS			0.11 J	0.11 J	0.13 J	0.28 J	0.92 J
PESTICIDES/PCBS (UG/L)							
4,4'-DDD	0.28		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.2		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.2		0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
ALDRIN	0.004		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
ALPHA-BHC	0.011		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310		TF5-SW-921-0006		TF5-SW-922-0006		TF5-SW-923-0006-AVG		TF5-SW-924-0006	
LOCATION ID			TF5-SW-914		TF5-SW-921		TF5-SW-922		TF5-SW-923		TF5-SW-924	
SAMPLE DATE			03/16/10		03/16/10		03/16/10		03/16/10		03/16/10	
SACODE			NORMAL		NORMAL		NORMAL		AVG		NORMAL	
QC TYPE			NM		NM		NM		NM		NM	
ALPHA-CHLORDANE	0.19	2	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
AROCLOR-1016	0.96	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1221	0.0068	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1232	0.0068	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1242	0.034	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1248	0.034	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1254	0.034	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1260	0.034	0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1262		0.5	1	U	1	U	1	U	1	U	1	U
AROCLOR-1268		0.5	1	U	1	U	1	U	1	U	1	U
BETA-BHC	0.037		0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
DELTA-BHC	0.011		0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
DIELDRIN	0.0042		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
ENDOSULFAN I	220		0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
ENDOSULFAN II	220		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
ENDOSULFAN SULFATE	220		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
ENDRIN	11	2	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
ENDRIN ALDEHYDE	11		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
ENDRIN KETONE	11		0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
GAMMA-BHC (LINDANE)	0.061	0.2	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
GAMMA-CHLORDANE	0.19	2	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
HEPTACHLOR	0.015	0.4	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
HEPTACHLOR EPOXIDE	0.0074	0.2	0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
METHOXYCHLOR	180	40	0.5	UJ	0.5	UJ	0.5	U	0.5	U	0.5	U
TOTAL AROCLOR		0.5	1	U	1	U	1	U	1	U	1	U
TOTAL CHLORDANE			0.05	U	0.05	U	0.05	U	0.05	U	0.05	U
TOTAL DDD/DDE/DDT			0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
TOXAPHENE	0.061	3	5	U	5	U	5	U	5	U	5	U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.4
ANALYTICAL RESULTS - SURFACE WATER
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL for Tapwater	Federal MCL	TF5-SW-914-0310	TF5-SW-921-0006	TF5-SW-922-0006	TF5-SW-923-0006-AVG	TF5-SW-924-0006
LOCATION ID			TF5-SW-914	TF5-SW-921	TF5-SW-922	TF5-SW-923	TF5-SW-924
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
SACODE			NORMAL	NORMAL	NORMAL	AVG	NORMAL
QC TYPE			NM	NM	NM	NM	NM
METALS (UG/L)							
ALUMINUM	37000		58.9 UJ	73.8 UJ	65.4 UJ	65.4 UJ	67.3 UJ
ANTIMONY	15	6	0.136 UJ	0.097 UJ	0.09 UJ	0.094 UJ	0.156 UJ
ARSENIC	0.045	10	0.297 J	0.244 J	0.236 U	0.236 U	0.236 U
BARIUM	7300	2000	9.4	9.1	9	9	9.1
BERYLLIUM	73	4	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U
CADMIUM	18	5	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U
CALCIUM			15200	14700	14900	14600	14500
CHROMIUM	0.043	100	0.975 UJ	1.1 UJ	1 UJ	0.992 UJ	1.1 UJ
COBALT	11		0.3 J	0.31 J	0.332 J	0.326 J	0.363 J
COPPER	1500	1300	1.9	1.8	1.9	1.8	1.8
IRON	26000		222 U	243	319	215	227 U
LEAD		15	0.233 J	0.196 J	0.23 J	0.193 J	0.268 J
MAGNESIUM			6280	6130	6400	6140	6040
MANGANESE	880		28.2 UJ	33.3 UJ	41.6 UJ	27.9 UJ	30.5 UJ
MERCURY	0.57	2	0.056 U	0.056 U	0.056 U	0.056 U	0.056 U
NICKEL	730		2.8	2.8	2.6	2.65	2.7
POTASSIUM			2230	2080	2080	2140	2100
SELENIUM	180	50	0.243 J	0.206 J	0.188 J	0.196 J	0.219 J
SILVER	180		0.008 U	0.008 U	0.008 U	0.008 U	0.008 U
SODIUM			30100	28900	28900	29700	29500
THALLIUM		2	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U
VANADIUM	180		0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ	0.331 UJ
ZINC	11000		39.2 UJ	36.3 UJ	38.5 UJ	37 UJ	38.1 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)								
1,1,1-TRICHLOROETHANE	8700000	38000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,1,2-TRICHLOROETHANE	1100	5300	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,1-DICHLOROETHANE	3300	17000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,1-DICHLOROETHENE	240000	1100000	7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,2-DIBROMOETHANE	34	170	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,2-DICHLOROBENZENE	1900000	9800000	1.6 J	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,2-DICHLOROETHANE	430	2200	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,2-DICHLOROPROPANE	890	4500	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,3-DICHLOROBENZENE			7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
1,4-DICHLOROBENZENE	2400	12000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
2-BUTANONE	28000000	200000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
2-HEXANONE	210000	1400000	7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
4-METHYL-2-PENTANONE	5300000	53000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
ACETONE	61000000	630000000	38 J	6.1 UJ	38 J	37 J	130 J	200 J
BENZENE	1100	5400	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
BROMOCHLOROMETHANE			7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
BROMODICHLOROMETHANE	270	1400	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
BROMOFORM	61000	220000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
BROMOMETHANE	7300	32000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
BTEX			7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
CARBON DISULFIDE	820000	3700000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CARBON TETRACHLORIDE	610	3000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CHLOROBENZENE	290000	1400000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CHLORODIBROMOMETHANE	680	3300	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CHLOROETHANE	15000000	61000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CHLOROFORM	290	1500	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CHLOROMETHANE	120000	500000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
CYCLOHEXANE	7000000	29000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
DICHLORODIFLUOROMETHANE	180000	780000	7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
ETHYLBENZENE	5400	27000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
ISOPROPYLBENZENE	2100000	11000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
M+P-XYLENES			7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
METHYL ACETATE	78000000	1E+09	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
METHYL CYCLOHEXANE			7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
METHYL TERT-BUTYL ETHER	43000	220000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
METHYLENE CHLORIDE	11000	53000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
O-XYLENE	3800000	19000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
STYRENE	6300000	36000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TETRACHLOROETHENE	550	2600	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TOLUENE	5000000	45000000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TOTAL CHLORINATED ETHENES			7.1 UJ	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
TOTAL CHLORINATED VOCS			1.6 J	6.1 UJ	5.5 UJ	4.3 UJ	11 UJ	19 UJ
TOTAL XYLENES	630000	2700000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
TRANS-1,2-DICHLOROETHENE	150000	690000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TRICHLOROETHENE	2800	14000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
VINYL CHLORIDE	60	1700	7.1 U	6.1 U	5.5 U	4.3 U	11 UJ	19 UJ
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	3900000	51000000	330 U	330 U	330 U	330 U	330 U	330 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
1,4-DIOXANE	44000	160000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	330 U	330 U	330 U	330 U	330 U	330 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4,5-TRICHLOROPHENOL	6100000	62000000	670 U	670 U	670 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	44000	160000	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	180000	1800000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4-DIMETHYLPHENOL	1200000	12000000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4-DINITROPHENOL	120000	1200000	670 U	670 U	670 U	670 U	670 U	670 U
2,4-DINITROTOLUENE	1600	5500	330 U	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	61000	620000	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	6300000	82000000	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	390000	5100000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-METHYLNAPHTHALENE	310000	4100000	210	24	31	4.7	7.3	7.4
2-METHYLPHENOL	3100000	31000000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	12
2-NITROANILINE	610000	6000000	670 U	670 U	670 U	670 U	670 U	670 U
2-NITROPHENOL			330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	1100	3800	330 U	330 U	330 U	330 U	330 UJ	330 U
3-NITROANILINE			670 U	670 U	670 U	670 U	670 U	670 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
4,6-DINITRO-2-METHYLPHENOL	4900	49000	670 U	670 U	670 U	670 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER			330 U	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ
4-CHLOROANILINE	2400	8600	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
4-CHLOROPHENYL PHENYL ETHER			330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	310000	3100000	3.3 U	3.3 U	3.3 U	11	5.3	8.8
4-NITROANILINE	24000	86000	670 U	670 U	670 U	670 U	670 U	670 U
4-NITROPHENOL			670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ
ACENAPHTHENE	3400000	33000000	48	24	14	10	8.9	12
ACENAPHTHYLENE	3400000	33000000	110	14	31	19	20	24
ACETOPHENONE	7800000	100000000	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	17000000	170000000	120	29	54	51	35	59
ATRAZINE	2100	7500	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	4.6 J
BENZALDEHYDE	7800000	100000000	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	150	2100	140 J	33 J	96 J	270 J	160 J	230 J
BENZO(A)PYRENE	15	210	190	42	130	260	230 J	300
BENZO(B)FLUORANTHENE	150	2100	290 J	72 J	170 J	420 J	230 J	430 J
BENZO(G,H,I)PERYLENE	1700000	17000000	150	32	81	250	200 J	320
BENZO(K)FLUORANTHENE	1500	21000	140 J	29 J	91 J	160	290 J	200 J
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	210	1000	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	330 U	45 J	41 J	130 J	250 J	140 J
BUTYL BENZYL PHTHALATE	260000	910000	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	31000000	310000000	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE			330 U	330 U	330 U	39 J	330 U	36 J
CHRYSENE	15000	210000	220	51	130	330 J	230 J	350 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
DIBENZO(A,H)ANTHRACENE	15	210	40	8.7	26	130	57	110
DIBENZOFURAN	78000	1000000	330 U	330 U	330 U	330 U	330 U	330 U
DIETHYL PHTHALATE	49000000	490000000	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE			330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	6100000	62000000	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE			330 U	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	2300000	22000000	400	100	210	710	380	700
FLUORENE	2300000	22000000	120	34	35	20	16	22
HEXACHLOROBENZENE	300	1100	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
HEXACHLOROBUTADIENE	6200	22000	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROETHANE	35000	120000	330 U	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS			2070 J	482 J	1210 J	3410 J	2270 J	3460 J
INDENO(1,2,3-CD)PYRENE	150	2100	130	29	72	320	180 J	280
ISOPHORONE	510000	1800000	330 U	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS			1170	265	366	419	294 J	393
NAPHTHALENE	3600	18000	130	9.6	21	4.2	7	8.6
NITROBENZENE	4800	24000	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
N-NITROSO-DI-N-PROPYLAMINE	69	250	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	99000	350000	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	3000	9000	33 U	33 U	33 U	33 U	33 U	33 U
PHENANTHRENE	1700000	17000000	430	130	180	310	200 J	260
PHENOL	18000000	180000000	3.3 U	3.3 U	3.3 U	7.6	3.3 U	7.3
PYRENE	1700000	17000000	370	85	200	560	310	540
TOTAL CARCINOGENIC PAHS-HALFND	15	210	1150 J	265 J	715 J	1890 J	1380 J	1900 J
TOTAL CARCINOGENIC PAHS-POS	15	210	1150 J	265 J	715 J	1890 J	1380 J	1900 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
TOTAL CHLORINATED VOCS			330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS			3240 J	746 J	1570 J	3830 J	2560 J	3850 J
PESTICIDES/PCBS (UG/KG)								
4,4'-DDD	2000	7200	3.3 U	3.3 U	3.3 U	3.3 U	3.4 J	3.3 U
4,4'-DDE	1400	5100	3.3 U	3.3 U	4.8	3.3 U	3.3 UJ	3.3 U
4,4'-DDT	1700	7000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
ALDRIN	29	100	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
ALPHA-BHC	77	270	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
ALPHA-CHLORDANE	1600	6500	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
AROCLOR-1016	3900	21000	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1221	140	540	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1232	140	540	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1242	220	740	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1248	220	740	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1254	220	740	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1260	220	740	33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1262			33 U	33 U	33 U	33 U	33 U	33 U
AROCLOR-1268			33 U	33 U	33 U	33 U	33 U	33 U
BETA-BHC	270	960	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
DELTA-BHC	77	270	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
DIELDRIN	30	110	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
ENDOSULFAN I	370000	3700000	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
ENDOSULFAN II	370000	3700000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
ENDOSULFAN SULFATE	370000	3700000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
ENDRIN	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
ENDRIN ALDEHYDE	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
ENDRIN KETONE	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 UJ	3.3 U
GAMMA-BHC (LINDANE)	520	2100	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
GAMMA-CHLORDANE	1600	6500	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
HEPTACHLOR	110	380	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
HEPTACHLOR EPOXIDE	53	190	1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
METHOXYCHLOR	310000	3100000	17 U	17 U	17 U	17 U	17 UJ	17 U
TOTAL AROCLOR	220	740	33 U	33 U	33 U	33 U	33 U	33 U
TOTAL CHLORDANE			1.7 U	1.7 U	1.7 U	1.7 U	1.7 UJ	1.7 U
TOTAL DDD/DDE/DDT			3.3 U	3.3 U	4.8	3.3 U	3.4 J	3.3 U
TOXAPHENE	440	1600	170 U	170 U	170 U	170 U	170 UJ	170 U
METALS (MG/KG)								
ALUMINUM	77000	990000	9480	7350	9390	6360	12600	12000
ANTIMONY	31	410	1.4 UJ	0.68 UJ	0.18 UJ	0.24 UJ	0.34 UJ	0.96 UJ
ARSENIC	0.39	1.6	10.5	121	12.7	11.5	14.1	12.8
BARIUM	15000	190000	26.4 J	24.6 J	17.1 J	19.1 J	36.3 J	38.7 J
BERYLLIUM	160	2000	0.43 J	1.1 J	0.36 J	0.33 J	0.56 J	0.65 J
CADMIUM	70	800	0.25 J	2	0.37	0.26 J	0.43 J	0.49 J
CALCIUM			1510 J	6.6 UJ	1580 J	813 J	1780 J	2850 J
CHROMIUM	0.29	5.6	10.6 J	18.8 J	13.5 J	10 J	16.6 J	16.8 J
COBALT	23	300	6.5	95	8.8	8.5	14.6	6.6 J
COPPER	3100	41000	23.5	4.9	22.5	17.1	40.5	43
IRON	55000	720000	18900	166000	28600	15300	24600	24500
LEAD	400	800	47.8 J	11.5 J	39.5 J	27.1 J	71 J	95.8 J
MAGNESIUM			1860	784	2740	1560	2980	2350
MANGANESE	1800	23000	121	982	163	204	215	112
MERCURY	5.6	34	0.12	0.054 J	0.063	0.038 J	0.12	0.19 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

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DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
NICKEL	1500	20000	30.9	127	23.6	16.2	29	41
POTASSIUM			271	193 J	213	275	376	450
SELENIUM	390	5100	2.7 UJ	1.3 UJ	2.3 UJ	2.3 UJ	3.3 UJ	5.9 UJ
SILVER	390	5100	0.14 J	0.079 U	0.08 U	0.1 U	0.15 U	0.35 UJ
SODIUM			56.6 J	39.6 J	113	30.2 J	132	252
THALLIUM			0.38 U	0.24 U	0.24 U	0.33 J	0.45 U	1.1 UJ
VANADIUM	390	5200	23.9	6.6 J	19.4	12.5	23.5	27.3
ZINC	23000	310000	63.8	109	90.7	71	123	83.6
MISCELLANEOUS PARAMETERS (S.U.)								
PH			4.7	5.3	5.5	5.3	5.7	5.4
MISCELLANEOUS PARAMETERS (MG/KG)								
TOTAL ORGANIC CARBON			44000	32000	37000	29000	37000	60000
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	15000	60000	3990 J	1050	1700 J	2780 J	9160 J	2950
1,2,3,4,6,7,8,9-OCDF	15000	60000	13.6	5.52 J	9.13	24	90.1	25.3
1,2,3,4,6,7,8-HPCDD	450	1800	75.7	25.3	35.4	70.3	237 J	85.7
1,2,3,4,6,7,8-HPCDF	450	1800	6.77	3.23 J	5.31	17.8	46.2	12.6
1,2,3,4,7,8,9-HPCDF	450	1800	0.826 U	0.233 UJ	0.504 U	1.04 J	4.32 J	1.19 U
1,2,3,4,7,8-HXCDD	45	180	0.987 J	0.332 J	0.501 J	1.08 J	3.71 J	1.3 J
1,2,3,4,7,8-HXCDF	45	180	2.13 J	0.368 J	1.45 J	1.61 J	8.63	1.89 J
1,2,3,6,7,8-HXCDD	45	180	1.83 J	0.739 J	0.997 J	2.37 J	8.2 J	3 J
1,2,3,6,7,8-HXCDF	45	180	0.941 J	0.268 J	0.619 J	1.29 J	4.08 J	0.959 J
1,2,3,7,8,9-HXCDD	45	180	1.94 J	1.09 J	1.42 J	3.03 J	9.36 J	3.31 J
1,2,3,7,8,9-HXCDF	45	180	0.174 U	0.11 U	0.0671 U	0.428 U	0.282 U	0.438 U
1,2,3,7,8-PECDD	4.5	18	0.477 J	0.0503 U	0.291 J	0.681 J	1.97 J	0.763 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-914-0006	TF5-SD-915-0006	TF5-SD-916-0006	TF5-SD-917-0006	TF5-SD-918-0006
LOCATION ID			TF5-SD-913	TF5-SD-914	TF5-SD-915	TF5-SD-916	TF5-SD-917	TF5-SD-918
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
QC TYPE			NM	NM	NM	NM	NM	NM
1,2,3,7,8-PECDF	150	600	0.561 J	0.0971 J	0.435 J	0.301 J	1.5 J	0.605 J
2,3,4,6,7,8-HXCDF	45	180	1.22 J	0.322 J	0.712 J	1.37 J	5.96	1.21 J
2,3,4,7,8-PECDF	15	60	0.694 J	0.139 J	0.517 J	0.266 J	2.1 J	0.75 J
2,3,7,8-TCDD	4.5	18	0.119 J	0.0444 U	0.0846 J	0.123 J	0.414 JK	0.117 U
2,3,7,8-TCDF	45	180	1.29 J	0.178 J	0.892 J	0.402 J	2.02 J	1.35 J
TEQ BIRD	4.5	18	3.87 J	0.719 J	2.54 J	2.85 J	11.4 J	4.26 J
TEQ BIRD HALFND	4.5	18	3.88 J	0.773 J	2.55 J	2.87 J	11.4 J	4.35 J
TEQ FISH	4.5	18	2.54 J	0.526 J	1.51 J	2.53 J	9.17 J	2.86 J
TEQ FISH HALFND	4.5	18	2.55 J	0.581 J	1.52 J	2.55 J	9.19 J	2.95 J
TEQ MAMMAL	4.5	18	3.88 J	0.976 J	2.12 J	3.74 J	12.9 J	4.18 J
TEQ MAMMAL HALFND	4.5	18	3.89 J	1.03 J	2.13 J	3.76 J	12.9 J	4.27 J
TOTAL HPCDD			161	49.9	70.6	136	458	169
TOTAL HPCDF			15.7	6.98	11.5	35.2	107	30.6
TOTAL HXCDD			17.4	7.55	11.3	18.7	64.9	26.9
TOTAL HXCDF			11.7	3.52 J	7.36	16.7	60.1	13.5
TOTAL PECDD			4.77 J	0.0503 U	3.23 J	3.43 J	14.8	1.7 J
TOTAL PECDF			7.66	1.5 J	7.44	6.97	37.2	11.4
TOTAL TCDD			0.91 J	0.0444 U	1.69	0.244 J	3.41	0.117 U
TOTAL TCDF			10.5	0.778 J	2.78	3.53	33.7	10.8

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
VOLATILES (UG/KG)								
1,1,1-TRICHLOROETHANE	8700000	38000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,1,2-TRICHLOROETHANE	1100	5300	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,1-DICHLOROETHANE	3300	17000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,1-DICHLOROETHENE	240000	1100000	7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2-DIBROMOETHANE	34	170	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2-DICHLOROBENZENE	1900000	9800000	1.6 J	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2-DICHLOROETHANE	430	2200	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,2-DICHLOROPROPANE	890	4500	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,3-DICHLOROBENZENE			7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
1,4-DICHLOROBENZENE	2400	12000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
2-BUTANONE	28000000	200000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
2-HEXANONE	210000	1400000	7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
4-METHYL-2-PENTANONE	5300000	53000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
ACETONE	61000000	630000000	38 J	48 J	63 J	170 J	91 J	13.4 J
BENZENE	1100	5400	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
BROMOCHLOROMETHANE			7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
BROMODICHLOROMETHANE	270	1400	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
BROMOFORM	61000	220000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
BROMOMETHANE	7300	32000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
BTEX			7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
CARBON DISULFIDE	820000	3700000	7.1 U	12 UJ	8.4 UJ	3.9 J	7.1 UJ	5.95 UJ
CARBON TETRACHLORIDE	610	3000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CHLOROBENZENE	290000	1400000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CHLORODIBROMOMETHANE	680	3300	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CHLOROETHANE	15000000	61000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CHLOROFORM	290	1500	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CHLOROMETHANE	120000	500000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
CYCLOHEXANE	7000000	29000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
DICHLORODIFLUOROMETHANE	180000	780000	7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
ETHYLBENZENE	5400	27000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
ISOPROPYLBENZENE	2100000	11000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
M+P-XYLENES			7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
METHYL ACETATE	78000000	1E+09	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
METHYL CYCLOHEXANE			7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
METHYL TERT-BUTYL ETHER	43000	220000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
METHYLENE CHLORIDE	11000	53000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
O-XYLENE	3800000	19000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
STYRENE	6300000	36000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TETRACHLOROETHENE	550	2600	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TOLUENE	5000000	45000000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TOTAL CHLORINATED ETHENES			7.1 UJ	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TOTAL CHLORINATED VOCS			1.6 J	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TOTAL XYLENES	630000	2700000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
TRANS-1,2-DICHLOROETHENE	150000	690000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TRICHLOROETHENE	2800	14000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
VINYL CHLORIDE	60	1700	7.1 U	12 UJ	8.4 UJ	14 UJ	7.1 UJ	5.95 UJ
SEMIVOLATILES (UG/KG)								
1,1-BIPHENYL	3900000	51000000	330 U	330 U	330 U	330 U	330 U	330 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
1,4-DIOXANE	44000	160000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	330 U	330 U	330 U	330 U	330 U	330 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4,5-TRICHLOROPHENOL	6100000	62000000	670 U	670 U	670 U	670 U	670 U	670 U
2,4,6-TRICHLOROPHENOL	44000	160000	330 U	330 U	330 U	330 U	330 U	330 U
2,4-DICHLOROPHENOL	180000	1800000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2,4-DIMETHYLPHENOL	1200000	12000000	3.3 U	3.5	3.3 U	3.3 U	3.3 U	3.3 U
2,4-DINITROPHENOL	120000	1200000	670 U	670 U	670 U	670 U	670 U	670 U
2,4-DINITROTOLUENE	1600	5500	330 U	330 U	330 U	330 U	330 U	330 U
2,6-DINITROTOLUENE	61000	620000	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLORONAPHTHALENE	6300000	82000000	330 U	330 U	330 U	330 U	330 U	330 U
2-CHLOROPHENOL	390000	5100000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
2-METHYLNAPHTHALENE	310000	4100000	210	15	3.3 U	5.8	11	3.3 U
2-METHYLPHENOL	3100000	31000000	3.3 U	3.5	3.3 U	3.3 U	3.3 UJ	3.3 UJ
2-NITROANILINE	610000	6000000	670 U	670 U	670 U	670 U	670 U	670 U
2-NITROPHENOL			330 U	330 U	330 U	330 U	330 U	330 U
3,3'-DICHLOROBENZIDINE	1100	3800	330 U	330 U	330 U	330 U	330 U	330 U
3-NITROANILINE			670 U	670 U	670 U	670 U	670 U	670 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
4,6-DINITRO-2-METHYLPHENOL	4900	49000	670 U	670 U	670 U	670 U	670 U	670 U
4-BROMOPHENYL PHENYL ETHER			330 U	330 U	330 U	330 U	330 U	330 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 U	3.3 U
4-CHLOROANILINE	2400	8600	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
4-CHLOROPHENYL PHENYL ETHER			330 U	330 U	330 U	330 U	330 U	330 U
4-METHYLPHENOL	310000	3100000	3.3 U	6.3	9.4	21	3.8	3.88
4-NITROANILINE	24000	86000	670 U	670 U	670 U	670 U	670 U	670 U
4-NITROPHENOL			670 UJ	670 UJ	670 UJ	670 UJ	670 UJ	670 UJ
ACENAPHTHENE	3400000	33000000	48	36	7.2	25	41	11.8 J
ACENAPHTHYLENE	3400000	33000000	110	64	14	31	39	6.6
ACETOPHENONE	7800000	100000000	330 U	330 U	330 U	330 U	330 U	330 U
ANTHRACENE	17000000	170000000	120	130	29	120	150	40 J
ATRAZINE	2100	7500	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ
BENZALDEHYDE	7800000	100000000	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
BENZO(A)ANTHRACENE	150	2100	140 J	270 J	90 J	650	620	190 J
BENZO(A)PYRENE	15	210	190	390	130	780	690	280
BENZO(B)FLUORANTHENE	150	2100	290 J	470 J	250 J	750	710	385 J
BENZO(G,H,I)PERYLENE	1700000	17000000	150	350	100	600	450	270
BENZO(K)FLUORANTHENE	1500	21000	140 J	460	69 J	860	630	360 J
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	210	1000	330 U	330 U	330 U	330 U	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	330 U	130 J	310 J	410	220 J	112 J
BUTYL BENZYL PHTHALATE	260000	910000	330 U	330 U	330 U	330 U	330 U	330 U
CAPROLACTAM	31000000	310000000	330 U	330 U	330 U	330 U	330 U	330 U
CARBAZOLE			330 U	49 J	330 U	100 J	81 J	50.5 J
CHRYSENE	15000	210000	220	440 J	170	860	860	400 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
DIBENZO(A,H)ANTHRACENE	15	210	40	110	38	180	150	87 J
DIBENZOFURAN	78000	1000000	330 U	330 U	330 U	330 U	330 U	330 U
DIETHYL PHTHALATE	49000000	490000000	330 U	330 U	330 U	330 U	330 U	330 U
DIMETHYL PHTHALATE			330 U	330 U	330 U	330 U	330 U	330 U
DI-N-BUTYL PHTHALATE	6100000	62000000	330 U	330 U	330 U	330 U	330 U	330 U
DI-N-OCTYL PHTHALATE			330 U	330 U	330 U	330 U	330 U	330 U
FLUORANTHENE	2300000	22000000	400	640	270	1800	1500	855
FLUORENE	2300000	22000000	120	62	14	42	66	20 J
HEXACHLOROBENZENE	300	1100	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
HEXACHLOROBUTADIENE	6200	22000	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	330 U	330 U	330 U	330 U	330 U	330 U
HEXACHLOROETHANE	35000	120000	330 U	330 U	330 U	330 U	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS			2070 J	4020 J	1430 J	8370	7140	3650 J
INDENO(1,2,3-CD)PYRENE	150	2100	130	310	92	590	430	215
ISOPHORONE	510000	1800000	330 U	330 U	330 U	330 U	330 U	330 U
LOW MOLECULAR WEIGHT PAHS			1170	689	194	922	964	326 J
NAPHTHALENE	3600	18000	130	22	3.3 U	7.7	17	3.92
NITROBENZENE	4800	24000	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ	330 UJ
N-NITROSO-DI-N-PROPYLAMINE	69	250	330 U	330 U	330 U	330 U	330 U	330 U
N-NITROSODIPHENYLAMINE	99000	350000	330 U	330 U	330 U	330 U	330 U	330 U
PENTACHLOROPHENOL	3000	9000	33 U	34	33 U	33 U	33 UJ	33 UJ
PHENANTHRENE	1700000	17000000	430	360	130	690	640	245
PHENOL	18000000	180000000	3.3 U	6.2	3.3 U	8.7	3.3 U	2.52
PYRENE	1700000	17000000	370	580	220	1300	1100	610
TOTAL CARCINOGENIC PAHS-HALFND	15	210	1150 J	2450 J	839 J	4670	4090	1920 J
TOTAL CARCINOGENIC PAHS-POS	15	210	1150 J	2450 J	839 J	4670	4090	1920 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
TOTAL CHLORINATED VOCS			330 U	330 U	330 U	330 U	330 U	330 U
TOTAL PAHS			3240 J	4710 J	1620 J	9290	8100	3980 J
PESTICIDES/PCBS (UG/KG)								
4,4'-DDD	2000	7200	3.3 U	3.3 U	3.3 U	3.3 U	51 UJ	3.62 J
4,4'-DDE	1400	5100	3.3 U	4.7	3.3 U	3.3 U	5.4	3.3 U
4,4'-DDT	1700	7000	3.3 U	3.4	3.3 U	3.3 U	15	3.3 U
ALDRIN	29	100	1.7 U	1.7 U	1.7 U	1.7 U	2.6	1.7 U
ALPHA-BHC	77	270	1.7 U	1.7 U	1.7 U	1.7 U	2.1	1.7 U
ALPHA-CHLORDANE	1600	6500	1.7 U	1.7 U	1.7 U	1.7 U	79 UJ	1.7 U
AROCLOR-1016	3900	21000	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1221	140	540	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1232	140	540	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1242	220	740	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1248	220	740	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1254	220	740	33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1260	220	740	33 U	45	40 J	33 U	78 J	54.2 J
AROCLOR-1262			33 U	33 U	33 U	33 U	33 UJ	33 U
AROCLOR-1268			33 U	33 U	33 U	33 U	33 UJ	33 U
BETA-BHC	270	960	1.7 U	1.7 U	1.7 U	1.7 U	91 UJ	1.7 U
DELTA-BHC	77	270	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
DIELDRIN	30	110	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN I	370000	3700000	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
ENDOSULFAN II	370000	3700000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDOSULFAN SULFATE	370000	3700000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U
ENDRIN ALDEHYDE	18000	180000	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	2.92 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
ENDRIN KETONE	18000	180000	3.3 U	3.4	3.3 U	3.3 U	11	2.82
GAMMA-BHC (LINDANE)	520	2100	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
GAMMA-CHLORDANE	1600	6500	1.7 U	1.7 U	1.7 U	1.7 U	4.9 J	1.7 U
HEPTACHLOR	110	380	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	53	190	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U
METHOXYCHLOR	310000	3100000	17 U	17 U	17 U	17 U	325 UJ	17 U
TOTAL AROCLOR	220	740	33 U	45	40 J	33 U	78 J	54.2 J
TOTAL CHLORDANE			1.7 U	1.7 U	1.7 U	1.7 U	4.9 J	1.7 U
TOTAL DDD/DDE/DDT			3.3 U	8.1	3.3 U	3.3 U	20.4 J	3.62 J
TOXAPHENE	440	1600	170 U	170 U	170 U	170 U	170 U	170 U
METALS (MG/KG)								
ALUMINUM	77000	990000	9480	11300	7110	10800	10200	4500
ANTIMONY	31	410	1.4 UJ	0.38 UJ	0.18 UJ	0.38 UJ	0.28 UJ	0.205 UJ
ARSENIC	0.39	1.6	10.5	25.9	11.4	17.1	16.6	11.5
BARIUM	15000	190000	26.4 J	38 J	21.6 J	35.4 J	30.6 J	12 J
BERYLLIUM	160	2000	0.43 J	0.57 J	0.32 J	0.53 J	0.4 J	0.24 J
CADMIUM	70	800	0.25 J	0.62	0.49	0.54	0.85	0.28 J
CALCIUM			1510 J	2710 J	1410 J	1630 J	2330 J	1000 J
CHROMIUM	0.29	5.6	10.6 J	16.1 J	17.6 J	16.6 J	18.3 J	6.9 J
COBALT	23	300	6.5	9.5	8.1	10.1	10.4	5.55
COPPER	3100	41000	23.5	30.2	21.1	32.1	26.8	10.8
IRON	55000	720000	18900	27400	22100	25100	33200	17300
LEAD	400	800	47.8 J	52.5 J	61.6 J	56.9 J	48.1 J	16.4 J
MAGNESIUM			1860	2680	2120	2780	3050	1580
MANGANESE	1800	23000	121	216	252	171	350	187
MERCURY	5.6	34	0.12	0.095 J	0.045 J	0.14	0.063	0.0145 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
NICKEL	1500	20000	30.9	25.5	20.3	30.3	22.5	13.4
POTASSIUM			271	490	269	455	331	197
SELENIUM	390	5100	2.7 UJ	5 UJ	2.3 UJ	4.2 UJ	3.9 UJ	2 UJ
SILVER	390	5100	0.14 J	0.16 U	0.077 U	0.17 U	0.12 U	0.278 J
SODIUM			56.6 J	102	68.9	198	227	46.9 J
THALLIUM			0.38 U	0.5 U	0.67 J	0.51 U	0.48 J	0.27 U
VANADIUM	390	5200	23.9	22.8	13.7	21.8	19.1	8.3
ZINC	23000	310000	63.8	133	112	122	168	78.2
MISCELLANEOUS PARAMETERS (S.U.)								
PH			4.7	5.7	5.7	5.7	6.4	6
MISCELLANEOUS PARAMETERS (MG/KG)								
TOTAL ORGANIC CARBON			44000	44000	33000	55000	37000	20000
DIOXINS/FURANS (NG/KG)								
1,2,3,4,6,7,8,9-OCDD	15000	60000	3990 J	5500 J	1980 J	4120 J	4040 J	951
1,2,3,4,6,7,8,9-OCDF	15000	60000	13.6	123	48.3	47.6	102	17.6 J
1,2,3,4,6,7,8-HPCDD	450	1800	75.7	327	103	169	244	39.2
1,2,3,4,6,7,8-HPCDF	450	1800	6.77	50.4	17.5	28.4	56.6	8.88 J
1,2,3,4,7,8,9-HPCDF	450	1800	0.826 U	3.65 J	1.42 J	2.16 J	3.72 J	0.736 J
1,2,3,4,7,8-HXCDD	45	180	0.987 J	4.3 J	1.32 J	2.79 J	3.73 J	0.77 J
1,2,3,4,7,8-HXCDF	45	180	2.13 J	3.87 J	1.95 J	2.69 J	4.67	1.04 J
1,2,3,6,7,8-HXCDD	45	180	1.83 J	12.1	3.6 J	6.16	9.61	1.54 J
1,2,3,6,7,8-HXCDF	45	180	0.941 J	2.9 J	1.25 J	1.84 J	3.6 J	0.756 J
1,2,3,7,8,9-HXCDD	45	180	1.94 J	10.4	3.29 J	7.63	9.53	2.18 J
1,2,3,7,8,9-HXCDF	45	180	0.174 U	0.267 U	0.259 U	0.184 U	0.389 J	0.138 J
1,2,3,7,8-PECDD	4.5	18	0.477 J	1.98 J	0.727 J	1.5 J	1.85 J	0.428 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-919-0006	TF5-SD-920-0006	TF5-SD-921-0006	TF5-SD-922-0006	TF5-SD-923-0006-AVG
LOCATION ID			TF5-SD-913	TF5-SD-919	TF5-SD-920	TF5-SD-921	TF5-SD-922	TF5-SD-923
SAMPLE DATE			03/16/10	03/16/10	03/16/10	03/16/10	03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT	0 FT	0 FT	0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	AVG
QC TYPE			NM	NM	NM	NM	NM	NM
1,2,3,7,8-PECDF	150	600	0.561 J	0.605 J	0.601 J	0.664 J	0.709 J	0.217 J
2,3,4,6,7,8-HXCDF	45	180	1.22 J	3.44 J	1.3 J	2.9 J	3.76 J	0.783 J
2,3,4,7,8-PECDF	15	60	0.694 J	0.934 J	0.526 J	0.612 J	0.968 J	0.216 J
2,3,7,8-TCDD	4.5	18	0.119 J	0.317 J	0.114 J	0.191 J	0.319 J	0.0183 U
2,3,7,8-TCDF	45	180	1.29 J	0.739 J	0.871 J	0.796 J	0.745 J	0.326 J
TEQ BIRD	4.5	18	3.87 J	7.86 J	3.67 J	5.76 J	7.69 J	1.76 J
TEQ BIRD HALFND	4.5	18	3.88 J	7.87 J	3.69 J	5.77 J	7.69 J	1.78 J
TEQ FISH	4.5	18	2.54 J	7.66 J	2.85 J	5.24 J	7.29 J	1.48 J
TEQ FISH HALFND	4.5	18	2.55 J	7.67 J	2.86 J	5.25 J	7.29 J	1.5 J
TEQ MAMMAL	4.5	18	3.88 J	11.9 J	4.2 J	7.62 J	10.4 J	2.03 J
TEQ MAMMAL HALFND	4.5	18	3.89 J	11.9 J	4.22 J	7.63 J	10.4 J	2.04 J
TOTAL HPCDD			161	579	180	325	446	72.8
TOTAL HPCDF			15.7	143	51.1	66.3	125	20.7 J
TOTAL HXCDD			17.4	76.2	24.8	45.6	66.1	12.7 J
TOTAL HXCDF			11.7	51.4	21.2	15.9	62.1	11.5
TOTAL PECDD			4.77 J	6.72	3.73 J	6.18	9.32	1.99 J
TOTAL PECDF			7.66	23.9	12.7	23.1	33	5.42
TOTAL TCDD			0.91 J	0.652 J	0.475 J	0.272 J	0.0252 U	0.135 J
TOTAL TCDF			10.5	0.437 J	3.97	7.68	4.28	1.93 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
VOLATILES (UG/KG)				
1,1,1-TRICHLOROETHANE	8700000	38000000	7.1 U	13 UJ
1,1,2,2-TETRACHLOROETHANE	560	2800	7.1 U	13 UJ
1,1,2-TRICHLOROETHANE	1100	5300	7.1 U	13 UJ
1,1,2-TRICHLOROTRIFLUOROETHANE	43000000	180000000	7.1 U	13 UJ
1,1-DICHLOROETHANE	3300	17000	7.1 U	13 UJ
1,1-DICHLOROETHENE	240000	1100000	7.1 UJ	13 UJ
1,2,3-TRICHLOROBENZENE	49000	490000	7.1 UJ	13 UJ
1,2,4-TRICHLOROBENZENE	22000	99000	7.1 UJ	13 UJ
1,2-DIBROMO-3-CHLOROPROPANE	5.4	69	7.1 U	13 UJ
1,2-DIBROMOETHANE	34	170	7.1 U	13 UJ
1,2-DICHLOROBENZENE	1900000	9800000	1.6 J	13 UJ
1,2-DICHLOROETHANE	430	2200	7.1 U	13 UJ
1,2-DICHLOROPROPANE	890	4500	7.1 U	13 UJ
1,3-DICHLOROBENZENE			7.1 U	13 UJ
1,4-DICHLOROBENZENE	2400	12000	7.1 U	13 UJ
2-BUTANONE	28000000	200000000	7.1 U	13 UJ
2-HEXANONE	210000	1400000	7.1 UJ	13 UJ
4-METHYL-2-PENTANONE	5300000	53000000	7.1 U	13 UJ
ACETONE	61000000	630000000	38 J	140 J
BENZENE	1100	5400	7.1 U	13 UJ
BROMOCHLOROMETHANE			7.1 U	13 UJ
BROMODICHLOROMETHANE	270	1400	7.1 U	13 UJ
BROMOFORM	61000	220000	7.1 U	13 UJ
BROMOMETHANE	7300	32000	7.1 U	13 UJ
BTEX			7.1 U	13 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
CARBON DISULFIDE	820000	3700000	7.1 U	13 UJ
CARBON TETRACHLORIDE	610	3000	7.1 U	13 UJ
CHLOROBENZENE	290000	1400000	7.1 U	13 UJ
CHLORODIBROMOMETHANE	680	3300	7.1 U	13 UJ
CHLOROETHANE	15000000	61000000	7.1 U	13 UJ
CHLOROFORM	290	1500	7.1 U	13 UJ
CHLOROMETHANE	120000	500000	7.1 U	13 UJ
CIS-1,2-DICHLOROETHENE	780000	10000000	7.1 U	13 UJ
CIS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	13 UJ
CYCLOHEXANE	7000000	29000000	7.1 U	13 UJ
DICHLORODIFLUOROMETHANE	180000	780000	7.1 UJ	13 UJ
ETHYLBENZENE	5400	27000	7.1 U	13 UJ
ISOPROPYLBENZENE	2100000	11000000	7.1 U	13 UJ
M+P-XYLENES			7.1 U	13 UJ
METHYL ACETATE	78000000	1E+09	7.1 U	13 UJ
METHYL CYCLOHEXANE			7.1 U	13 UJ
METHYL TERT-BUTYL ETHER	43000	220000	7.1 U	13 UJ
METHYLENE CHLORIDE	11000	53000	7.1 U	13 UJ
O-XYLENE	3800000	19000000	7.1 U	13 UJ
STYRENE	6300000	36000000	7.1 U	13 UJ
TETRACHLOROETHENE	550	2600	7.1 U	13 UJ
TOLUENE	5000000	45000000	7.1 U	13 UJ
TOTAL 1,2-DICHLOROETHENE	700000	9200000	7.1 U	13 UJ
TOTAL CHLORINATED ETHENES			7.1 UJ	13 UJ
TOTAL CHLORINATED VOCS			1.6 J	13 UJ
TOTAL XYLENES	630000	2700000	7.1 U	13 UJ

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
TRANS-1,2-DICHLOROETHENE	150000	690000	7.1 U	13 UJ
TRANS-1,3-DICHLOROPROPENE	1700	8100	7.1 U	13 UJ
TRICHLOROETHENE	2800	14000	7.1 U	13 UJ
TRICHLOROFLUOROMETHANE	790000	3400000	7.1 U	13 UJ
VINYL CHLORIDE	60	1700	7.1 U	13 UJ
SEMIVOLATILES (UG/KG)				
1,1-BIPHENYL	3900000	51000000	330 U	330 U
1,2,4,5-TETRACHLOROBENZENE	18000	180000	3.3 U	3.3 U
1,4-DIOXANE	44000	160000	3.3 U	3.3 U
2,2'-OXYBIS(1-CHLOROPROPANE)	4600	22000	330 U	330 U
2,3,4,6-TETRACHLOROPHENOL	1800000	18000000	3.3 U	3.3 U
2,4,5-TRICHLOROPHENOL	6100000	62000000	670 U	670 U
2,4,6-TRICHLOROPHENOL	44000	160000	330 U	330 U
2,4-DICHLOROPHENOL	180000	1800000	3.3 U	3.3 U
2,4-DIMETHYLPHENOL	1200000	12000000	3.3 U	3.3 U
2,4-DINITROPHENOL	120000	1200000	670 U	670 U
2,4-DINITROTOLUENE	1600	5500	330 U	330 U
2,6-DINITROTOLUENE	61000	620000	330 U	330 U
2-CHLORONAPHTHALENE	6300000	82000000	330 U	330 U
2-CHLOROPHENOL	390000	5100000	3.3 U	3.3 U
2-METHYLNAPHTHALENE	310000	4100000	210	3.6
2-METHYLPHENOL	3100000	31000000	3.3 U	3.3 UJ
2-NITROANILINE	610000	6000000	670 U	670 U
2-NITROPHENOL			330 U	330 U
3,3'-DICHLOROBENZIDINE	1100	3800	330 U	330 U
3-NITROANILINE			670 U	670 U

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
4,6-DINITRO-2-METHYLPHENOL	4900	49000	670 U	670 U
4-BROMOPHENYL PHENYL ETHER			330 U	330 U
4-CHLORO-3-METHYLPHENOL	6100000	62000000	3.3 UJ	3.3 U
4-CHLOROANILINE	2400	8600	330 UJ	330 UJ
4-CHLOROPHENYL PHENYL ETHER			330 U	330 U
4-METHYLPHENOL	310000	3100000	3.3 U	5.3
4-NITROANILINE	24000	86000	670 U	670 U
4-NITROPHENOL			670 UJ	670 UJ
ACENAPHTHENE	3400000	33000000	48	14
ACENAPHTHYLENE	3400000	33000000	110	12
ACETOPHENONE	7800000	100000000	330 U	330 U
ANTHRACENE	17000000	170000000	120	55
ATRAZINE	2100	7500	3.3 UJ	3.3 UJ
BENZALDEHYDE	7800000	100000000	330 UJ	330 UJ
BENZO(A)ANTHRACENE	150	2100	140 J	600
BENZO(A)PYRENE	15	210	190	760
BENZO(B)FLUORANTHENE	150	2100	290 J	1000
BENZO(G,H,I)PERYLENE	1700000	17000000	150	630
BENZO(K)FLUORANTHENE	1500	21000	140 J	720
BIS(2-CHLOROETHOXY)METHANE	180000	1800000	330 U	330 U
BIS(2-CHLOROETHYL)ETHER	210	1000	330 U	330 U
BIS(2-ETHYLHEXYL)PHTHALATE	35000	120000	330 U	210 J
BUTYL BENZYL PHTHALATE	260000	910000	330 U	330 U
CAPROLACTAM	31000000	310000000	330 U	330 U
CARBAZOLE			330 U	100 J
CHRYSENE	15000	210000	220	890

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
DIBENZO(A,H)ANTHRACENE	15	210	40	160
DIBENZOFURAN	78000	1000000	330 U	330 U
DIETHYL PHTHALATE	49000000	490000000	330 U	330 U
DIMETHYL PHTHALATE			330 U	330 U
DI-N-BUTYL PHTHALATE	6100000	62000000	330 U	330 U
DI-N-OCTYL PHTHALATE			330 U	330 U
FLUORANTHENE	2300000	22000000	400	1800
FLUORENE	2300000	22000000	120	24
HEXACHLOROBENZENE	300	1100	3.3 U	3.3 U
HEXACHLOROBUTADIENE	6200	22000	330 U	330 U
HEXACHLOROCYCLOPENTADIENE	370000	3700000	330 U	330 U
HEXACHLOROETHANE	35000	120000	330 U	330 U
HIGH MOLECULAR WEIGHT PAHS			2070 J	8520
INDENO(1,2,3-CD)PYRENE	150	2100	130	660
ISOPHORONE	510000	1800000	330 U	330 U
LOW MOLECULAR WEIGHT PAHS			1170	666
NAPHTHALENE	3600	18000	130	7.7
NITROBENZENE	4800	24000	330 UJ	330 UJ
N-NITROSO-DI-N-PROPYLAMINE	69	250	330 U	330 U
N-NITROSODIPHENYLAMINE	99000	350000	330 U	330 U
PENTACHLOROPHENOL	3000	9000	33 U	33 UJ
PHENANTHRENE	1700000	17000000	430	550
PHENOL	18000000	180000000	3.3 U	5.5
PYRENE	1700000	17000000	370	1300
TOTAL CARCINOGENIC PAHS-HALFND	15	210	1150 J	4790
TOTAL CARCINOGENIC PAHS-POS	15	210	1150 J	4790

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
TOTAL CHLORINATED VOCS			330 U	330 U
TOTAL PAHS			3240 J	9190
PESTICIDES/PCBS (UG/KG)				
4,4'-DDD	2000	7200	3.3 U	3.3 U
4,4'-DDE	1400	5100	3.3 U	3.9
4,4'-DDT	1700	7000	3.3 U	4.3
ALDRIN	29	100	1.7 U	1.7 U
ALPHA-BHC	77	270	1.7 U	1.7 U
ALPHA-CHLORDANE	1600	6500	1.7 U	1.7 U
AROCLOR-1016	3900	21000	33 U	33 U
AROCLOR-1221	140	540	33 U	33 U
AROCLOR-1232	140	540	33 U	33 U
AROCLOR-1242	220	740	33 U	33 U
AROCLOR-1248	220	740	33 U	33 U
AROCLOR-1254	220	740	33 U	33 U
AROCLOR-1260	220	740	33 U	73 J
AROCLOR-1262			33 U	33 U
AROCLOR-1268			33 U	33 U
BETA-BHC	270	960	1.7 U	1.7 U
DELTA-BHC	77	270	1.7 U	1.7 U
DIELDRIN	30	110	3.3 U	3.3 U
ENDOSULFAN I	370000	3700000	1.7 U	1.7 U
ENDOSULFAN II	370000	3700000	3.3 U	3.3 U
ENDOSULFAN SULFATE	370000	3700000	3.3 U	3.3 U
ENDRIN	18000	180000	3.3 U	3.3 U
ENDRIN ALDEHYDE	18000	180000	3.3 U	3.5

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
ENDRIN KETONE	18000	180000	3.3 U	3.3 U
GAMMA-BHC (LINDANE)	520	2100	1.7 U	1.7 U
GAMMA-CHLORDANE	1600	6500	1.7 U	1.7 U
HEPTACHLOR	110	380	1.7 U	1.7 U
HEPTACHLOR EPOXIDE	53	190	1.7 U	1.7 U
METHOXYCHLOR	310000	3100000	17 U	17 U
TOTAL AROCLOR	220	740	33 U	73 J
TOTAL CHLORDANE			1.7 U	1.7 U
TOTAL DDD/DDE/DDT			3.3 U	8.2
TOXAPHENE	440	1600	170 U	170 U
METALS (MG/KG)				
ALUMINUM	77000	990000	9480	11200
ANTIMONY	31	410	1.4 UJ	0.44 UJ
ARSENIC	0.39	1.6	10.5	16.7
BARIUM	15000	190000	26.4 J	47.2 J
BERYLLIUM	160	2000	0.43 J	0.62 J
CADMIUM	70	800	0.25 J	0.77
CALCIUM			1510 J	3680 J
CHROMIUM	0.29	5.6	10.6 J	18.1 J
COBALT	23	300	6.5	13.3
COPPER	3100	41000	23.5	41.2
IRON	55000	720000	18900	26800
LEAD	400	800	47.8 J	70.3 J
MAGNESIUM			1860	2940
MANGANESE	1800	23000	121	525
MERCURY	5.6	34	0.12	0.11 J

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
NICKEL	1500	20000	30.9	30.7
POTASSIUM			271	546
SELENIUM	390	5100	2.7 UJ	4.4 UJ
SILVER	390	5100	0.14 J	0.2 U
SODIUM			56.6 J	166
THALLIUM			0.38 U	1.7 J
VANADIUM	390	5200	23.9	24.2
ZINC	23000	310000	63.8	190
MISCELLANEOUS PARAMETERS (S.U.)				
PH			4.7	6
MISCELLANEOUS PARAMETERS (MG/KG)				
TOTAL ORGANIC CARBON			44000	53000
DIOXINS/FURANS (NG/KG)				
1,2,3,4,6,7,8,9-OCDD	15000	60000	3990 J	6520 J
1,2,3,4,6,7,8,9-OCDF	15000	60000	13.6	147
1,2,3,4,6,7,8-HPCDD	450	1800	75.7	302
1,2,3,4,6,7,8-HPCDF	450	1800	6.77	69.6
1,2,3,4,7,8,9-HPCDF	450	1800	0.826 U	5.32 J
1,2,3,4,7,8-HXCDD	45	180	0.987 J	5.76 J
1,2,3,4,7,8-HXCDF	45	180	2.13 J	6.61 J
1,2,3,6,7,8-HXCDD	45	180	1.83 J	11
1,2,3,6,7,8-HXCDF	45	180	0.941 J	4.49 J
1,2,3,7,8,9-HXCDD	45	180	1.94 J	14.4
1,2,3,7,8,9-HXCDF	45	180	0.174 U	0.575 J
1,2,3,7,8-PECDD	4.5	18	0.477 J	3.06 J

TABLE A-4.5
ANALYTICAL RESULTS - SEDIMENT
DU5-1_2010
TANK FARM 5, NEWPORT, RHODE ISLAND

SAMPLE ID	EPA RSL Residential Soil	EPA RSL Industrial Soil	TF5-SD-913-0006	TF5-SD-924-0006
LOCATION ID			TF5-SD-913	TF5-SD-924
SAMPLE DATE			03/16/10	03/16/10
TOP DEPTH			0 FT	0 FT
BOTTOM DEPTH			0.5 FT	0.5 FT
SACODE			NORMAL	NORMAL
QC TYPE			NM	NM
1,2,3,7,8-PECDF	150	600	0.561 J	1.07 J
2,3,4,6,7,8-HXCDF	45	180	1.22 J	5.05 J
2,3,4,7,8-PECDF	15	60	0.694 J	1.48 J
2,3,7,8-TCDD	4.5	18	0.119 J	0.48 J
2,3,7,8-TCDF	45	180	1.29 J	1.17 J
TEQ BIRD	4.5	18	3.87 J	11.5 J
TEQ BIRD HALFND	4.5	18	3.88 J	11.5 J
TEQ FISH	4.5	18	2.54 J	10.9 J
TEQ FISH HALFND	4.5	18	2.55 J	10.9 J
TEQ MAMMAL	4.5	18	3.88 J	14.7 J
TEQ MAMMAL HALFND	4.5	18	3.89 J	14.7 J
TOTAL HPCDD			161	575
TOTAL HPCDF			15.7	167
TOTAL HXCDD			17.4	96.1
TOTAL HXCDF			11.7	77
TOTAL PECDD			4.77 J	16
TOTAL PECDF			7.66	40.5
TOTAL TCDD			0.91 J	2.55 J
TOTAL TCDF			10.5	8.17

BLACK SHADING-EXCEEDS AT LEAST ONE CRITERION; GRAY SHADING-DETECTED;U-NOT DETECTED; J-QUANTITATION APPROXIMATE; R-REJECTED; NA-NOT ANALYZED

A5 - EVALUATION OF BIODEGRADATION PARAMETERS

Appendix A5
Tank Farm 5, Naval Station Newport
Evaluation of Biodegradation Parameters around Tanks and Development of Geochemical Conceptual Site Model

Interaction of Petroleum and Metals in Groundwater

At some sites, the geochemical conditions that facilitate the biodegradation of petroleum can transform naturally occurring minerals in the aquifer to more mobile forms (USEPA, 1998). In addition, laboratory experimentation and numerical modeling have shown that under anaerobic conditions where petroleum degradation is occurring, concentrations of aqueous iron and manganese increased (Baedeker, et al, 1993). Some sites have dissolved metals contamination due solely to the petroleum contamination, and the solution to controlling the metals plume is to eliminate the source of the petroleum.

Iron (Fe) and manganese (Mn) can be present in water in three different forms: dissolved, particulate or colloidal. Dissolved forms are ferrous iron (Fe(II)) and manganous manganese (Mn(II)). The particulate forms are ferric iron (Fe(III)) and manganic manganese (Mn(IV)). The colloidal forms are very small particles which are difficult to settle and filter, and are less common in groundwater.

Along with the temperature and pH of the water, the reduction-oxidation chemistry greatly influences the precipitation and dissolution of Fe and Mn. Aqueous Fe(II) and Mn(II) are present in significant concentrations only in natural waters that are anoxic. When the aqueous environment is aerobic, insoluble Fe(III) and Mn(III/IV) oxides form, taking these minerals out of solution and creating particulates.

Anaerobic degradation of the petroleum can result in increased concentrations of Fe and Mn in groundwater. Following a release of petroleum to the subsurface, indigenous microbes use the petroleum as an electron donor, to support microbial respiration. These bacteria use oxygen first as an electron acceptor to support respiration, and the demand on oxygen often depletes the available dissolved oxygen (DO) in the groundwater, ultimately creating anaerobic conditions. Aerobic bacteria activities are then reduced and anaerobic microorganisms (if present) may begin the degradation of the petroleum. The anaerobic bacteria will utilize other electron acceptors available in groundwater. First, the petroleum is metabolized by de-nitrification where nitrate is used as the electron acceptor. When there is still petroleum, and more favorable terminal electron acceptors (like oxygen or nitrate) are absent, microbes that reduce Fe(III) and Mn(III/IV) oxides take over. In this way aqueous Fe(II) and Mn(II) are produced from the insoluble Fe(III) and Mn(III/IV) oxides (particulates).

The fate and transport of heavy metals in water is also affected by the precipitation and dissolution of Fe and Mn. Heavy metals adsorb on Fe and Mn oxide surfaces and are incorporated in the Fe and Mn oxide when precipitation of Fe and Mn occurs. As a result, changing redox conditions in natural waters and the resulting precipitation and dissolution of Fe and Mn can also cause a similar cyclical uptake and release of heavy metal pollutants (Environmental Catalysis, 2003).

Tank Farm 5 Evaluation

Groundwater at Tank Farm 5, DU 5-1 contains Mn, Fe and cobalt (Co) at concentrations above preliminary remediation goals (PRGs) that have been proposed. In addition, levels of arsenic (As) in groundwater at DU 5-1 are elevated relative to RSLs, but do not exceed the proposed PRG based on the MCL. Therefore, although the behavior of arsenic is similar to the other metals discussed here, arsenic is not discussed further.

An evaluation of available groundwater chemistry data from around tanks at Tank Farm 5 and DU 5-1 was performed to determine if there is evidence that historical releases of petroleum in this area altered the groundwater geochemistry beneath DU 5-1, and potentially resulted in an increase in the concentrations of Mn, Fe, Co and As in the groundwater.

The southern boundary of DU 5-1 is about 400 feet northwest (downgradient) of the closest tanks (Tanks 50 and 51) at Tank Farm 5. A synoptic groundwater elevation round was performed during the 2010 Data Gaps Assessment, using monitoring wells located both at DU 5-1 and around Tank 50. Based upon the groundwater elevations measured at that time, a groundwater contour map was generated and is reproduced here as Figure 1. Examination of this figure confirms that the overall groundwater flow direction at Tank Farm 5 is northwesterly, from the area of the tanks to DU 5-1.

Table 1 provides the field parameters and total petroleum hydrocarbon (TPH) results from groundwater sampling around the tanks at Tank Farm 5 performed in 2010. In addition, the concentrations of Co, Fe and Mn are shown schematically in wells around Tank 50, in DU 5-1 and in DU 5-3 on Figure 2. Available TPH analytical data from around Tank 50, from 2010 and earlier sampling events, are also presented on Figure 3. These data suggest that, in many instances, the presence of TPH associated with the tanks has resulted in a reduction of DO and/or ORP. This suggests that the presence of the tanks has altered groundwater geochemistry.

Around Tank 50, groundwater changes from aerobic, upgradient of the tank, to anaerobic, downgradient of the tank. The groundwater from an upgradient well had a positive ORP value (112.8 mV) and the highest DO value (1.50 mg/L). The groundwater from downgradient and side-gradient wells at this tank had negative ORP values (between -37 and -64.3 mV) and lower DO values (between 0.19 and 0.49 mg/L). These data suggest the presence of the reducing conditions in groundwater results from groundwater flowing through and being impacted by the tank area upgradient of DU 5-1.

Geochemical Conceptual Site Model – Tank Farm 5

Based upon the understanding of the basic geochemical interaction between petroleum, Fe, Mn and heavy metals described above and the observations of the geochemistry at the

Tank Farm 5 Site, a conceptual model of the geochemistry of this interaction is provided below.

1) Naturally occurring Fe and Mn in the environment occur at the site under aerobic conditions.
2) The introduction of petroleum hydrocarbons followed by its degradation lowers the ORP of the system.
3) Bacterial degradation of hydrocarbons eventually results in the reduction of Fe(III) and Mn(IV) to Fe(II) and Mn(II).
4) The reduction in ORP is an indication of a predicted increase in concentrations of dissolved Fe and Mn in groundwater.
5) Co and As that had been originally sorbed on to the hydrous Fe(III) and Mn(IV), is released due to reducing conditions caused by the presence of petroleum hydrocarbons.
6) Once the redox conditions of the system return to the natural state, i.e. aerobic, insoluble Fe(III) and Mn(III/IV) oxides form from the dissolved Fe and Mn and the cobalt is once again precipitated with the Fe and Mn.

The conclusion of this evaluation is that the existing levels of dissolved Mn, Fe, and Co are likely present in groundwater at DU 5-1 as a result of reducing conditions. The reducing conditions resulted from historical petroleum releases at tanks upgradient of the DU 5-1 Site. When the reducing conditions are corrected, via the natural attenuation of the petroleum, the Mn, Fe and Co concentrations in groundwater will also eventually be reduced.

As depicted on Figure 3, the older (1995 and /or 1998) TPH concentrations in groundwater, where available, are higher than the 2010 TPH concentrations. This suggests that degradation of petroleum in groundwater around the tanks has been occurring at the Site. As shown in Table 1, groundwater TPH concentrations are below laboratory reporting limits at four of the five locations around Tank 50, monitored in 2010. Although there are no DO or ORP data from the 1995 or 1998 groundwater sampling events, it is anticipated that the reducing conditions that resulted from historical release(s) of petroleum have also started to correct themselves.

Although existing data indicate the cyclical effect described above, there are not adequate data to determine the length of time required for the reducing conditions at DU 5-1 and other affected areas to be corrected, and subsequently a prediction of time for the concentrations of Mn, Fe and Co to reduce to below PRGs. Periodic monitoring may provide adequate data for a trend analysis to be performed to determine the rate at which the aquifer will restore itself and to estimate the time for the Mn, Fe and Co to reach PRGs.

References

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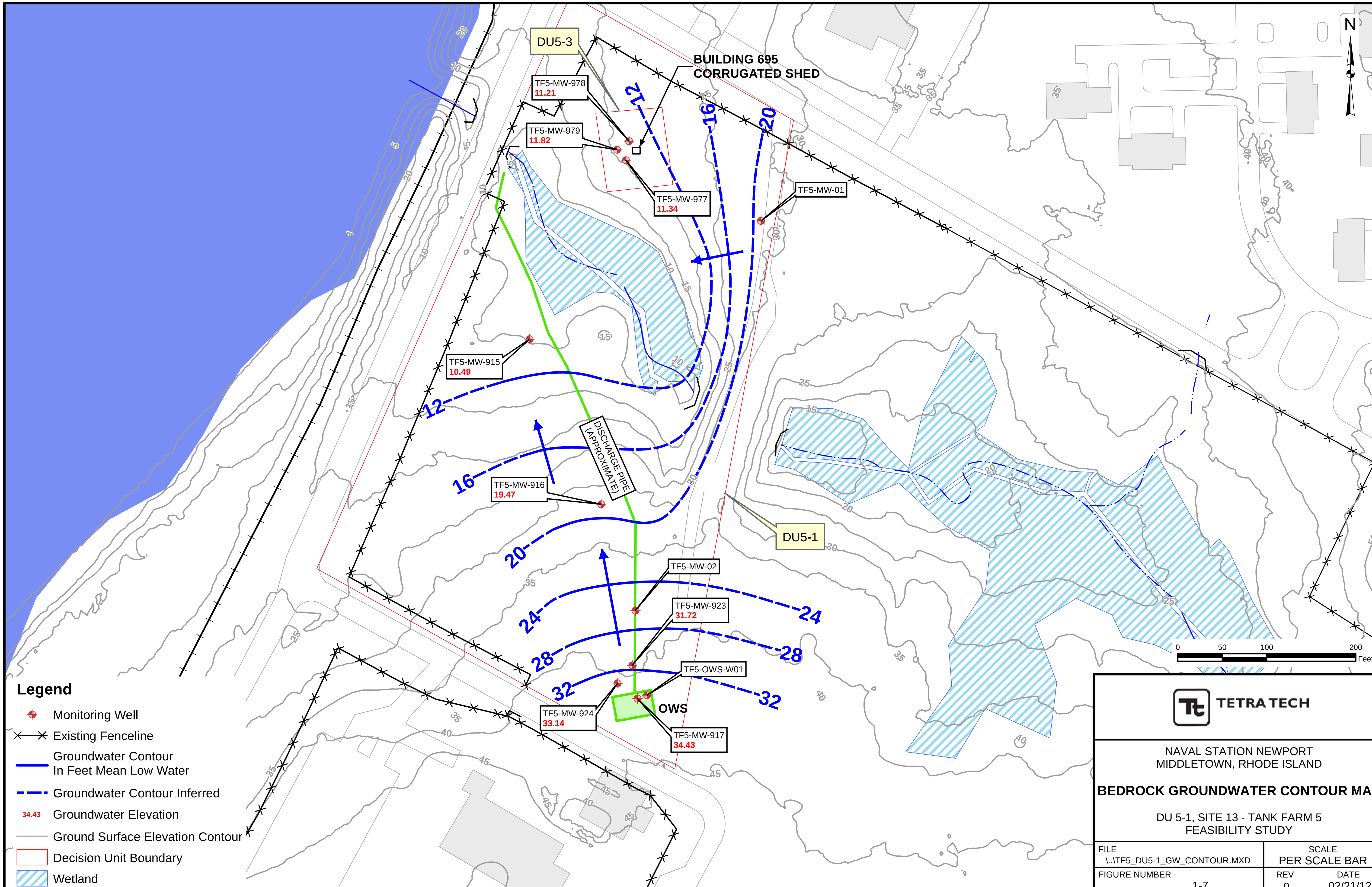
Appendix A5
Table A 5-1
GROUNDWATER DATA, MAY 2010 DATA GAPS INVESTIGATION
TANK FARM 5 CATEGORY 2 AREA
SUMMARY OF GEOCHEMISTRY DATA
NAVSTA NEWPORT, NEWPORT RI

Decision Unit	Well ID	screened unit	Location relative tank	Depth Sampled	Spec. Cond. (mS/cm)	pH	ORP (mV)	DO (mg/L)	Turbidity (NTU)	ExTPH (mg/L)	Comments
5-2 (Tank 50)	TF5-MW-108	Fill	cross/ upgradient	14.72	0.35	6.55	-64.3	0.19	4.28	0.35U	clear, with slight sulfur odor
	TF5-MW-200	overburden	downgradient	18	0.51	6.58	-47.1	0.22	25.60	0.35U	clear, colorless
	TF5-MW-207B	bedrock	downgradient	23	0.47	6.01	-37	0.19	3.41	0.64	clear, colorless
	TF5-MW-911	bedrock	upgradient	19.5	0.49	6.03	112.8	1.50	7.08	0.35UJ	clear, colorless
	TF5-MW-918	bedrock	downgradient	37.85	0.405	6.73	-45.2	0.49	9.53	0.35UJ	

Notes:
U indicates not detected above indicated laboratory reporting limit
J indicates estimated value



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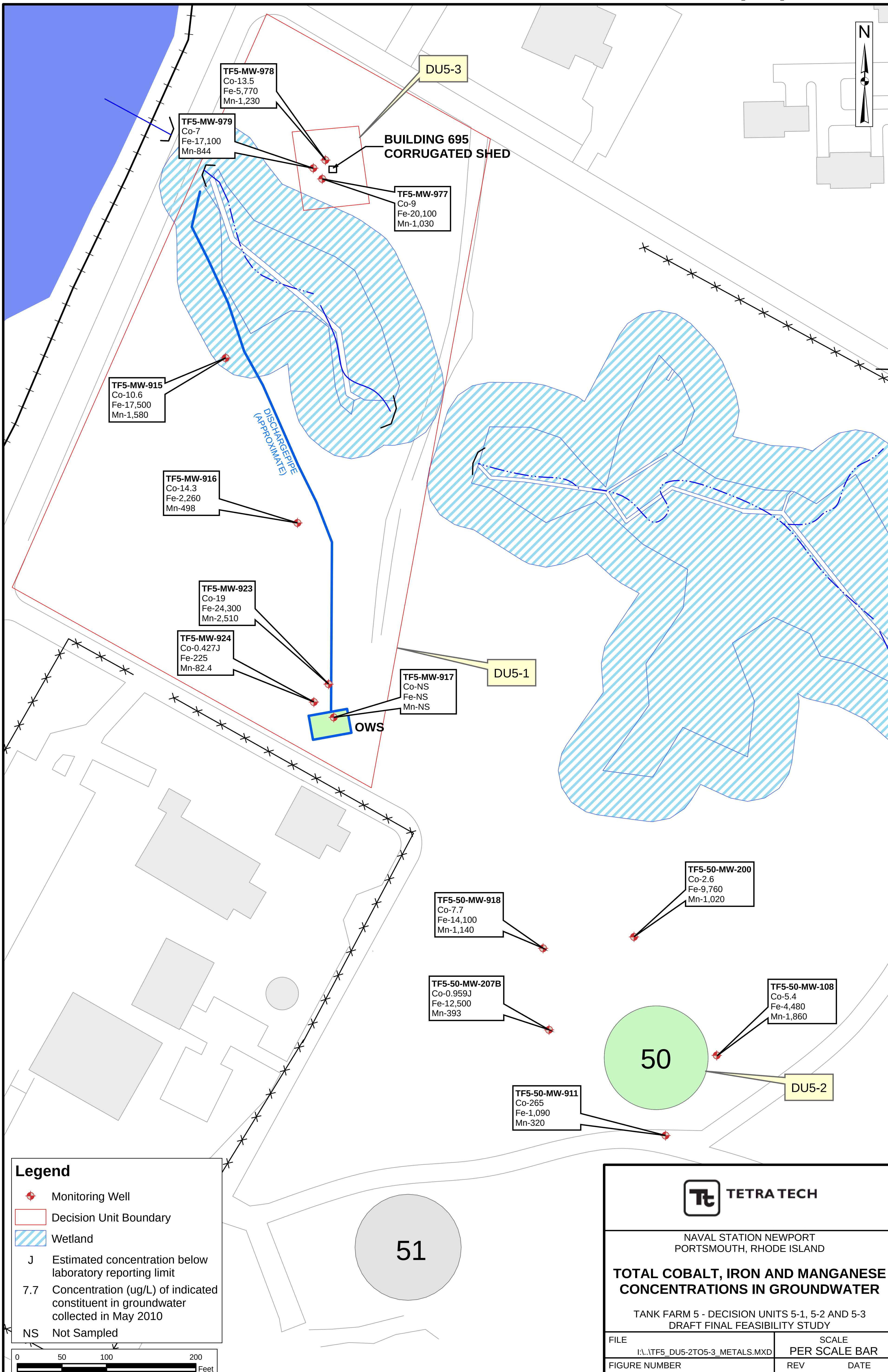

TETRA TECH

NAVAL STATION NEWPORT
PORTSMOUTH, RHODE ISLAND

TOTAL COBALT, IRON AND MANGANESE CONCENTRATIONS IN GROUNDWATER

TANK FARM 5 - DECISION UNITS 5-1, 5-2 AND 5-3
DRAFT FINAL FEASIBILITY STUDY

FILE	SCALE
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FIGURE NUMBER	REV	DATE
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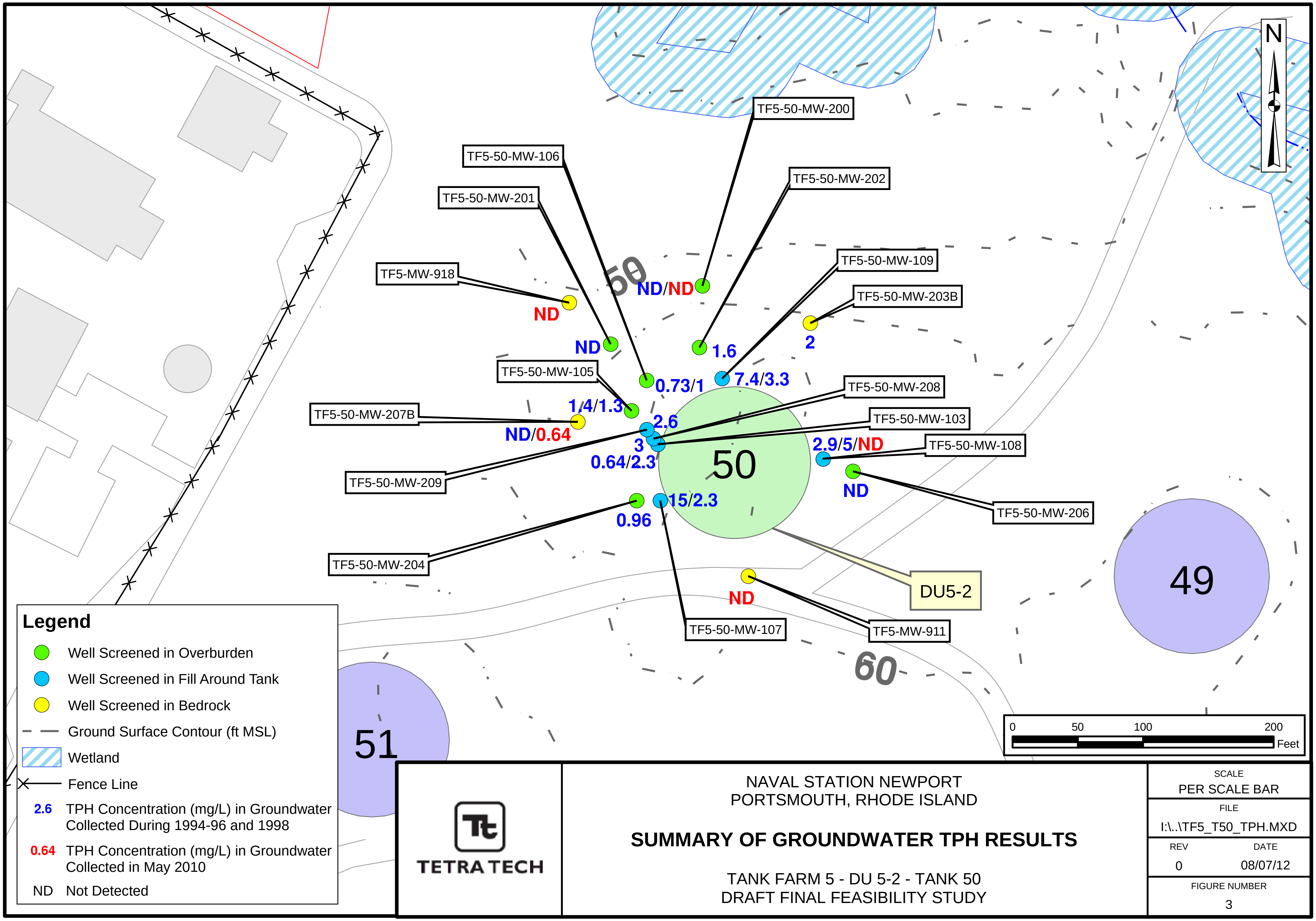

TETRA TECH

NAVAL STATION NEWPORT
PORTSMOUTH, RHODE ISLAND

SUMMARY OF GROUNDWATER TPH RESULTS

TANK FARM 5 - DU 5-2 - TANK 50
DRAFT FINAL FEASIBILITY STUDY

SCALE	PER SCALE BAR
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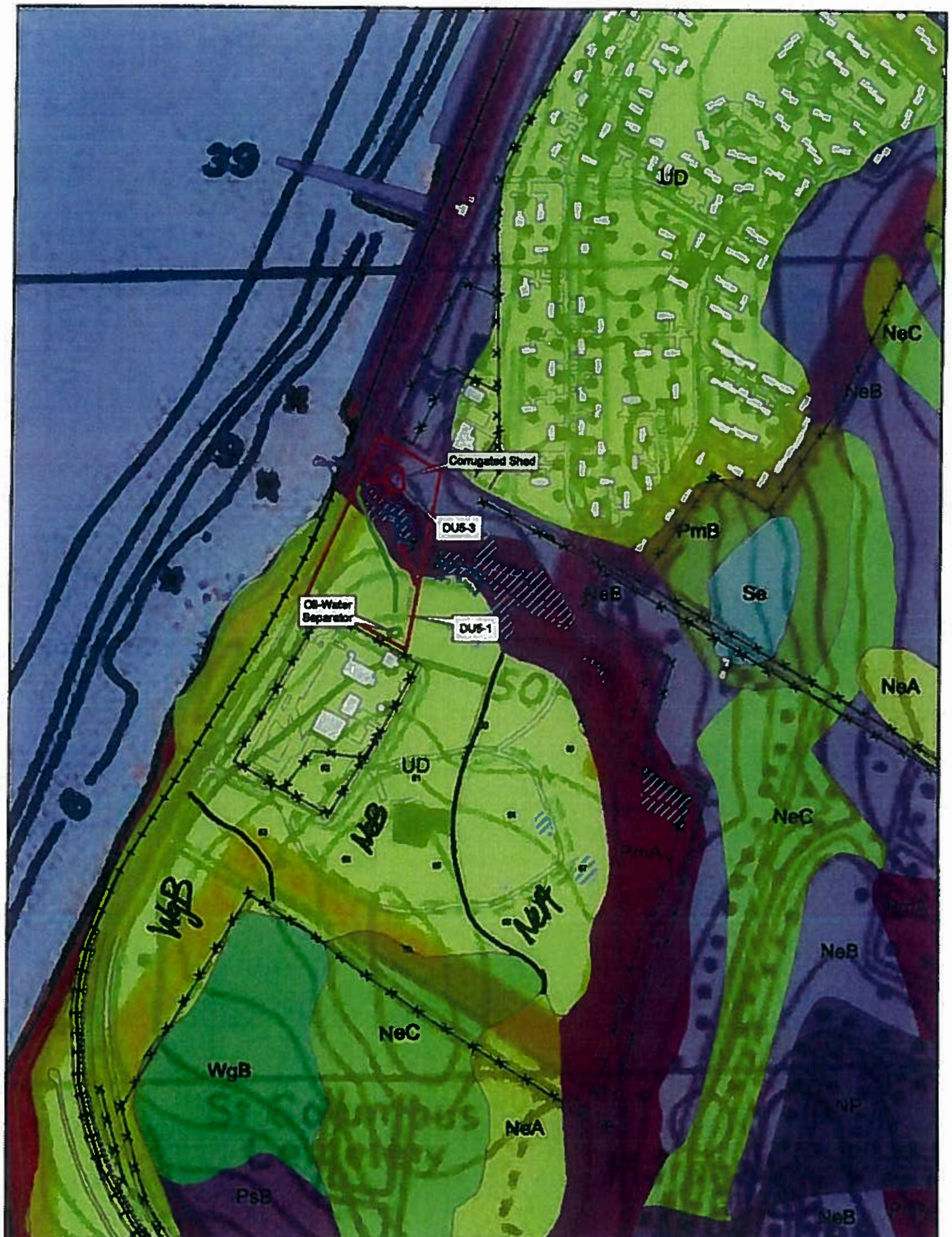
REV 0	DATE 08/07/12
FIGURE NUMBER	3

A6 – SOIL CLASSIFICATIONS PRIOR TO TANK FARM DEVELOPMENT



LEGEND

Decision Unit Boundary

Ruin 1 Straight Discharge Area

Discharge Pipe

Wetland

Railroad Tracks

Building

Fence

For soil and sediment, the screening level (SL) is the EPA RSL for residential soil.

For groundwater and surface water, the screening level (SL) is the minimum of the EPA tapwater RSL and MCL.

Ne B - Newport silt loam

Pm A - Pittstown silt loam

0 50 100 200 300 Feet

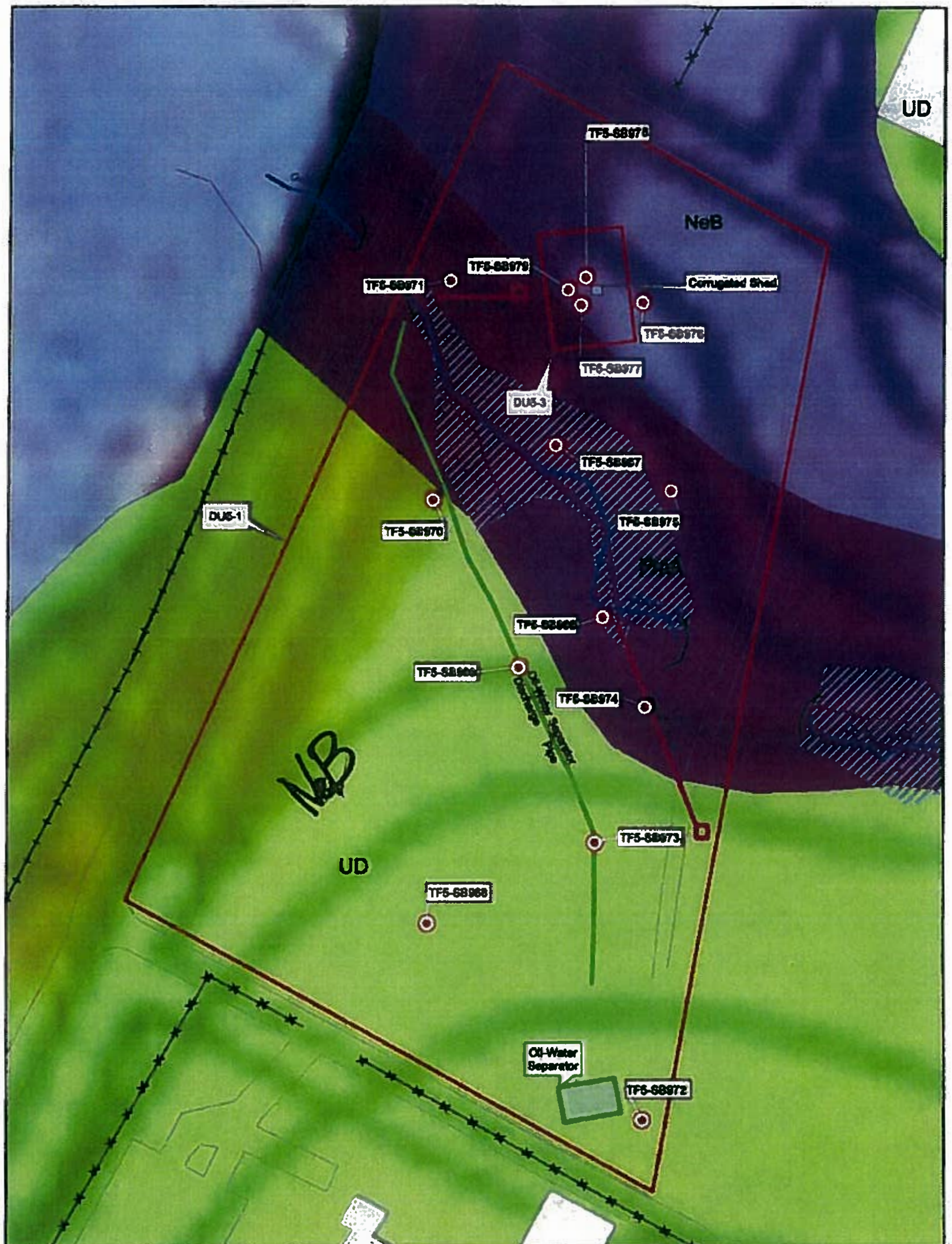
Appendix A6
Soil Classifications
Prior to
Tank Farm Development

DU 5-1 at Tank Farm 5

N

Date: 9/17/2010
File Name: I:\02696\SI.DR\ .mxd
Author: GJG

TETRA TECH NUS, INC.



LEGEND

2010 Soil Sample Location

Decision Unit Boundary

Rule 1 Straight Discharge Area

Discharge Pipe

Wetland

Railroad Tracks

Building

Fence

For soil and sediment, the screening level (SL) is the EPA RSL for residential soil.

For groundwater and surface water, the screening level (SL) is the minimum of the EPA tapwater RSL and MCL.

NeB - Newport silt loam
PmA - Pittstown silt loam

0 50 100 200 300 Feet

Appendix A6
Soil Classifications
Prior to
Tank Farm Development
DU 5-1 at Tank Farm 5

N

Date: 9/17/2010
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TETRA TECH NUS, INC.

A7 – CALCULATION OF TIME TO ACHIEVE PRGS THROUGH MNA

CLIENT: NAVFAC		JOB NUMBER: 112G02698	
SUBJECT: **Tank Farm 5, DU-51, Estimate Time To Cleanup of Groundwater via Natural Attenuation**			
BASED ON:		DRAWING NUMBER:	
BY: D. Seiken Date: 2/7/13	CHECKED BY: Date:	APPROVED BY:	DATE:

Tank Farm 5

Hydraulic Conductivity (K) Data

Well ID	type of material	K (ft/day)
MW-1S	weathered BR	0.18
MW-2S	weathered BR	0.156
MW-3S	weathered BR	0.209
MW-5S	weathered BR	0.174
MW901	bedrock (BR)	2.77
MW-902	BR	2.05
MW-203B	phyllite	1.17
MW-207B	phyllite	0.05
Bedrock Geometric Mean K =		*0.368*

MW-901	interval (ft bgs)	K(ft/day)
	71-81	0.31
	81-91	39.05
	91-101	0.38
	101-111	3.81
	111-121	3.78
	121-131	0.15
	131-141	44.72
	141-152	7.85
MW-901 Geometric Mean K =		*2.77*

MW-6S	till	0.253
MW-105	outwash	2.52
MW-200	outwash/altered phyllite	1.99
MW-201	outwash and till	0.68
MW-206	till	2.52
Overburden Geometric Mean K =		*1.17*

MW-902	interval (ft bgs)	K(ft/day)
	105-115	0.31
	115-125	39.05
	125-135	0.38
	135-146.5	3.81
MW-902 Geometric Mean K =		*2.05*

Notes:
1) The K data from specific intervals in MW-901 and MW-902 were used to get a geometric mean K for each well. The geometric mean Ks for each well were used in the dataset to estimate the geometric mean bedrock K at the site, as shown on the left of page.
2) Other than MW-901 and MW-902, all K data are from slug tests.
3) Packer test data source: "*Bedrock Groundwater Investigation Report for Former Tanks 53 and 56, Tank Farm 5, NAVSTA, Newport, RI.*" Tetra Tech NUS, Inc. July 2000.
4) Slug test data sources for MW-1S, MW-2S, MW-3S, MW-5S and MW-6S: "*Remedial Investigation , Naval Education and Training Center, Newport, RI.*" TRC Environmental Corporation. January, 1992.
5) Slug test data sources for MW-203B, MW-207B, MW-105, MW-200, MW-201 and MW-206: *"Site Investigation Report, Tank 50, Tank Farm 5, Naval Education and Training Center, Newport, RI."* Brown & Root Environmental. December 1995.

Effective porosity (n) Data
n of shale =0.05
n of silt/ sand/gravel = 0.35
Source: "*Groundwater*" , Freeze and Cherry, 1979.

Hydraulic Gradient (i) = 34.43 ft-10.49 ft/380 ft = 0.063
Source: "*Data Gaps Assessment Report for IR Site 12 and IR Site 13, Category 1 Areas, NAVSTA, Newport, RI.* "
Tetra Tech. August, 2012

Bedrock calculation
V= Ki/n
V = 0.368 (0.063)/ 0.05
V = 0.46 ft/day

Overburden calculation
V= Ki/n
V = 1.17 (0.063)/ 0.35
V = 0.21 ft/day

T = time for groundwater from outside DU-5-1 to travel to Gomes Brook at western edge of DU. Distance = 600 ft.

T=600 ft/ 0.46 ft/day = 3.6 years

T=600 ft/ 0.21 ft/day = 7.8 years

Assume: 3 flushes of groundwater will achieve PRGs

Bedrock cleanup Time = 11 years

Overburden cleanup Time = 23 years

APPENDIX B

CALCULATION OF PRELIMINARY REMEDIATION GOALS

DEVELOPMENT OF RISK BASED PRELIMINARY REMEDIAL GOALS

1.0 INTRODUCTION

This appendix describes the methodology used to develop preliminary remedial goals (PRGs) for the chemicals of concern (COCs) at Tank Farm 5 based on the risk calculated. Other PRGs may be developed in another process step that are based solely on ARARs. The following guidance was used in the development of the PRGs:

- Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals) (USEPA, December 1991).

- Guidance for Characterizing Background and Chemical Concentrations in Soil for CERCLA Sites (USEPA, September 2002).

- Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) (USEPA, July 2004).

- Guidelines for Carcinogen Risk Assessment (USEPA, March 2005).

- Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens (USEPA, March 2005).

- Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment) (USEPA, January 2009).

- U.S. Navy Policy on the Use of Background Chemical Levels (January 2004).

- U.S. Navy Human Health Risk Assessment Guidance (December 2008).

COCs were identified in the human health risk assessment (HHRA) (Tetra Tech, January 2011) for those media with incremental lifetime cancer risks (ILCR) greater than $1x10^{-5}$ or a hazard index of 1. Chemicals were not considered as significant contributors to risk and therefore are not included as COCs if their individual carcinogenic risk contribution was less than $1x10^{-6}$ and their non-carcinogenic HQ was less than 0.1. Also chemicals identified as being within naturally occurring levels were not retained as COCs. Table 1 presents the COCs for Tank Farm 5.

At Tank Farm 5, manganese was the only chemical identified as COCs for direct contact with soil. Arsenic, cobalt, iron, and manganese were identified as COCs for direct contact with groundwater. Construction workers were identified as the receptors of concern for exposures to soil. Hypothetical residents were identified as receptors of concern for exposures to groundwater.

No COCs were identified for surface water and sediment at Tank Farm 5.

Section 2 presents the methodology for deriving the preliminary PRGs for soil. Section 3 presents the methodology for deriving preliminary PRGs for groundwater.

2.0 DEVELOPMENT OF PRELIMINARY REMEDIAL GOALS FOR SOIL

2.1 Direct Contact with Soil

It was assumed that receptors could be exposed to chemicals in soil through incidental ingestion, dermal contact, and inhalation of fugitive dust. No volatile COCs were identified in soil, therefore inhalation of volatile emissions from soil was not considered in the calculation of the PRGs. The equation for deriving a carcinogenic PRG for exposures to soil is:

$$PRG_{Soil} = \frac{TCR \cdot AT}{EF \cdot ED \cdot \left[\frac{IR_{Soil} \cdot FI \cdot CF}{BW} \cdot CSF_{oral} + \frac{SA \cdot AF \cdot ABS \cdot CF}{BW} \cdot CSF_{derm} + \frac{1}{PEF} \cdot ET \cdot IUR \right]}$$

The equation for a noncarcinogenic RGO for exposures to soil by is:

$$PRG_{Soil} = \frac{THI \cdot AT}{EF \cdot ED \cdot \left[\frac{IR_{Soil} \cdot FI \cdot CF}{BW} \cdot \frac{1}{RfD_{oral}} + \frac{SA \cdot AF \cdot ABS \cdot CF}{BW} \cdot \frac{1}{RfD_{derm}} + \frac{1}{PEF} \cdot ET \cdot \frac{1}{RfC} \right]}$$

The equation for lifetime exposures to carcinogens in soil is:

$$PRG_{Soil} = \frac{TCR \cdot AT}{EF \cdot \left[\begin{array}{l} \left(\frac{IR_{Soil-child} \cdot FI_{child} \cdot ED_{child}}{BW_{child}} + \frac{IR_{Soil-adult} \cdot FI_{adult} \cdot ED_{adult}}{BW_{adult}} \right) \cdot CF \cdot CSF_{oral} + \left(\frac{SA_{chld} \cdot AF_{child} \cdot ED_{child}}{BW_{child}} + \frac{SA_{adult} \cdot AF_{adult} \cdot ED_{adult}}{BW_{adult}} \right) \cdot ABS \cdot CF \cdot CSF_{derm} \\ + \left(\frac{1}{PEF} \right) \cdot \left(ET_{child} \cdot ED_{child} + ET_{adult} \cdot ED_{adult} \right) \cdot IUR \end{array} \right]}$$

where:

IR	=	ingestion rate (mg/day)
FI	=	fraction ingested from contaminated source (dimensionless)
EF	=	exposure frequency (days/yr)

ED	=	exposure duration (yr)
SA	=	skin surface area available for contact (cm^2)
AF	=	skin adherence factor (mg/cm^2/event)
ABS	=	absorption factor (dimensionless)
EV	=	event frequency (events/day)
CF	=	conversion factor (1×10^{-6} kg/mg)
BW	=	body weight (kg)
AT	=	averaging time (days);
		for noncarcinogens, AT = ED x 365 days/yr;
		for carcinogens, AT = 70 yr x 365 days/yr
PEF	=	Particulate emission factor, m^3/kg
CSF_{oral}	=	oral cancer slope factor, $(mg/kg/day)^{-1}$
CSF_{derm}	=	dermal cancer slope factor, $(mg/kg/day)^{-1}$
IUR	=	inhalation unit risk, $(\mu g/m^3)^{-1}$
RfD_{oral}	=	oral reference dose, mg/kg/day
RfD_{derm}	=	dermal reference dose, mg/kg/day
RfC	=	Reference concentration, mg/m^3

The exposure assumptions used to develop PRGs for exposures to soil are the same exposure assumptions that were used in the HHRA and are presented in Table 2. Toxicity criteria used in the development of the PRGs are presented in Tables 3 to 6. The preliminary PRGs for soil are presented in Table 7 for Tank Farm 5. Also included in Table 7 are the background 95 percent upper prediction limits (UPL), the USEPA Regional Screening Levels (RSLs) (USEPA, May 2012), and RIDEM Direct Exposure Criteria (DECs) for residential soil (RIDEM, November 2011). The RSLs are presented for informational purposes only and were not used as PRGs. Copies of the PRG calculations are included in Attachment A.

2.2 Calculation of Background Upper Prediction Limits

Background data is available for the two soil types found at Tank Farm 5; Newport silt loam (Ne), and Pittstown silt loam (Pm). Upper prediction limits were calculated for each of the individual soil type and for all soil type combined using USEPA's ProUCL Version 4.1.01. The calculated UPLs are presented in Table 8. Copies of the ProUCL printouts are included in Attachment B. Since it is possible for an individual to be exposed to both soil types the UPL for the combined soil types was selected as the background concentration for inclusion in Table 7.

3.0 DEVELOPMENT OF PRELIMINARY REMEDIAL GOALS FOR GROUNDWATER

It was assumed hypothetical residents could be exposed to COCs in groundwater ingestion, dermal contact, and inhalation of chemicals that have volatilized from groundwater. The equation for deriving a groundwater PRG for carcinogens is:

$$PRG_{GW} = \frac{TCR \cdot AT}{EF \cdot ED \cdot \left[\frac{IR_{GW}}{BW} \cdot CSF_{oral} + \frac{DA_{event} \cdot EV \cdot SA}{BW} \cdot CSF_{derm} + \frac{ET}{VF} \cdot IUR \right]}$$

And the equation for noncarcinogens is:

$$PRG_{GW} = \frac{THI \cdot AT}{EF \cdot ED \cdot \left[\frac{IR_{GW}}{BW} \cdot \frac{1}{RfD_{oral}} + \frac{DA_{event} \cdot EV \cdot SA}{BW} \cdot \frac{1}{RfD_{derm}} + \frac{ET}{VF} \cdot \frac{1}{RfC} \right]}$$

The equation for lifetime exposures to carcinogens in groundwater is:

$$PRG_{GW} = \frac{TCR \cdot AT}{EF \cdot \left[\begin{array}{l} \left(\frac{IR_{GW-child} \cdot ED_{child}}{BW_{child}} + \frac{IR_{GW-adult} \cdot ED_{adult}}{BW_{adult}} \right) \cdot CSF_{oral} + \left(\frac{DA_{event-child} \cdot EV_{child} \cdot SA_{child} \cdot ED_{child}}{BW_{child}} + \frac{DA_{event-adult} \cdot EV_{adult} \cdot SA_{adult} \cdot ED_{adult}}{BW_{adult}} \right) \cdot CSF_{derm} \\ + \frac{1}{VF} \cdot \left(ET_{child} \cdot ED_{child} + ET_{adult} \cdot ED_{adult} \right) \cdot IUR \end{array} \right]}$$

where

IR	=	ingestion rate for groundwater (L/day)
EF	=	exposure frequency (days/yr)
ED	=	exposure duration (yr)
DA_{event}	=	dermally absorbed dose per event (mg/cm^2-event)
EV	=	event frequency (events/day)
ED	=	exposure duration (yr)
ET	=	exposure time (hours/day)
EF	=	exposure frequency (days/yr)
SA	=	skin surface area available for contact (cm^2)
BW	=	body weight (kg)
AT	=	averaging time (days);
		for noncarcinogens, AT = ED x 365 days/yr;
		for carcinogens, AT = 70 yrs x 365 days/yr
VF	=	volatilization factor, m^3/kg
CSF_{oral}	=	oral cancer slope factor, (mg/kg/day)$^{-1}$

CSF_{derm} = dermal cancer slope factor, $(mg/kg/day)^{-1}$

IUR = inhalation unit risk, $(\mu g/m^3)^{-1}$

RfD_{oral} = oral reference dose, mg/kg/day

RfD_{derm} = dermal reference dose, mg/kg/day

RfC = Reference concentration, mg/m^3

ADAF = Age dependent adjustment factor, (unitless)

The exposure assumptions used to develop PRGs for exposures to groundwater are presented in Table 2. Toxicity criteria used in the development of the PRGs are presented in Tables 3 to 6. The preliminary PRGs for groundwater are presented in Table 9 for Tank Farm 5. Also included in Table 9 are USEPA Regional Screening Levels (RSLs) (USEPA, May 2012), USEPA Maximum Contaminant Levels (MCLs) (USEPA April 2012), and RIDEM GA groundwater objectives (RIDEM, November 2011). The RSLs are presented for informational purposes only and were not used as PRGs. Copies of the PRG calculations are included in Attachment C.

REFERENCES

Rhode Island Department of Environmental Management (RIDEM), Office of Waste Management, November 2011. Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases.

Tetra Tech, January 2011. Data Gaps Assessment Report for Installation Restoration for Site 12 (Tank Farm 4) and 13 (Tank Farm 5), Naval Station Newport, Rhode Island. Prepared for the Naval Facilities Engineering Command, Mid-Atlantic.

USEPA, April 2012. 2012 Edition of the Drinking Water Standards and Health Advisories, EPA 820-S-12-001, Office of Water, Washington, D.C.

USEPA, May 2012. Regional Screening Levels for Chemical Contaminants at Superfund Sites, prepared by Oak Ridge National Laboratory. http://epa-prgs.ornl.gov/chemicals/index.shtml.

TABLE 1
CHEMICALS RETAINED AS CHEMICALS OF CONCERN
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical	Receptor								
	Construction Workers	Industrial Workers	Adolescent Trespassers	Child Recreational Users	Adult Recreational Users	Lifelong Recreational Users	Child Residents	Adult Residents	Lifelong Residents
Surface Soil									
No COCs identified for surface soil.									
All Soil									
Manganese	X								
Groundwater									
Arsenic							X		X
Cobalt							X	X	
Iron							X		
Manganese							X	X	
Surface Water									
No COCs identified for surface water.									
Sediment									
No COCs identified for sediment.									

A chemical is retained as a COC if it contributed to a total cancer risk greater than $1x10^{-4}$ or to a target organ hazard index greater than 1.

Source: Table 6-38 from Data Gap Assessment (DGA) Report for Installation Restoration Site 12 (Tank Farm 4) and 13 (Tank Farm 5) (Tetra Tech NUS, January 2011).

TABLE 2
SUMMARY OF EXPOSURE INPUT PARAMETERS
REASONABLE MAXIMUM EXPOSURES
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Parameter Code	Exposure Parameter	Construction Worker	Child Resident	Adult Resident
All Exposures				
ED	Exposure Duration (years)	1[(1)]	6[(2,3)]	24[(2,3)]
BW	Body Weight (kg)	70[(2)]	15[(2,3)]	70[(2,3)]
AT-N	Averaging Time (Non-Cancer) (days)	365[(4)]	2,190[(3,4)]	8,760[(3,4)]
AT-C	Averaging Time (Cancer) (days)	25,550[(4)]	25,550[(3,4)]	25,550[(3,4)]
Incidental Ingestion/Dermal Contact with Soil				
IR	Ingestion Rate (mg/day)	330[(2)]	200[(2,3)]	100[(2,3)]
EF	Exposure Frequency (days/year)	130[(1)]	350[(2,3)]	350[(2,3)]
FI	Fraction Ingested (unitless)	1	1	1
SA	Skin Surface Available for Contact (cm^2)	3,300[(5)]	2,800[(5)]	5,700[(5)]
AF	Soil to Skin Adherence Factor (mg/cm^2/event)	0.3[(5)]	0.2[(5)]	0.07[(5)]
ABS	Absorption Factor (unitless)	chemical-specific[(5)]	chemical-specific[(5)]	chemical-specific[(5)]
CF	Conversion Factor (kg/mg)	1E-06	1E-06	1E-06
Inhalation Fugitive Dust/Volatile Emissions from Soil				
ET	Exposure Time (hours/day)	8[(1)]	24	24
EF	Exposure Frequency (days/year)	130[(1)]	350[(2,3)]	350[(2,3)]
PEF	Particulate Emission Factor (m^3/kg)	1.4E+06[(6)]	1.1E+10[(7)]	1.1E+10[(7)]
Ingestion/Dermal Contact with Groundwater				
IR	Ingestion Rate (L/day)	NA	1[(2)]	2.0[(2)]
EF	Exposure Frequency (days/year)	NA	350[(2)]	350[(2)]
ET	Exposure Time (hours/day)	NA	1.0[(5)]	0.58[(5)]
EV	Event Frequency (events/day)	NA	1[(8)]	1[(8)]
SA	Skin Surface Available for Contact (cm^2)	NA	6,600[(5)]	18,000[(5)]
	Kp (cm/hour), t* (hour/event), t (hour), and B (unitless)	NA	chemical-specific[(5)]	chemical-specific[(5)]

TABLE 2
SUMMARY OF EXPOSURE INPUT PARAMETERS
REASONABLE MAXIMUM EXPOSURES
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Parameter Code	Exposure Parameter	Construction Worker	Child Resident	Adult Resident
Inhalation of Volatile Emissions from Groundwater				
ET	Exposure Time (hours/day)	NA	NA	NA
EF	Exposure Frequency (days/year)	NA	NA	NA
VF	Volatilization Factor (L/m^3)	NA	0.5[9]	0.5[9]

Notes:
1 - Assumes a 26 week construction project over a course of one year.
2 - USEPA, 1997: Exposure Factors Handbook. EPA/600/8-95/002FA.
3 - Rhode Island Department of Environmental Management, DEM-DSR-01-93, February 2004.
4 - USEPA, 1989: Risk Assessment Guidance for Superfund. Vol 1: Human Health Evaluation Manual, Part A.
5 - USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. PA/540/R/99/005.
6 - USEPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9365.4-24.
7 - USEPA, 2012: Soil Screening Guidance calculation Internet site at http://risk.lsd.ornl.gov/calc_start.htm. Site-specific values for Hartford, Connecticut.
8 - Professional judgment.
9 - USEPA, 1991. Risk Assessment Guidance for Superfund. Vol 1: Human Health Evaluation Manual, Part B, Development of Risk-Based Preliminary Remediation Goals.

TABLE 3
NON-CANCER TOXICITY DATA -- ORAL/DERMAL
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD		Oral Absorption Efficiency for Dermal[1]	Absorbed RfD for Dermal[2]		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfD:Target Organ(s)	
		Value	Units		Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Inorganics										
Arsenic	Chronic	3.0E-04	mg/kg/day	1	3.0E-04	mg/kg/day	Skin, Cardiovascular System	3/1	IRIS	11/12/2012
Cobalt	Chronic	3.0E-04	mg/kg/day	1	3.0E-04	mg/kg/day	Blood	3000/1	PPRTV	8/25/2008
Iron	Chronic	7.0E-01	mg/kg/day	1	7.0E-01	mg/kg/day	Gastrointestinal System	1.5/1	PPRTV	9/11/2006
Manganese[3]	Chronic	2.4E-02	mg/kg/day	0.04	9.6E-04	mg/kg/day	Central Nervous System	1	IRIS	11/12/2012

Notes:
1 - U.S. EPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Interim. EPA/540/R/99/005.
2 - Adjusted dermal RfD = Oral RfD x Oral Absorption Efficiency for Dermal.
3 - Adjusted IRIS value in accordance with IRIS.

Definitions:
IRIS = Integrated Risk Information System
NA = Not Available.

TABLE 4
NON-CANCER TOXICITY DATA -- INHALATION
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical of Potential Concern	Chronic/ Subchronic	Inhalation RfC		Extrapolated RfD[1]		Primary Target Organ(s)	Combined Uncertainty/Modifying Factors	RfC : Target Organ(s)	
		Value	Units	Value	Units			Source(s)	Date(s) (MM/DD/YYYY)
Inorganics									
Arsenic	Chronic	1.5E-05	mg/m3	4.3E-06	(mg/kg/day)	NA	NA	Cal EPA	9/2009
Cobalt	Chronic	6.0E-06	mg/m^3	1.7E-06	(mg/kg/day)	Lungs	NA	PPRTV	8/25/2008
Iron	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	Chronic	5.0E-05	mg/m^3	1.4E-05	(mg/kg/day)	Central Nervous System	1000/1	IRIS	11/12/2012

Notes:
1 - Extrapolated RfD = RfC *20m^3/day / 70 kg

Definitions:
IRIS = Integrated Risk Information System
NA = Not Applicable
Cal EPA = California Environmental Protection Agency, Technical Support Document for Describing Available Cancer Slope Factors, September 2009.
PPRTV = Provisional Peer Reviewed Toxicity Value.

TABLE 5
CANCER TOXICITY DATA -- ORAL/DERMAL
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical of Potential Concern	Oral Cancer Slope Factor		Oral Absorption Efficiency for Dermal[1]	Absorbed Cancer Slope Factor for Dermal[2]		Weight of Evidence/ Cancer Guideline Description	Oral CSF	
	Value	Units		Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Inorganics								
Arsenic	1.5E+00	$(mg/kg/day)^{-1}$	1	1.5E+00	$(mg/kg/day)^{-1}$	A / Known human carcinogen	IRIS	11/12/2012
Cobalt	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	NA	D (Not classifiable as to human carcinogenicity)	IRIS	11/12/2012

Notes:

1 - USEPA, 2004: Risk Assessment Guidance for Superfund (Part E, Supplemental Guidance for Dermal Risk Assessment) Interim. EPA/540/R/99/005.

2 - Adjusted cancer slope factor for dermal = Oral cancer slope factor / Oral absorption efficiency for dermal.

IRIS = Integrated Risk Information System.

NA = Not Available.

TABLE 6
CANCER TOXICITY DATA -- INHALATION
TANK FARM 4
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical of Potential Concern	Unit Risk		Inhalation Cancer Slope Factor(1)		Weight of Evidence/ Cancer Guideline Description	Unit Risk : Inhalation CSF	
	Value	Units	Value	Units		Source(s)	Date(s) (MM/DD/YYYY)
Inorganics							
Arsenic	4.3E-03	$(ug/m^3)^{-1}$	1.5E+01	$(mg/kg/day)^{-1}$	A / Known human carcinogen	IRIS	11/12/2012
Cobalt	9.0E-03	$(ug/m^3)^{-1}$	3.2E+01	$(mg/kg/day)^{-1}$	NA	PPRTV	8/25/2008
Iron	NA	NA	NA	NA	NA	NA	NA
Manganese	NA	NA	NA	NA	D / Not classifiable as to human carcinogenicity	IRIS	11/12/2012

Notes:
1 - Inhalation CSF = Unit Risk * 70 kg / $20m^3$/day.

Definitions:
IRIS = Integrated Risk Information System.
NA = Not Available.
Cal EPA = California Environmental Protection Agency, Technical Support Document for Describing Available Cancer Slope Factors, September 2009.
PPRTV = Provisional Peer Reviewed Toxicity Value.

TABLE 7
PRELIMINARY REMEDIAL GOALS - SOIL
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical	EPA RSL[1] (mg/kg)	RIDEM Direct Contact Criteria[2] (mg/kg)	Background		Risk-Based-Concentrations[3]			
			Surface Soil (mg/kg)	Subsurface Soil (mg/kg)	Target Cancer Risk Level			Hazard Index = 1 (mg/kg)
					10^{-6} (mg/kg)	10^{-5} (mg/kg)	10^{-4} (mg/kg)	
CONSTRUCTION WORKERS								
Manganese	NA	10,000	421	1,214	NA	NA	NA	585

Notes:

1 - EPA Regional Screening Levels for Chemical Contaminants at Superfund Sites, May 2012.
[Cancer benchmark value = 1E-06, Hazard index (HI) = 1].

2 - RIDEM, DEM-DSR-01-93, November 2011.

3 - Risk-based concentrations were calculated using the exposure assumptions presented in the HHRA for Tank Farm 4 and 5. (Tetra Tech, January 2011).

mg/kg - Milligram per kilogram.
NA - Not applicable.
PRG - Preliminary Remediation Goal.
RSL - Regional Screening Levels.
EPA - United States Environmental Protection Agency.

TABLE 8
BACKGROUND CONCENTRATIONS - SOIL
SITE 8 - NAVAL UNDERSEA COMMAND DISPOSAL AREA
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Parameter	Soil Type	Upper Prediction Limit (mg/kg)	
		Surface Soil	Subsurface Soil
Arsenic	Pm	17.4	22.8
	Ne	16.7	9.4
	Combined	17.3	23.6
Manganese	Pm	489	1086
	Ne	261	448
	Combined	421	1214
Benzo(a)anthracene	Pm	0.158	NS
	Ne	NA	NS
	Combined	0.158	NS
Benzo(a)pyrene	Pm	0.156	NS
	Ne	NA	NS
	Combined	0.156	NS
Benzo(b)fluoranthene	Pm	0.099	NS
	Ne	NA	NS
	Combined	0.099	NS
Benzo(k)fluoranthene	Pm	NA	NS
	Ne	NA	NS
	Combined	NA	NS
Chrysene	Pm	NA	NS
	Ne	NA	NS
	Combined	NA	NS
Dibenzo(a,h)anthracene	Pm	NA	NS
	Ne	NA	NS
	Combined	NA	NS
Indeno(1,2,3-cd)pyrene	Pm	NA	NS
	Ne	NA	NS
	Combined	NA	NS

NA = Not Applicable. There are less than four detected samples, meaningful UPLs cannot be calculated.
Ne = Newport Soil Type.
NS - Subsurface soil samples were not analayzed for PAHs.
Pm - Pittstown Soil Type.

TABLE 9
PRELIMINARY REMEDIAL GOALS - GROUNDWATER
TANK FARM 5
NAVSTA NEWPORT, NEWPORT, RHODE ISLAND

Chemical	EPA RSL(1) Tap Water (ug/L)	EPA MCL(2) (ug/L)	RIDEM GA Groundwater Objective(3) (ug/L)	Risk-Based-Concentrations			
				Target Cancer Risk Level			Hazard Index = 1 (ug/L)
				10^{-6} (ug/L)	10^{-5} (ug/L)	10^{-4} (ug/L)	
HYPOTHETICAL CHILD RESIDENTS							
Arsenic	0.045	10	10	0.12	1.2	12	4.7
Cobalt	4.7	NA	NA	NA	NA	NA	4.7
Iron	11,000	NA	NA	NA	NA	NA	10,900
Manganese	320	NA	NA	NA	NA	NA	320
HYPOTHETICAL ADULT RESIDENTS							
Arsenic	0.045	10	10	0.071	0.71	7.1	11
Cobalt	4.7	NA	NA	NA	NA	NA	11
Iron	11,000	NA	NA	NA	NA	NA	25,400
Manganese	320	NA	NA	NA	NA	NA	775
HYPOTHETICAL LIFELONG RESIDENTS							
Arsenic	0.045	10	10	0.044	0.44	4.4	NA
Cobalt	4.7	NA	NA	NA	NA	NA	NA
Iron	11,000	NA	NA	NA	NA	NA	NA
Manganese	320	NA	NA	NA	NA	NA	NA

Notes:
1 - EPA Regional Screening Levels for Chemical Contaminants at Superfund Sites, Novemeber 2012. [Cancer benchmark value = 1E-06, Hazard index (HI) = 1].
2 - EPA Primary Drinking Water Standard (EPA, April 2012).
3 - RIDEM, DEM-DSR-01-93, November 2011.

ug/L - Microgram per liter.
NA - Not applicable.
MCL - Maximum Concentration Level.
PRG - Preliminary Remedial Goal.
RIDEM - Rhode Island Department of Environmental Management.
RSL - Regional Screening Levels.
EPA - United States Environmental Protection Agency.

ATTACHMENT A

PRG CALCULATIONS FOR SOIL

RISK ASSESSMENT SPREADSHEET - CALCULATION OF RISK-BASED CONCENTRATIONS FOR SOIL

SITE NAME: NAVSTA NEWPORT, NEWPORT, RHODE ISLAND
EXPOSURE POINT: TANK FARM 5
EXPOSURE SCENARIO: CONSTRUCTION WORKERS
MEDIA: SURFACE/SUBSURFACE SOIL
DATE: NOVEMBER 12, 2012

THIS SPREADSHEET CALCULATES RISK-BASED CLEANUP GOALS FOR EXPOSURES TO SOIL
THE INCIDENTAL INGESTION, DERMAL CONTACT, AND INHALATION ROUTES OF EXPOSURE ARE CONSIDERED.

RELEVANT EQUATION:

Carcinogens

$$PRG_{soil} = \frac{TCR}{IntakeFac_{oral} \cdot CSF_{oral} + IntakeFac_{derm} \cdot CSF_{derm} + IntakeFac_{inh} \cdot CSF_{inh}}$$

NonCarcinogens

$$PRG_{soil} = \frac{THI}{\left(\frac{IntakeFac_{oral}}{RfD_{oral}}\right) + \left(\frac{IntakeFac_{derm}}{RfD_{derm}}\right) + \left(\frac{IntakeFac_{inh}}{RfD_{inh}}\right)}$$

$$IntakeFac_{oral} = \frac{IR \times EF \times ED \times FI \times CF}{BW \times AT}$$

$$IntakeFac_{derm} = \frac{SA \times AF \times ABS \times EF \times ED \times CF}{BW \times AT}$$

$$IntakeFac_{inh} = \frac{EF \times ED \times ET \times (1/VF + 1/PEF)}{AT \times 24 \text{ Hours/day}}$$

Where:

Parameter	Value	Definition
TCR = :	1E-06	Target Cancer Risk
THI = :	1	Target Hazard Index
IR = :	330	Soil Ingestion Rate (mg/day)
CF = :	1.0E-06	Conversion Factor (kg/mg)
FI = :	1	Fraction from contaminated source (unitless)
SA = :	3300	Skin surface available for contact (cm^2/day)
AF = :	0.3	Soil to skin adherence factor (mg/cm^2)
ABS = :	Chemical Specific	Absorption factor (unitless)
ET = :	8	Exposure time (hr/day)
EF = :	130	Exposure Frequency (days/year)
ED = :	1	Exposure Duration (years)
BW = :	70	Body Weight (kg)
ATc = :	25,550	Averaging time for carcinogenic exposures (days)
ATn = :	365	Averaging time for noncarcinogenic exposures (days)
PEF = :	1.40E+06	Particulate emission factor (m^3/kg)
VF = :	Chemical Specific	Volatilization Factor (m^3/kg)

CHEMICAL	ABS	Cancer Slope Factor			Reference Dose		
		Oral (mg/kg/day)$^{-1}$	Dermal (mg/kg/day)$^{-1}$	Inhalation (ug/m^3)$^{-1}$	Oral (mg/kg/day)	Dermal (mg/kg/day)	Inhalation (mg/m^3)
Manganese	0	NA	NA	NA	1.4E-01	5.6E-03	5.0E-05

CHEMICAL	Carcinogenic Intake Factors			Noncarcinogenic Intakes Factors		
	Oral (kg/kg/day)	Dermal (kg/kg/day)	Inhalation (kg/m^3)	Oral (kg/kg/day)	Dermal (kg/kg/day)	Inhalation (kg/m^3)
Manganese	2.40E-08	0.00E+00	1.21E-09	1.68E-06	0.00E+00	8.48E-08

CHEMICAL	Soil Concentration	
	Carcinogenic (mg/kg)	Noncarcinogenic (mg/kg)
Manganese	NA	585

ATTACHMENT B

PROUCL OUTPUTS

BACKGROUND STATISTICS

General Background Statistics for Data Sets with Non-Detects			
User Selected Options			
From File	Sheet1.wst		
Full Precision	OFF		
Confidence Coefficient	95%		
Coverage	90%		
Different or Future K Values	1		
Number of Bootstrap Operations	2000		
M|MG/KG|ARSENIC| (so_sb_ne)			
General Statistics			
Total Number of Observations	21	Number of Distinct Observations	18
Tolerance Factor	1.905		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1.9	Minimum	0.642
Maximum	17.7	Maximum	2.874
Second Largest	5.8	Second Largest	1.758
First Quartile	2.5	First Quartile	0.916
Median	3.8	Median	1.335
Third Quartile	4.95	Third Quartile	1.599
Mean	4.376	Mean	1.323
SD	3.315	SD	0.512
Coefficient of Variation	0.757		
Skewness	3.483		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.585	Shapiro Wilk Test Statistic	0.88
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	10.69	95% UTL with 90% Coverage	9.966
95% UPL (t)	10.23	95% UPL (t)	9.277
90% Percentile (z)	8.624	90% Percentile (z)	7.241
95% Percentile (z)	9.828	95% Percentile (z)	8.722
99% Percentile (z)	12.09	99% Percentile (z)	12.37
Gamma Distribution Test		**Data Distribution Test**	
k star	2.965	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
Theta Star	1.476		
MLE of Mean	4.376		
MLE of Standard Deviation	2.542		
nu star	124.5		
A-D Test Statistic	1.054	**Nonparametric Statistics**	
5% A-D Critical Value	0.749	90% Percentile	5.5
K-S Test Statistic	0.187	95% Percentile	5.8
5% K-S Critical Value	0.191	99% Percentile	15.32

BACKGROUND STATISTICS

Data follow Appx. Gamma Distribution at 5% Significance Leve			
Assuming Gamma Distribution		95% UTL with 90% Coverage	17.7
90% Percentile	7.784	95% Percentile Bootstrap UTL with 90% Coverage	17.7
95% Percentile	9.215	95% BCA Bootstrap UTL with 90% Coverage	5.8
99% Percentile	12.32	95% UPL	16.51
		95% Chebyshev UPL	19.16
95% WH Approx. Gamma UPL	9.348	Upper Threshold Limit Based upon IQR	8.625
95% HW Approx. Gamma UPL	9.3		
95% WH Approx. Gamma UTL with 90% Coverage	9.917		
95% HW Approx. Gamma UTL with 90% Coverage	9.892		

BACKGROUND STATISTICS

M|MG/KG|ARSENIC| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	45	Number of Distinct Observations	42
Tolerance Factor	1.662		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1.9	Minimum	0.642
Maximum	23.5	Maximum	3.157
Second Largest	21.8	Second Largest	3.082
First Quartile	4.4	First Quartile	1.482
Median	7.6	Median	2.028
Third Quartile	14.7	Third Quartile	2.688
Mean	9.656	Mean	2.001
SD	6.517	SD	0.779
Coefficient of Variation	0.675		
Skewness	0.503		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.891	Shapiro Wilk Test Statistic	0.915
Shapiro Wilk Critical Value	0.945	Shapiro Wilk Critical Value	0.945
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	20.49	95% UTL with 90% Coverage	27.01
95% UPL (t)	20.73	95% UPL (t)	27.78
90% Percentile (z)	18.01	90% Percentile (z)	20.07
95% Percentile (z)	20.37	95% Percentile (z)	26.64
99% Percentile (z)	24.82	99% Percentile (z)	45.3
Gamma Distribution Test		**Data Distribution Test**	
k star	1.907	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
Theta Star	5.063		
MLE of Mean	9.656		
MLE of Standard Deviation	6.992		
nu star	171.6		
A-D Test Statistic	1.028	**Nonparametric Statistics**	
5% A-D Critical Value	0.76	90% Percentile	18.48
K-S Test Statistic	0.131	95% Percentile	20.48
5% K-S Critical Value	0.133	99% Percentile	22.75
Data follow Appx. Gamma Distribution at 5% Significance Leve			
Assuming Gamma Distribution		95% UTL with 90% Coverage	20.5
90% Percentile	18.99	95% Percentile Bootstrap UTL with 90% Coverage	20.5
95% Percentile	23.25	95% BCA Bootstrap UTL with 90% Coverage	20.5
99% Percentile	32.73	95% UPL	21.41
		95% Chebyshev UPL	38.37
95% WH Approx. Gamma UPL	23.63	Upper Threshold Limit Based upon IQR	30.15
95% HW Approx. Gamma UPL	24.37		
95% WH Approx. Gamma UTL with 90% Coverage	23.18		
95% HW Approx. Gamma UTL with 90% Coverage	23.86		

BACKGROUND STATISTICS

M|MG/KG|ARSENIC| (so_sb_pm)			
General Statistics			
Total Number of Observations	24	Number of Distinct Observations	24
Tolerance Factor	1.853		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	5.3	Minimum	1.668
Maximum	23.5	Maximum	3.157
Second Largest	21.8	Second Largest	3.082
First Quartile	10.3	First Quartile	2.332
Median	14.3	Median	2.66
Third Quartile	17.7	Third Quartile	2.874
Mean	14.28	Mean	2.594
SD	4.896	SD	0.381
Coefficient of Variation	0.343		
Skewness	0.0511		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.981	Shapiro Wilk Test Statistic	0.957
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	23.35	95% UTL with 90% Coverage	27.14
95% UPL (t)	22.84	95% UPL (t)	26.09
90% Percentile (z)	20.55	90% Percentile (z)	21.82
95% Percentile (z)	22.33	95% Percentile (z)	25.07
99% Percentile (z)	25.66	99% Percentile (z)	32.51
Gamma Distribution Test		**Data Distribution Test**	
k star	6.994	**Data appear Normal at 5% Significance Level**	
Theta Star	2.041		
MLE of Mean	14.28		
MLE of Standard Deviation	5.398		
nu star	335.7		
A-D Test Statistic	0.239	**Nonparametric Statistics**	
5% A-D Critical Value	0.745	90% Percentile	20.47
K-S Test Statistic	0.108	95% Percentile	21.61
5% K-S Critical Value	0.178	99% Percentile	23.11
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	21.8
90% Percentile	21.48	95% Percentile Bootstrap UTL with 90% Coverage	22.6
95% Percentile	24.15	95% BCA Bootstrap UTL with 90% Coverage	22.57
99% Percentile	29.72	95% UPL	23.08
		95% Chebyshev UPL	36.06
95% WH Approx. Gamma UPL	24.5	Upper Threshold Limit Based upon IQR	28.8
95% HW Approx. Gamma UPL	24.83		
95% WH Approx. Gamma UTL with 90% Coverage	25.28		
95% HW Approx. Gamma UTL with 90% Coverage	25.66		

BACKGROUND STATISTICS

M|MG/KG|ARSENIC| (so_ss_ne)			
General Statistics			
Total Number of Observations	22	Number of Distinct Observations	19
Tolerance Factor	1.886		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1.7	Minimum	0.531
Maximum	17.1	Maximum	2.839
Second Largest	14.5	Second Largest	2.674
First Quartile	2.4	First Quartile	0.875
Median	5.9	Median	1.774
Third Quartile	8.525	Third Quartile	2.143
Mean	6.277	Mean	1.597
SD	4.394	SD	0.719
Coefficient of Variation	0.7		
Skewness	0.963		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.873	Shapiro Wilk Test Statistic	0.91
Shapiro Wilk Critical Value	0.911	Shapiro Wilk Critical Value	0.911
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	14.56	95% UTL with 90% Coverage	19.16
95% UPL (t)	14.01	95% UPL (t)	17.49
90% Percentile (z)	11.91	90% Percentile (z)	12.41
95% Percentile (z)	13.5	95% Percentile (z)	16.11
99% Percentile (z)	16.5	99% Percentile (z)	26.29
Gamma Distribution Test		**Data Distribution Test**	
k star	1.964	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	3.196		
MLE of Mean	6.277		
MLE of Standard Deviation	4.479		
nu star	86.43		
A-D Test Statistic	0.849	**Nonparametric Statistics**	
5% A-D Critical Value	0.755	90% Percentile	11.61
K-S Test Statistic	0.216	95% Percentile	14.36
5% K-S Critical Value	0.188	99% Percentile	16.55
Data not Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	14.5
90% Percentile	12.26	95% Percentile Bootstrap UTL with 90% Coverage	16.84
95% Percentile	14.97	95% BCA Bootstrap UTL with 90% Coverage	16.56
99% Percentile	21	95% UPL	16.71
		95% Chebyshev UPL	25.86
95% WH Approx. Gamma UPL	15.47	Upper Threshold Limit Based upon IQR	17.71
95% HW Approx. Gamma UPL	15.84		
95% WH Approx. Gamma UTL with 90% Coverage	16.49		
95% HW Approx. Gamma UTL with 90% Coverage	16.97		

BACKGROUND STATISTICS

M|MG/KG|ARSENIC| (so_ss_ne+pm)			
General Statistics			
Total Number of Observations	42	Number of Distinct Observations	38
Tolerance Factor	1.678		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	1.7	Minimum	0.531
Maximum	21.3	Maximum	3.059
Second Largest	17.1	Second Largest	2.839
First Quartile	4.875	First Quartile	1.582
Median	7.25	Median	1.98
Third Quartile	10.6	Third Quartile	2.361
Mean	7.852	Mean	1.875
SD	4.532	SD	0.653
Coefficient of Variation	0.577		
Skewness	0.777		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.896	Shapiro Wilk Test Statistic	0.893
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	15.46	95% UTL with 90% Coverage	19.51
95% UPL (t)	15.57	95% UPL (t)	19.83
90% Percentile (z)	13.66	90% Percentile (z)	15.06
95% Percentile (z)	15.31	95% Percentile (z)	19.09
99% Percentile (z)	18.39	99% Percentile (z)	29.8
Gamma Distribution Test		**Data Distribution Test**	
k star	2.664	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	2.948		
MLE of Mean	7.852		
MLE of Standard Deviation	4.811		
nu star	223.8		
A-D Test Statistic	0.53	**Nonparametric Statistics**	
5% A-D Critical Value	0.756	90% Percentile	13.27
K-S Test Statistic	0.113	95% Percentile	14.98
5% K-S Critical Value	0.137	99% Percentile	19.58
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	15
90% Percentile	14.3	95% Percentile Bootstrap UTL with 90% Coverage	15
95% Percentile	17.06	95% BCA Bootstrap UTL with 90% Coverage	15
99% Percentile	23.08	95% UPL	16.79
		95% Chebyshev UPL	27.84
95% WH Approx. Gamma UPL	17.31	Upper Threshold Limit Based upon IQR	19.19
95% HW Approx. Gamma UPL	17.76		
95% WH Approx. Gamma UTL with 90% Coverage	17.11		
95% HW Approx. Gamma UTL with 90% Coverage	17.55		

BACKGROUND STATISTICS

M|MG/KG|ARSENIC| (so_ss_pm)			
General Statistics			
Total Number of Observations	20	Number of Distinct Observations	19
Tolerance Factor	1.926		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	4.7	Minimum	1.548
Maximum	21.3	Maximum	3.059
Second Largest	15	Second Largest	2.708
First Quartile	6.2	First Quartile	1.824
Median	8.6	Median	2.151
Third Quartile	12.15	Third Quartile	2.497
Mean	9.585	Mean	2.181
SD	4.116	SD	0.402
Coefficient of Variation	0.429		
Skewness	1.246		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.897	Shapiro Wilk Test Statistic	0.968
Shapiro Wilk Critical Value	0.905	Shapiro Wilk Critical Value	0.905
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	17.51	95% UTL with 90% Coverage	19.2
95% UPL (t)	16.88	95% UPL (t)	18.05
90% Percentile (z)	14.86	90% Percentile (z)	14.82
95% Percentile (z)	16.36	95% Percentile (z)	17.15
99% Percentile (z)	19.16	99% Percentile (z)	22.55
Gamma Distribution Test		**Data Distribution Test**	
k star	5.548	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	1.728		
MLE of Mean	9.585		
MLE of Standard Deviation	4.069		
nu star	221.9		
A-D Test Statistic	0.32	**Nonparametric Statistics**	
5% A-D Critical Value	0.744	90% Percentile	13.47
K-S Test Statistic	0.106	95% Percentile	15.32
5% K-S Critical Value	0.194	99% Percentile	20.1
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	21.3
90% Percentile	15.03	95% Percentile Bootstrap UTL with 90% Coverage	21.3
95% Percentile	17.11	95% BCA Bootstrap UTL with 90% Coverage	21.3
99% Percentile	21.48	95% UPL	20.99
		95% Chebyshev UPL	27.97
95% WH Approx. Gamma UPL	17.42	Upper Threshold Limit Based upon IQR	21.08
95% HW Approx. Gamma UPL	17.55		
95% WH Approx. Gamma UTL with 90% Coverage	18.33		
95% HW Approx. Gamma UTL with 90% Coverage	18.5		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_sb_ne)			
General Statistics			
Total Number of Observations	21	Number of Distinct Observations	21
Tolerance Factor	1.905		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	176	Minimum	5.17
Maximum	634	Maximum	6.452
Second Largest	359	Second Largest	5.883
First Quartile	224	First Quartile	5.412
Median	255	Median	5.541
Third Quartile	322	Third Quartile	5.775
Mean	283.6	Mean	5.605
SD	96.94	SD	0.283
Coefficient of Variation	0.342		
Skewness	2.449		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.761	Shapiro Wilk Test Statistic	0.912
Shapiro Wilk Critical Value	0.908	Shapiro Wilk Critical Value	0.908
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	468.2	95% UTL with 90% Coverage	466.2
95% UPL (t)	454.7	95% UPL (t)	448.1
90% Percentile (z)	407.8	90% Percentile (z)	390.7
95% Percentile (z)	443	95% Percentile (z)	433.1
99% Percentile (z)	509.1	99% Percentile (z)	525.3
Gamma Distribution Test		**Data Distribution Test**	
k star	10.25	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	27.67		
MLE of Mean	283.6		
MLE of Standard Deviation	88.58		
nu star	430.4		
A-D Test Statistic	0.665	**Nonparametric Statistics**	
5% A-D Critical Value	0.743	90% Percentile	344
K-S Test Statistic	0.135	95% Percentile	359
5% K-S Critical Value	0.189	99% Percentile	579
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	634
90% Percentile	401.4	95% Percentile Bootstrap UTL with 90% Coverage	634
95% Percentile	443.2	95% BCA Bootstrap UTL with 90% Coverage	359
99% Percentile	529.1	95% UPL	606.5
		95% Chebyshev UPL	716.1
95% WH Approx. Gamma UPL	448	Upper Threshold Limit Based upon IQR	469
95% HW Approx. Gamma UPL	447.7		
95% WH Approx. Gamma UTL with 90% Coverage	464.1		
95% HW Approx. Gamma UTL with 90% Coverage	464.3		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	45	Number of Distinct Observations	43
Tolerance Factor	1.662		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	176	Minimum	5.17
Maximum	1520	Maximum	7.326
Second Largest	1370	Second Largest	7.223
First Quartile	249	First Quartile	5.517
Median	344	Median	5.841
Third Quartile	516	Third Quartile	6.246
Mean	425.2	Mean	5.918
SD	271.4	SD	0.489
Coefficient of Variation	0.638		
Skewness	2.564		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.727	Shapiro Wilk Test Statistic	0.934
Shapiro Wilk Critical Value	0.945	Shapiro Wilk Critical Value	0.945
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	876.4	95% UTL with 90% Coverage	838.1
95% UPL (t)	886.2	95% UPL (t)	853.2
90% Percentile (z)	773	90% Percentile (z)	695.7
95% Percentile (z)	871.6	95% Percentile (z)	830.9
99% Percentile (z)	1057	99% Percentile (z)	1160
Gamma Distribution Test		**Data Distribution Test**	
k star	3.629	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	117.2		
MLE of Mean	425.2		
MLE of Standard Deviation	223.2		
nu star	326.6		
A-D Test Statistic	1.265	**Nonparametric Statistics**	
5% A-D Critical Value	0.753	90% Percentile	644.8
K-S Test Statistic	0.134	95% Percentile	810.8
5% K-S Critical Value	0.132	99% Percentile	1454
Data not Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	850
90% Percentile	724.5	95% Percentile Bootstrap UTL with 90% Coverage	1083
95% Percentile	846.1	95% BCA Bootstrap UTL with 90% Coverage	850
99% Percentile	1107	95% UPL	1214
		95% Chebyshev UPL	1621
95% WH Approx. Gamma UPL	849.2	Upper Threshold Limit Based upon IQR	916.5
95% HW Approx. Gamma UPL	848.4		
95% WH Approx. Gamma UTL with 90% Coverage	836.8		
95% HW Approx. Gamma UTL with 90% Coverage	835.4		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_sb_pm)			
General Statistics			
Total Number of Observations	24	Number of Distinct Observations	24
Tolerance Factor	1.853		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	214	Minimum	5.366
Maximum	1520	Maximum	7.326
Second Largest	1370	Second Largest	7.223
First Quartile	370.8	First Quartile	5.916
Median	462	Median	6.135
Third Quartile	597.5	Third Quartile	6.393
Mean	549.2	Mean	6.192
SD	313.6	SD	0.469
Coefficient of Variation	0.571		
Skewness	2.102		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.762	Shapiro Wilk Test Statistic	0.948
Shapiro Wilk Critical Value	0.916	Shapiro Wilk Critical Value	0.916
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	1130	95% UTL with 90% Coverage	1166
95% UPL (t)	1098	95% UPL (t)	1110
90% Percentile (z)	951.1	90% Percentile (z)	891.7
95% Percentile (z)	1065	95% Percentile (z)	1057
99% Percentile (z)	1279	99% Percentile (z)	1456
Gamma Distribution Test		**Data Distribution Test**	
k star	3.924	**Data Follow Appr. Gamma Distribution at 5% Significance Level**	
Theta Star	140		
MLE of Mean	549.2		
MLE of Standard Deviation	277.3		
nu star	188.3		
A-D Test Statistic	0.77	**Nonparametric Statistics**	
5% A-D Critical Value	0.748	90% Percentile	791.2
K-S Test Statistic	0.171	95% Percentile	1292
5% K-S Critical Value	0.179	99% Percentile	1486
Data follow Appx. Gamma Distribution at 5% Significance Leve			
Assuming Gamma Distribution		95% UTL with 90% Coverage	1370
90% Percentile	920.9	95% Percentile Bootstrap UTL with 90% Coverage	1475
95% Percentile	1070	95% BCA Bootstrap UTL with 90% Coverage	1370
99% Percentile	1389	95% UPL	1483
		95% Chebyshev UPL	1944
95% WH Approx. Gamma UPL	1086	Upper Threshold Limit Based upon IQR	937.6
95% HW Approx. Gamma UPL	1090		
95% WH Approx. Gamma UTL with 90% Coverag	1130		
95% HW Approx. Gamma UTL with 90% Coverag	1136		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_ss_ne)			
General Statistics			
Total Number of Observations	22	Number of Distinct Observations	21
Tolerance Factor	1.886		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	85.5	Minimum	4.449
Maximum	290	Maximum	5.67
Second Largest	253	Second Largest	5.533
First Quartile	129.3	First Quartile	4.862
Median	178	Median	5.182
Third Quartile	201.3	Third Quartile	5.304
Mean	171.1	Mean	5.099
SD	50.83	SD	0.305
Coefficient of Variation	0.297		
Skewness	0.431		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.968	Shapiro Wilk Test Statistic	0.975
Shapiro Wilk Critical Value	0.911	Shapiro Wilk Critical Value	0.911
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	266.9	95% UTL with 90% Coverage	291.2
95% UPL (t)	260.5	95% UPL (t)	280.2
90% Percentile (z)	236.2	90% Percentile (z)	242.2
95% Percentile (z)	254.7	95% Percentile (z)	270.5
99% Percentile (z)	289.3	99% Percentile (z)	333
Gamma Distribution Test		**Data Distribution Test**	
k star	10.16	**Data appear Normal at 5% Significance Level**	
Theta Star	16.84		
MLE of Mean	171.1		
MLE of Standard Deviation	53.67		
nu star	447		
A-D Test Statistic	0.298	**Nonparametric Statistics**	
5% A-D Critical Value	0.743	90% Percentile	221.7
K-S Test Statistic	0.13	95% Percentile	251.5
5% K-S Critical Value	0.185	99% Percentile	282.2
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	253
90% Percentile	242.4	95% Percentile Bootstrap UTL with 90% Coverage	283.2
95% Percentile	267.8	95% BCA Bootstrap UTL with 90% Coverage	283.2
99% Percentile	320	95% UPL	284.5
		95% Chebyshev UPL	397.6
95% WH Approx. Gamma UPL	271.1	Upper Threshold Limit Based upon IQR	309.3
95% HW Approx. Gamma UPL	273		
95% WH Approx. Gamma UTL with 90% Coverage	280		
95% HW Approx. Gamma UTL with 90% Coverage	282.4		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_ss_ne+pm)			
General Statistics			
Total Number of Observations	42	Number of Distinct Observations	38
Tolerance Factor	1.678		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	85.5	Minimum	4.449
Maximum	477	Maximum	6.168
Second Largest	454	Second Largest	6.118
First Quartile	142.3	First Quartile	4.957
Median	197	Median	5.283
Third Quartile	282.5	Third Quartile	5.643
Mean	227.4	Mean	5.33
SD	103.9	SD	0.445
Coefficient of Variation	0.457		
Skewness	0.888		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.868	Shapiro Wilk Test Statistic	0.924
Shapiro Wilk Critical Value	0.942	Shapiro Wilk Critical Value	0.942
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	401.8	95% UTL with 90% Coverage	435.2
95% UPL (t)	404.4	95% UPL (t)	440
90% Percentile (z)	360.6	90% Percentile (z)	364.9
95% Percentile (z)	398.4	95% Percentile (z)	428.8
99% Percentile (z)	469.2	99% Percentile (z)	580.6
Gamma Distribution Test		**Data Distribution Test**	
k star	4.951	**Data appear Gamma Distributed at 5% Significance Level**	
Theta Star	45.93		
MLE of Mean	227.4		
MLE of Standard Deviation	102.2		
nu star	415.9		
A-D Test Statistic	0.461	**Nonparametric Statistics**	
5% A-D Critical Value	0.752	90% Percentile	399.1
K-S Test Statistic	0.094	95% Percentile	432.3
5% K-S Critical Value	0.137	99% Percentile	467.6
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	433
90% Percentile	364.3	95% Percentile Bootstrap UTL with 90% Coverage	433
95% Percentile	417.3	95% BCA Bootstrap UTL with 90% Coverage	433
99% Percentile	529.6	95% UPL	450.9
		95% Chebyshev UPL	685.8
95% WH Approx. Gamma UPL	421.2	Upper Threshold Limit Based upon IQR	492.9
95% HW Approx. Gamma UPL	425		
95% WH Approx. Gamma UTL with 90% Coverage	417.5		
95% HW Approx. Gamma UTL with 90% Coverage	421		

BACKGROUND STATISTICS

M|MG/KG|MANGANESE| (so_ss_pm)			
General Statistics			
Total Number of Observations	20	Number of Distinct Observations	18
Tolerance Factor	1.926		
Raw Statistics		**Log-Transformed Statistics**	
Minimum	101	Minimum	4.615
Maximum	477	Maximum	6.168
Second Largest	454	Second Largest	6.118
First Quartile	197	First Quartile	5.283
Median	280	Median	5.632
Third Quartile	380.3	Third Quartile	5.94
Mean	289.4	Mean	5.584
SD	112.8	SD	0.44
Coefficient of Variation	0.39		
Skewness	0.0495		
Background Statistics			
Normal Distribution Test		**Lognormal Distribution Test**	
Shapiro Wilk Test Statistic	0.962	Shapiro Wilk Test Statistic	0.942
Shapiro Wilk Critical Value	0.905	Shapiro Wilk Critical Value	0.905
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
95% UTL with 90% Coverage	506.7	95% UTL with 90% Coverage	621.5
95% UPL (t)	489.3	95% UPL (t)	580.7
90% Percentile (z)	434	90% Percentile (z)	467.9
95% Percentile (z)	475	95% Percentile (z)	549.1
99% Percentile (z)	551.9	99% Percentile (z)	741.4
Gamma Distribution Test		**Data Distribution Test**	
k star	5.231	**Data appear Normal at 5% Significance Level**	
Theta Star	55.33		
MLE of Mean	289.4		
MLE of Standard Deviation	126.5		
nu star	209.2		
A-D Test Statistic	0.317	**Nonparametric Statistics**	
5% A-D Critical Value	0.744	90% Percentile	435.1
K-S Test Statistic	0.122	95% Percentile	455.2
5% K-S Critical Value	0.194	99% Percentile	472.6
Data appear Gamma Distributed at 5% Significance Level			
Assuming Gamma Distribution		95% UTL with 90% Coverage	477
90% Percentile	458.7	95% Percentile Bootstrap UTL with 90% Coverage	477
95% Percentile	524	95% BCA Bootstrap UTL with 90% Coverage	477
99% Percentile	661.5	95% UPL	475.9
		95% Chebyshev UPL	793.3
95% WH Approx. Gamma UPL	534.9	Upper Threshold Limit Based upon IQR	655.1
95% HW Approx. Gamma UPL	544.2		
95% WH Approx. Gamma UTL with 90% Coverage	563.3		
95% HW Approx. Gamma UTL with 90% Coverage	575		

BACKGROUND STATISTICS

OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_ne)

General Statistics

Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21

Warning: This data set only has 0 observations!

Data set is too small to compute reliable and meaningful statistics and estimates!

The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_ne) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!

If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_ne+pm)

General Statistics

Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45

Warning: This data set only has 0 observations!

Data set is too small to compute reliable and meaningful statistics and estimates!

The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_ne+pm) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!

If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_pm)

General Statistics

Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24

Warning: This data set only has 0 observations!

Data set is too small to compute reliable and meaningful statistics and estimates!

The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE| (so_sb_pm) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!

If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

BACKGROUND STATISTICS

OS|UG/KG|BENZO(A)ANTHRACENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(A)ANTHRACENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(A)ANTHRACENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	17
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful and reliable test statistics and estimates.			
No statistics will be produced!			
Tolerance Factor	1.926	Percent Non-Detects	85.00%
Number of Missing Values	22		
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	52	Minimum Detected	3.951
Maximum Detected	66	Maximum Detected	4.19
Mean of Detected	59	Mean of Detected	4.073
SD of Detected	7	SD of Detected	0.119
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Warning: There are only 3 Distinct Detected Values in this data set			
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.			
Those methods will return a 'N/A' value on your output display!			
It is necessary to have 4 or more Distinct Values for bootstrap methods.			
However, results obtained using 4 to 9 distinct values may not be reliable.			
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.			
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	1	Shapiro Wilk Test Statistic	0.999
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	

BACKGROUND STATISTICS

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	113.5	Mean (Log Scale)	4.7
SD	25.12	SD (Log Scale)	0.281
95% UTL 90% Coverage	161.9	95% UTL 90% Coverage	188.7
95% UPL (t)	158	95% UPL (t)	180.7
90% Percentile (z)	145.7	90% Percentile (z)	157.5
95% Percentile (z)	154.8	95% Percentile (z)	174.4
99% Percentile (z)	171.9	99% Percentile (z)	211.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	59.04
		SD in Original Scale	6.269
		Mean in Log Scale	4.073
		SD in Log Scale	0.106
		95% UTL 90% Coverage	72.05
		95% UPL (t)	70.88
		90% Percentile (z)	67.28
		95% Percentile (z)	69.93
		99% Percentile (z)	75.18
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	59
5% K-S Critical Value	N/A	SD	5.715
Data not Gamma Distributed at 5% Significance Level		SE of Mean	4.041
		95% KM UTL with 90% Coverage	70.01
Assuming Gamma Distribution		95% KM Chebyshev UPL	84.53
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	69.13
Mean	N/A	90% Percentile (z)	66.32
Median	N/A	95% Percentile (z)	68.4
SD	N/A	99% Percentile (z)	72.3
k star	N/A		
Theta star	N/A	**Gamma ROS Limits with Extrapolated Data**	
Nu star	N/A	95% Wilson Hilferty (WH) Approx. Gamma UPL	N/A
95% Percentile of Chisquare (2k)	N/A	95% Hawkins Wixley (HW) Approx. Gamma UPL	N/A
		95% WH Approx. Gamma UTL with 90% Coverag	N/A
90% Percentile	N/A	95% HW Approx. Gamma UTL with 90% Coverag	N/A
95% Percentile	N/A		
99% Percentile	N/A		
Note: DL/2 is not a recommended method.			

BACKGROUND STATISTICS

OS|UG/KG|BENZO(A)ANTHRACENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	3
Number of Distinct Detected Data	3	Number of Non-Detect Data	17
Warning: Data set has only 3 Detected Values.			
This is not enough to compute meaningful and reliable test statistics and estimates.			
No statistics will be produced!			
Tolerance Factor	1.926	Percent Non-Detects	85.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	52	Minimum Detected	3.951
Maximum Detected	66	Maximum Detected	4.19
Mean of Detected	59	Mean of Detected	4.073
SD of Detected	7	SD of Detected	0.119
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Warning: There are only 3 Distinct Detected Values in this data set			
The number of detected data may not be adequate enough to perform GOF tests, bootstrap, and ROS methods.			
Those methods will return a 'N/A' value on your output display!			
It is necessary to have 4 or more Distinct Values for bootstrap methods.			
However, results obtained using 4 to 9 distinct values may not be reliable.			
It is recommended to have 10 to 15 or more observations for accurate and meaningful results and estimates.			
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	1	Shapiro Wilk Test Statistic	0.999
5% Shapiro Wilk Critical Value	0.767	5% Shapiro Wilk Critical Value	0.767
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	113.5	Mean (Log Scale)	4.7
SD	25.12	SD (Log Scale)	0.281
95% UTL 90% Coverage	161.9	95% UTL 90% Coverage	188.7
95% UPL (t)	158	95% UPL (t)	180.7
90% Percentile (z)	145.7	90% Percentile (z)	157.5
95% Percentile (z)	154.8	95% Percentile (z)	174.4
99% Percentile (z)	171.9	99% Percentile (z)	211.1
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	59.04
		SD in Original Scale	6.269
		Mean in Log Scale	4.073
		SD in Log Scale	0.106
		95% UTL 90% Coverage	72.05
		95% UPL (t)	70.88
		90% Percentile (z)	67.28
		95% Percentile (z)	69.93
		99% Percentile (z)	75.18

BACKGROUND STATISTICS

Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	N/A	Data appear Normal at 5% Significance Level	
Theta Star	N/A		
nu star	N/A		
A-D Test Statistic	N/A	**Nonparametric Statistics**	
5% A-D Critical Value	N/A	Kaplan-Meier (KM) Method	
K-S Test Statistic	N/A	Mean	59
5% K-S Critical Value	N/A	SD	5.715
Data not Gamma Distributed at 5% Significance Level		SE of Mean	4.041
		95% KM UTL with 90% Coverage	70.01
Assuming Gamma Distribution		95% KM Chebyshev UPL	84.53
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	69.13
Mean	N/A	90% Percentile (z)	66.32
Median	N/A	95% Percentile (z)	68.4
SD	N/A	99% Percentile (z)	72.3
k star	N/A		
Theta star	N/A	**Gamma ROS Limits with Extrapolated Data**	
Nu star	N/A	95% Wilson Hilferty (WH) Approx. Gamma UPL	N/A
95% Percentile of Chisquare (2k)	N/A	95% Hawkins Wixley (HW) Approx. Gamma UPL	N/A
		95% WH Approx. Gamma UTL with 90% Coverag	N/A
90% Percentile	N/A	95% HW Approx. Gamma UTL with 90% Coverag	N/A
95% Percentile	N/A		
99% Percentile	N/A		

Note: DL/2 is not a recommended method.

OS|UG/KG|BENZO(A)PYRENE| (so_sb_ne)

General Statistics

Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21

Warning: This data set only has 0 observations!
Data set is too small to compute reliable and meaningful statistics and estimates!
The data set for variable OS|UG/KG|BENZO(A)PYRENE| (so_sb_ne) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

OS|UG/KG|BENZO(A)PYRENE| (so_sb_ne+pm)

General Statistics

Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45

Warning: This data set only has 0 observations!
Data set is too small to compute reliable and meaningful statistics and estimates!
The data set for variable OS|UG/KG|BENZO(A)PYRENE| (so_sb_ne+pm) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

BACKGROUND STATISTICS

OS|UG/KG|BENZO(A)PYRENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(A)PYRENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(A)PYRENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(A)PYRENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(A)PYRENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	9
Number of Distinct Detected Data	8	Number of Non-Detect Data	11
Tolerance Factor	1.926	Percent Non-Detects	55.00%
Number of Missing Values	22		
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	51	Minimum Detected	3.932
Maximum Detected	78	Maximum Detected	4.357
Mean of Detected	60.22	Mean of Detected	4.089
SD of Detected	8.686	SD of Detected	0.138
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Warning: There are only 9 Detected Values in this data			
Note: It should be noted that even though bootstrap may be performed on this data set			
the resulting calculations may not be reliable enough to draw conclusions			
It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.			

BACKGROUND STATISTICS

Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.913	Shapiro Wilk Test Statistic	0.938
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	95.23	Mean (Log Scale)	4.489
SD	34	SD (Log Scale)	0.386
95% UTL 90% Coverage	160.7	95% UTL 90% Coverage	187.4
95% UPL (t)	155.5	95% UPL (t)	176.5
90% Percentile (z)	138.8	90% Percentile (z)	146.1
95% Percentile (z)	151.2	95% Percentile (z)	168.1
99% Percentile (z)	174.3	99% Percentile (z)	218.7
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	60.02
		SD in Original Scale	6.544
		Mean in Log Scale	4.089
		SD in Log Scale	0.105
		95% UTL 90% Coverage	73.14
		95% UPL (t)	71.96
		90% Percentile (z)	68.33
		95% Percentile (z)	71
		99% Percentile (z)	76.29
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	38.43	Data appear Normal at 5% Significance Level	
Theta Star	1.567		
nu star	691.7		
A-D Test Statistic	0.29	**Nonparametric Statistics**	
5% A-D Critical Value	0.72	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.16	Mean	60.22
5% K-S Critical Value	0.279	SD	8.189
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.895
		95% KM UTL with 90% Coverage	75.99
Assuming Gamma Distribution		95% KM Chebyshev UPL	96.8
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	74.73
Mean	60.8	90% Percentile (z)	70.72
Median	61.82	95% Percentile (z)	73.69
SD	6.453	99% Percentile (z)	79.27
k star	81.9		
Theta star	0.742	**Gamma ROS Limits with Extrapolated Data**	
Nu star	3276	95% Wilson Hilferty (WH) Approx. Gamma UPL	72.53
95% Percentile of Chisquare (2k)	194.7	95% Hawkins Wixley (HW) Approx. Gamma UPL	72.58
		95% WH Approx. Gamma UTL with 90% Coverag	73.64
90% Percentile	69.55	95% HW Approx. Gamma UTL with 90% Coverag	73.7
95% Percentile	72.25		
99% Percentile	77.51		
Note: DL/2 is not a recommended method.			

BACKGROUND STATISTICS

OS|UG/KG|BENZO(A)PYRENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	9
Number of Distinct Detected Data	8	Number of Non-Detect Data	11
Tolerance Factor	1.926	Percent Non-Detects	55.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	51	Minimum Detected	3.932
Maximum Detected	78	Maximum Detected	4.357
Mean of Detected	60.22	Mean of Detected	4.089
SD of Detected	8.686	SD of Detected	0.138
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Warning: There are only 9 Detected Values in this data			
Note: It should be noted that even though bootstrap may be performed on this data set			
the resulting calculations may not be reliable enough to draw conclusions			
It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.			
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.913	Shapiro Wilk Test Statistic	0.938
5% Shapiro Wilk Critical Value	0.829	5% Shapiro Wilk Critical Value	0.829
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	95.23	Mean (Log Scale)	4.489
SD	34	SD (Log Scale)	0.386
95% UTL 90% Coverage	160.7	95% UTL 90% Coverage	187.4
95% UPL (t)	155.5	95% UPL (t)	176.5
90% Percentile (z)	138.8	90% Percentile (z)	146.1
95% Percentile (z)	151.2	95% Percentile (z)	168.1
99% Percentile (z)	174.3	99% Percentile (z)	218.7
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	60.02
		SD in Original Scale	6.544
		Mean in Log Scale	4.089
		SD in Log Scale	0.105
		95% UTL 90% Coverage	73.14
		95% UPL (t)	71.96
		90% Percentile (z)	68.33
		95% Percentile (z)	71
		99% Percentile (z)	76.29

Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	38.43	Data appear Normal at 5% Significance Level	
Theta Star	1.567		
nu star	691.7		
A-D Test Statistic	0.29	**Nonparametric Statistics**	
5% A-D Critical Value	0.72	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.16	Mean	60.22
5% K-S Critical Value	0.279	SD	8.189
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.895
		95% KM UTL with 90% Coverage	75.99
Assuming Gamma Distribution		95% KM Chebyshev UPL	96.8
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	74.73
Mean	60.8	90% Percentile (z)	70.72
Median	61.82	95% Percentile (z)	73.69
SD	6.453	99% Percentile (z)	79.27
k star	81.9		
Theta star	0.742	**Gamma ROS Limits with Extrapolated Data**	
Nu star	3276	95% Wilson Hilferty (WH) Approx. Gamma UPL	72.53
95% Percentile of Chisquare (2k)	194.7	95% Hawkins Wixley (HW) Approx. Gamma UPL	72.58
		95% WH Approx. Gamma UTL with 90% Coverag	73.64
90% Percentile	69.55	95% HW Approx. Gamma UTL with 90% Coverag	73.7
95% Percentile	72.25		
99% Percentile	77.51		
Note: DL/2 is not a recommended method.			
OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_ne+pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			

OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(B)FLUORANTHENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(B)FLUORANTHENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(B)FLUORANTHENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	10
Number of Distinct Detected Data	10	Number of Non-Detect Data	10
Tolerance Factor	1.926	Percent Non-Detects	50.00%
Number of Missing Values	22		
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	51	Minimum Detected	3.932
Maximum Detected	120	Maximum Detected	4.787
Mean of Detected	71.9	Mean of Detected	4.248
SD of Detected	19.32	SD of Detected	0.24
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.824	Shapiro Wilk Test Statistic	0.911
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	

BACKGROUND STATISTICS

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	97.83	Mean (Log Scale)	4.531
SD	30.88	SD (Log Scale)	0.34
95% UTL 90% Coverage	157.3	95% UTL 90% Coverage	178.8
95% UPL (t)	152.5	95% UPL (t)	169.6
90% Percentile (z)	137.4	90% Percentile (z)	143.6
95% Percentile (z)	148.6	95% Percentile (z)	162.5
99% Percentile (z)	169.7	99% Percentile (z)	204.9
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	71.13
		SD in Original Scale	14.47
		Mean in Log Scale	4.248
		SD in Log Scale	0.184
		95% UTL 90% Coverage	99.59
		95% UPL (t)	96.81
		90% Percentile (z)	88.48
		95% Percentile (z)	94.58
		99% Percentile (z)	107.2
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	12.8	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	5.615		
nu star	256.1		
A-D Test Statistic	0.467	**Nonparametric Statistics**	
5% A-D Critical Value	0.725	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.214	Mean	71.9
5% K-S Critical Value	0.266	SD	18.33
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	6.111
		95% KM UTL with 90% Coverage	107.2
Assuming Gamma Distribution		95% KM Chebyshev UPL	153.8
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	104.4
Mean	73.03	90% Percentile (z)	95.39
Median	75.03	95% Percentile (z)	102.1
SD	14.44	99% Percentile (z)	114.5
k star	25.64		
Theta star	2.848	**Gamma ROS Limits with Extrapolated Data**	
Nu star	1026	95% Wilson Hilferty (WH) Approx. Gamma UPL	98.97
95% Percentile of Chisquare (2k)	69	95% Hawkins Wixley (HW) Approx. Gamma UPL	99.07
		95% WH Approx. Gamma UTL with 90% Coverag	101.6
90% Percentile	92.02	95% HW Approx. Gamma UTL with 90% Coverag	101.7
95% Percentile	98.26		
99% Percentile	110.7		
Note: DL/2 is not a recommended method.			

BACKGROUND STATISTICS

OS|UG/KG|BENZO(B)FLUORANTHENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	10
Number of Distinct Detected Data	10	Number of Non-Detect Data	10
Tolerance Factor	1.926	Percent Non-Detects	50.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	51	Minimum Detected	3.932
Maximum Detected	120	Maximum Detected	4.787
Mean of Detected	71.9	Mean of Detected	4.248
SD of Detected	19.32	SD of Detected	0.24
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.824	Shapiro Wilk Test Statistic	0.911
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	97.83	Mean (Log Scale)	4.531
SD	30.88	SD (Log Scale)	0.34
95% UTL 90% Coverage	157.3	95% UTL 90% Coverage	178.8
95% UPL (t)	152.5	95% UPL (t)	169.6
90% Percentile (z)	137.4	90% Percentile (z)	143.6
95% Percentile (z)	148.6	95% Percentile (z)	162.5
99% Percentile (z)	169.7	99% Percentile (z)	204.9
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	71.13
		SD in Original Scale	14.47
		Mean in Log Scale	4.248
		SD in Log Scale	0.184
		95% UTL 90% Coverage	99.59
		95% UPL (t)	96.81
		90% Percentile (z)	88.48
		95% Percentile (z)	94.58
		99% Percentile (z)	107.2

BACKGROUND STATISTICS

Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	12.8	Data appear Gamma Distributed at 5% Significance Level	
Theta Star	5.615		
nu star	256.1		
A-D Test Statistic	0.467	**Nonparametric Statistics**	
5% A-D Critical Value	0.725	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.214	Mean	71.9
5% K-S Critical Value	0.266	SD	18.33
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	6.111
		95% KM UTL with 90% Coverage	107.2
Assuming Gamma Distribution		95% KM Chebyshev UPL	153.8
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	104.4
Mean	73.03	90% Percentile (z)	95.39
Median	75.03	95% Percentile (z)	102.1
SD	14.44	99% Percentile (z)	114.5
k star	25.64		
Theta star	2.848	**Gamma ROS Limits with Extrapolated Data**	
Nu star	1026	95% Wilson Hilferty (WH) Approx. Gamma UPL	$\boxed{98.97}$
95% Percentile of Chisquare (2k)	69	95% Hawkins Wixley (HW) Approx. Gamma UPL	99.07
		95% WH Approx. Gamma UTL with 90% Coverag	101.6
90% Percentile	92.02	95% HW Approx. Gamma UTL with 90% Coverage	101.7
95% Percentile	98.26		
99% Percentile	110.7		
Note: DL/2 is not a recommended method.			
OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_ne+pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			

BACKGROUND STATISTICS

OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(K)FLUORANTHENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|BENZO(K)FLUORANTHENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|BENZO(K)FLUORANTHENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	6
Number of Distinct Detected Data	5	Number of Non-Detect Data	14
Tolerance Factor	1.926	Percent Non-Detects	70.00%
Number of Missing Values	22		
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	52	Minimum Detected	3.951
Maximum Detected	69	Maximum Detected	4.234
Mean of Detected	57.83	Mean of Detected	4.053
SD of Detected	6.047	SD of Detected	0.1
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Warning: There are only 6 Detected Values in this data			
Note: It should be noted that even though bootstrap may be performed on this data set			
the resulting calculations may not be reliable enough to draw conclusions			
It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.			

Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.844	Shapiro Wilk Test Statistic	0.868
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	104.7	Mean (Log Scale)	4.592
SD	32.98	SD (Log Scale)	0.372
95% UTL 90% Coverage	168.2	95% UTL 90% Coverage	202.3
95% UPL (t)	163.2	95% UPL (t)	191
90% Percentile (z)	147	90% Percentile (z)	159.1
95% Percentile (z)	159	95% Percentile (z)	182.2
99% Percentile (z)	181.4	99% Percentile (z)	234.8
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	57.73
		SD in Original Scale	4.195
		Mean in Log Scale	4.053
		SD in Log Scale	0.071
		95% UTL 90% Coverage	66.02
		95% UPL (t)	65.3
		90% Percentile (z)	63.07
		95% Percentile (z)	64.72
		99% Percentile (z)	67.92
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	58.31	Data appear Normal at 5% Significance Level	
Theta Star	0.992		
nu star	699.7		
A-D Test Statistic	0.497	**Nonparametric Statistics**	
5% A-D Critical Value	0.696	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.309	Mean	57.83
5% K-S Critical Value	0.332	SD	5.52
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.469
		95% KM UTL with 90% Coverage	68.47
Assuming Gamma Distribution		95% KM Chebyshev UPL	82.49
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	67.61
Mean	58.19	90% Percentile (z)	64.91
Median	58.4	95% Percentile (z)	66.91
SD	4.089	99% Percentile (z)	70.68
k star	184.8		
Theta star	0.315	**Gamma ROS Limits with Extrapolated Data**	
Nu star	7393	95% Wilson Hilferty (WH) Approx. Gamma UPL	65.57
95% Percentile of Chisquare (2k)	415.5	95% Hawkins Wixley (HW) Approx. Gamma UPL	65.59
		95% WH Approx. Gamma UTL with 90% Coverag	66.25
90% Percentile	63.74	95% HW Approx. Gamma UTL with 90% Coverag	66.27
95% Percentile	65.41		
99% Percentile	68.61		
Note: DL/2 is not a recommended method.			

BACKGROUND STATISTICS

OS|UG/KG|BENZO(K)FLUORANTHENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	6
Number of Distinct Detected Data	5	Number of Non-Detect Data	14
Tolerance Factor	1.926	Percent Non-Detects	70.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	52	Minimum Detected	3.951
Maximum Detected	69	Maximum Detected	4.234
Mean of Detected	57.83	Mean of Detected	4.053
SD of Detected	6.047	SD of Detected	0.1
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Warning: There are only 6 Detected Values in this data			
Note: It should be noted that even though bootstrap may be performed on this data set			
the resulting calculations may not be reliable enough to draw conclusions			
It is recommended to have 10-15 or more distinct observations for accurate and meaningful results.			
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.844	Shapiro Wilk Test Statistic	0.868
5% Shapiro Wilk Critical Value	0.788	5% Shapiro Wilk Critical Value	0.788
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	104.7	Mean (Log Scale)	4.592
SD	32.98	SD (Log Scale)	0.372
95% UTL 90% Coverage	168.2	95% UTL 90% Coverage	202.3
95% UPL (t)	163.2	95% UPL (t)	191
90% Percentile (z)	147	90% Percentile (z)	159.1
95% Percentile (z)	159	95% Percentile (z)	182.2
99% Percentile (z)	181.4	99% Percentile (z)	234.8
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	57.73
		SD in Original Scale	4.195
		Mean in Log Scale	4.053
		SD in Log Scale	0.071
		95% UTL 90% Coverage	66.02
		95% UPL (t)	65.3
		90% Percentile (z)	63.07
		95% Percentile (z)	64.72
		99% Percentile (z)	67.92

BACKGROUND STATISTICS

Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	58.31	Data appear Normal at 5% Significance Level	
Theta Star	0.992		
nu star	699.7		
A-D Test Statistic	0.497	**Nonparametric Statistics**	
5% A-D Critical Value	0.696	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.309	Mean	57.83
5% K-S Critical Value	0.332	SD	5.52
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	2.469
		95% KM UTL with 90% Coverage	68.47
Assuming Gamma Distribution		95% KM Chebyshev UPL	82.49
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	67.61
Mean	58.19	90% Percentile (z)	64.91
Median	58.4	95% Percentile (z)	66.91
SD	4.089	99% Percentile (z)	70.68
k star	184.8		
Theta star	0.315	**Gamma ROS Limits with Extrapolated Data**	
Nu star	7393	95% Wilson Hilferty (WH) Approx. Gamma UPL	65.57
95% Percentile of Chisquare (2k)	415.5	95% Hawkins Wixley (HW) Approx. Gamma UPL	65.59
		95% WH Approx. Gamma UTL with 90% Coverag	66.25
90% Percentile	63.74	95% HW Approx. Gamma UTL with 90% Coverag	66.27
95% Percentile	65.41		
99% Percentile	68.61		
Note: DL/2 is not a recommended method.			

OS|UG/KG|CHRYSENE| (so_sb_ne)

General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21

Warning: This data set only has 0 observations!
Data set is too small to compute reliable and meaningful statistics and estimates!
The data set for variable OS|UG/KG|CHRYSENE| (so_sb_ne) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

OS|UG/KG|CHRYSENE| (so_sb_ne+pm)

General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45

Warning: This data set only has 0 observations!
Data set is too small to compute reliable and meaningful statistics and estimates!
The data set for variable OS|UG/KG|CHRYSENE| (so_sb_ne+pm) was not processed!

It is suggested to collect at least 8 to 10 observations before using these statistical methods!
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.

BACKGROUND STATISTICS

OS|UG/KG|CHRYSENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|CHRYSENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|CHRYSENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|CHRYSENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|CHRYSENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	10
Number of Distinct Detected Data	9	Number of Non-Detect Data	10
Tolerance Factor	1.926	Percent Non-Detects	50.00%
Number of Missing Values	22		
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	55	Minimum Detected	4.007
Maximum Detected	90	Maximum Detected	4.5
Mean of Detected	70.3	Mean of Detected	4.244
SD of Detected	9.866	SD of Detected	0.138
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommend		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.967	Shapiro Wilk Test Statistic	0.982
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
Data appear Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**	

BACKGROUND STATISTICS

Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	97.03	Mean (Log Scale)	4.529
SD	29.45	SD (Log Scale)	0.314
95% UTL 90% Coverage	153.7	95% UTL 90% Coverage	169.7
95% UPL (t)	149.2	95% UPL (t)	161.6
90% Percentile (z)	134.8	90% Percentile (z)	138.6
95% Percentile (z)	145.5	95% Percentile (z)	155.3
99% Percentile (z)	165.5	99% Percentile (z)	192.4
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	70.07
		SD in Original Scale	7.581
		Mean in Log Scale	4.244
		SD in Log Scale	0.107
		95% UTL 90% Coverage	85.58
		95% UPL (t)	84.19
		90% Percentile (z)	79.9
		95% Percentile (z)	83.05
		99% Percentile (z)	89.31
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	40.57	Data appear Normal at 5% Significance Level	
Theta Star	1.733		
nu star	811.3		
A-D Test Statistic	0.207	**Nonparametric Statistics**	
5% A-D Critical Value	0.724	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.182	Mean	70.3
5% K-S Critical Value	0.266	SD	9.36
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	3.12
		95% KM UTL with 90% Coverage	88.33
Assuming Gamma Distribution		95% KM Chebyshev UPL	112.1
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	86.88
Mean	71.01	90% Percentile (z)	82.3
Median	72.26	95% Percentile (z)	85.7
SD	7.527	99% Percentile (z)	92.07
k star	79.98		
Theta star	0.888	**Gamma ROS Limits with Extrapolated Data**	
Nu star	3199	95% Wilson Hilferty (WH) Approx. Gamma UPL	84.88
95% Percentile of Chisquare (2k)	190.5	95% Hawkins Wixley (HW) Approx. Gamma UPL	84.96
		95% WH Approx. Gamma UTL with 90% Coverag	86.19
90% Percentile	81.35	95% HW Approx. Gamma UTL with 90% Coverag	86.29
95% Percentile	84.55		
99% Percentile	90.77		
Note: DL/2 is not a recommended method.			

BACKGROUND STATISTICS

OS|UG/KG|CHRYSENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	10
Number of Distinct Detected Data	9	Number of Non-Detect Data	10
Tolerance Factor	1.926	Percent Non-Detects	50.00%
Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	55	Minimum Detected	4.007
Maximum Detected	90	Maximum Detected	4.5
Mean of Detected	70.3	Mean of Detected	4.244
SD of Detected	9.866	SD of Detected	0.138
Minimum Non-Detect	230	Minimum Non-Detect	5.438
Maximum Non-Detect	310	Maximum Non-Detect	5.737
Data with Multiple Detection Limits		**Single Detection Limit Scenario**	
Note: Data have multiple DLs - Use of KM Method is recommen		Number treated as Non-Detect with Single DL	20
For all methods (except KM, DL/2, and ROS Methods),		Number treated as Detected with Single DL	0
Observations < Largest ND are treated as NDs		Single DL Non-Detect Percentage	100.00%
Background Statistics			
Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.967	Shapiro Wilk Test Statistic	0.982
5% Shapiro Wilk Critical Value	0.842	5% Shapiro Wilk Critical Value	0.842
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Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
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SD	29.45	SD (Log Scale)	0.314
95% UTL 90% Coverage	153.7	95% UTL 90% Coverage	169.7
95% UPL (t)	149.2	95% UPL (t)	161.6
90% Percentile (z)	134.8	90% Percentile (z)	138.6
95% Percentile (z)	145.5	95% Percentile (z)	155.3
99% Percentile (z)	165.5	99% Percentile (z)	192.4
Maximum Likelihood Estimate(MLE) Method	N/A	Log ROS Method	
		Mean in Original Scale	70.07
		SD in Original Scale	7.581
		Mean in Log Scale	4.244
		SD in Log Scale	0.107
		95% UTL 90% Coverage	85.58
		95% UPL (t)	84.19
		90% Percentile (z)	79.9
		95% Percentile (z)	83.05
		99% Percentile (z)	89.31
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	40.57	Data appear Normal at 5% Significance Level	
Theta Star	1.733		
nu star	811.3		
A-D Test Statistic	0.207	**Nonparametric Statistics**	
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K-S Test Statistic	0.182	Mean	70.3
5% K-S Critical Value	0.266	SD	9.36
Data appear Gamma Distributed at 5% Significance Level		SE of Mean	3.12
		95% KM UTL with 90% Coverage	88.33

BACKGROUND STATISTICS

Assuming Gamma Distribution		95% KM Chebyshev UPL	112.1
Gamma ROS Statistics with Extrapolated Data		95% KM UPL (t)	86.88
Mean	71.01	90% Percentile (z)	82.3
Median	72.26	95% Percentile (z)	85.7
SD	7.527	99% Percentile (z)	92.07
k star	79.98		
Theta star	0.888	**Gamma ROS Limits with Extrapolated Data**	
Nu star	3199	95% Wilson Hilferty (WH) Approx. Gamma UPL	84.88
95% Percentile of Chisquare (2k)	190.5	95% Hawkins Wixley (HW) Approx. Gamma UPL	84.96
		95% WH Approx. Gamma UTL with 90% Coverag	86.19
90% Percentile	81.35	95% HW Approx. Gamma UTL with 90% Coverag	86.29
95% Percentile	84.55		
99% Percentile	90.77		
Note: DL/2 is not a recommended method.			
OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_ne+pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			

OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_ne+pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	0
Number of Distinct Detected Data	0	Number of Non-Detect Data	20
Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!			
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!			
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_ne+pm) was not processed!			
OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_pm)			
General Statistics			
Number of Valid Data	20	Number of Detected Data	0
Number of Distinct Detected Data	0	Number of Non-Detect Data	20
Warning: All observations are Non-Detects (NDs), therefore all statistics and estimates should also be NDs!			
Specifically, sample mean, UCLs, UPLs, and other statistics are also NDs lying below the largest detection limit!			
The Project Team may decide to use alternative site specific values to estimate environmental parameters (e.g., EPC, BTV).			
The data set for variable OS|UG/KG|DIBENZO(A,H)ANTHRACENE| (so_ss_pm) was not processed!			

BACKGROUND STATISTICS

OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	21
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_ne+pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	45
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_ne+pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_pm)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	24
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_sb_pm) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			
OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_ne)			
General Statistics			
Total Number of Observations	0	Number of Distinct Observations	0
Tolerance Factor	N/A	Number of Missing Values	22
Warning: This data set only has 0 observations!			
Data set is too small to compute reliable and meaningful statistics and estimates!			
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_ne) was not processed!			
It is suggested to collect at least 8 to 10 observations before using these statistical methods!			
If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.			

BACKGROUND STATISTICS

OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_ne+pm)													
General Statistics													
Number of Valid Data					20	Number of Detected Data					1		
Number of Distinct Detected Data					1	Number of Non-Detect Data					19		
Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_ne+pm) was not processed!													
OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_pm)													
General Statistics													
Number of Valid Data					20	Number of Detected Data					1		
Number of Distinct Detected Data					1	Number of Non-Detect Data					19		
Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!													
It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).													
The data set for variable OS|UG/KG|INDENO(1,2,3-CD)PYRENE| (so_ss_pm) was not processed!													

ATTACHMENT C

PRG CALCULATIONS FOR GROUNDWATER

RISK ASSESSMENT SPREADSHEET - CLEANUP LEVELS (PAGE 1 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: CHILD RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

THIS SPREADSHEET CALCULATES CLEANUP LEVELS FOR EXPOSURES TO GROUNDWATER
VIA INGESTION, DERMAL CONTACT, AND INHALATION

RELEVANT EQUATIONS:

$$PRG_{GW} = \frac{TCR}{Intake_{ing} \cdot CSF_{oral} + Intake_{derm} \cdot CSF_{derm} + Intake_{inh} \cdot IUR}$$

$$PRG_{GW} = \frac{THI}{\left(\frac{Intake_{ing}}{RfD_{oral}}\right) + \left(\frac{Intake_{derm}}{RfD_{derm}}\right) + \left(\frac{Intake_{inh}}{RfC}\right)}$$

$$Intake_{ing} = \frac{IR \times EF \times ED}{BW \times AT}$$

$$Intake_{derm} = \frac{DA_{Event} \times EV \times ED \times EF \times SA}{BW \times AT}$$

$$Intake_{inh} = \frac{K \times ET \times EF \times ED}{AT \times 24 \text{ hrs/day}}$$

For Inorganics DAevent = Kp x CF x tevent

For Organics

$$\text{If tevent} \leq t^*, \text{ then DAevent} = 2 \times Kp \times FA \times CF \times \sqrt{\frac{6 \times tau \div tevent}{\pi}}$$

$$\text{If tevent} > t^*, \text{ then DAevent} = Kp \times FA \times CF \times \left[\frac{tevent}{1+B} + 2 \times tau \times \left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$$

Where:

Parameter	Child	Definition
TCR = :	1.0E-06	Target Cancer Risk
THI = :	1	Target Hazard Index
IR = :	1	Ingestion rate (L/day)
SA = :	6,600	Skin surface available for contact (cm^2)
DAevent = :	Chemical Specific	Absorbed dose per event (mg/cm^2-event)
EV = :	1	Event frequency (events/days)
EF = :	350	Exposure frequency (days/year)
ED = :	6	Exposure duration (years)
ET = :	24	Exposure time (hrs/day)
BW = :	15	Body weight (kg)
ATc = :	25,550	Averaging time for carcinogenic exposures (days)
ATn = :	2,190	Averaging time for noncarcinogenic exposures (days)
CF = :	0.001	Conversion Factor (L/m^3)
Kp =:	Chemical Specific	Permeability coefficient (cm/hr)
Cw = :	Chemical Specific	Concentration of chemical in water (mg/L)
tevent = :	1	duration of event (hr/event)
K = :	0.5	Volatilization Factor (L/m3)
tau = :	Chemical Specific	Lag time (hr)
t* = :	Chemical Specific	Time it takes to reach steady state (hr)
B = :	Chemical Specific	Dimensionless constant
FA = :	Chemical Specific	Fraction absorbed (dimensionless)

RISK ASSESSMENT SPREADSHEET - DIRECT DERMAL CONTACT WITH GROUNDWATER (PAGE 2 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: CHILD RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

CHEMICAL	Organic or Inorganic	Estimated Kp (cm/hr)	FA	tau-event (hr)	B	t* (hr)	DAevent (L/cm^2 - event)
Arsenic	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	1.00E-06
Cobalt	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	1.00E-06
Iron	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	1.00E-06
Manganese	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	1.00E-06

CHEMICAL	Cancer Slope Factor			Reference Dose			Volatile
	Oral $(mg/kg/day)^{-1}$	Dermal $(mg/kg/day)^{-1}$	Inhalation $(ug/m^3)^{-1}$	Oral (mg/kg/day)	Dermal (mg/kg/day)	Inhalation (mg/m^3)	Yes or No
Arsenic	1.50E+00	1.50E+00	4.30E-03	3.00E-04	3.00E-04	1.50E-05	No
Cobalt	NA	NA	9.00E-03	3.00E-04	3.00E-04	6.00E-06	No
Iron	NA	NA	NA	7.00E-01	7.00E-01	NA	No
Manganese	NA	NA	NA	2.40E-02	9.60E-04	5.00E-05	No

CHEMICAL	Carcinogenic Intakes			Noncarcinogenic Intakes		
	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)
Arsenic	5.48E-03	3.62E-05	0.00E+00	6.39E-02	4.22E-04	0.00E+00
Cobalt	5.48E-03	3.62E-05	0.00E+00	6.39E-02	4.22E-04	0.00E+00
Iron	5.48E-03	3.62E-05	0.00E+00	6.39E-02	4.22E-04	0.00E+00
Manganese	5.48E-03	3.62E-05	0.00E+00	6.39E-02	4.22E-04	0.00E+00

RISK ASSESSMENT SPREADSHEET - DIRECT DERMAL CONTACT WITH GROUNDWATER (PAGE 3 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: CHILD RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

CHEMICAL	Groundwater Concentration	
	Carcinogenic (ug/L)	Noncarcinogenic (ug/L)
Arsenic	0.12	4.7
Cobalt	NA	4.7
Iron	NA	10878
Manganese	NA	322

RISK ASSESSMENT SPREADSHEET - CLEANUP LEVELS (PAGE 1 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: ADULT RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

THIS SPREADSHEET CALCULATES CLEANUP LEVELS FOR EXPOSURES TO GROUNDWATER
VIA INGESTION, DERMAL CONTACT, AND INHALATION

RELEVANT EQUATIONS:

$$PRG_{GW} = \frac{TCR}{Intake_{ing} \cdot CSF_{oral} + Intake_{derm} \cdot CSF_{derm} + Intake_{inh} \cdot IUR}$$

$$PRG_{GW} = \frac{THI}{\left(\frac{Intake_{ing}}{RfD_{oral}}\right) + \left(\frac{Intake_{derm}}{RfD_{derm}}\right) + \left(\frac{Intake_{inh}}{RfC}\right)}$$

$$Intake_{ing} = \frac{IR \times EF \times ED}{BW \times AT}$$

$$Intake_{derm} = \frac{DA_{Event} \times EV \times ED \times EF \times SA}{BW \times AT}$$

$$Intake_{inh} = \frac{K \times ET \times EF \times ED}{AT \times 24 \text{ hrs/day}}$$

For Inorganics DAevent = Kp x CF x tevent

For Organics: If $tevent \leq t^*$, then $DAevent = 2 \times Kp \times FA \times CF \times \sqrt{\frac{6 \times tau \div tevent}{\pi}}$

If $tevent > t^*$, then $DAevent = Kp \times FA \times CF \times \left[\frac{tevent}{1+B} + 2 \times tau \times \left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$

Where:

Parameter	Value	Definition
TCR = :	1.0E-06	Target Cancer Risk
THI = :	1	Target Hazard Index
IR = :	2	Ingestion rate (L/day)
SA = :	18,000	Skin surface available for contact (cm^2)
DAevent = :	Chemical Specific	Absorbed dose per event (mg/cm^2-event)
EV = :	1	Event frequency (events/days)
EF = :	350	Exposure frequency (days/year)
ED = :	24	Exposure duration (years)
ET = :	24	Exposure time (hrs/day)
BW = :	70	Body weight (kg)
ATc = :	25,550	Averaging time for carcinogenic exposures (days)
ATn = :	8,760	Averaging time for noncarcinogenic exposures (days)
CF = :	0.001	Conversion Factor (L/m^3)
Kp =:	Chemical Specific	Permeability coefficient (cm/hr)
Cw = :	Chemical Specific	Concentration of chemical in water (mg/L)
tevent = :	0.58	duration of event (hr/event)
K = :	0.5	Volatilization Factor (L/m3)
tau = :	Chemical Specific	Lag time (hr)
t* = :	Chemical Specific	Time it takes to reach steady state (hr)
B = :	Chemical Specific	Dimensionless constant
FA = :	Chemical Specific	Fraction absorbed (dimensionless)

RISK ASSESSMENT SPREADSHEET - DIRECT DERMAL CONTACT WITH GROUNDWATER (PAGE 2 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: ADULT RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

CHEMICAL	Organic or Inorganic	Estimated Kp (cm/hr)	FA	tau-event (hr)	B	t* (hr)	DAevent (L/cm^2 - event)
Cobalt	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	5.80E-07
Manganese	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	5.80E-07

CHEMICAL	Cancer Slope Factor			Reference Dose			Volatile Yes or No
	Oral $(mg/kg/day)^{-1}$	Dermal $(mg/kg/day)^{-1}$	Inhalation $(ug/m^3)^{-1}$	Oral (mg/kg/day)	Dermal (mg/kg/day)	Inhalation (mg/m^3)	
Cobalt	NA	NA	9.00E-03	3.00E-04	3.00E-04	6.00E-06	No
Manganese	NA	NA	NA	2.40E-02	9.60E-04	5.00E-05	No

CHEMICAL	Carcinogenic Intakes			Noncarcinogenic Intakes		
	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)
Cobalt	9.39E-03	4.90E-05	0.00E+00	2.74E-02	1.43E-04	0.00E+00
Manganese	9.39E-03	4.90E-05	0.00E+00	2.74E-02	1.43E-04	0.00E+00

RISK ASSESSMENT SPREADSHEET - DIRECT DERMAL CONTACT WITH GROUNDWATER (PAGE 3 OF 3)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: ADULT RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

CHEMICAL	Groundwater Concentration	
	Carcinogenic (ug/L)	Noncarcinogenic (ug/L)
Cobalt	NA	11
Manganese	NA	775

RISK ASSESSMENT SPREADSHEET - CLEANUP LEVELS (PAGE 1 OF 2)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: LIFELONG RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

THIS SPREADSHEET CALCULATES CLEANUP LEVELS FOR EXPOSURES TO GROUNDWATER
VIA INGESTION, DERMAL CONTACT, AND INHALATION

RELEVANT EQUATIONS:

$$PRG_{GW} = \frac{TCR}{Intake_{ing} \cdot CSF_{oral} + Intake_{derm} \cdot CSF_{derm} + Intake_{inh} \cdot IUR}$$

$$PRG_{GW} = \frac{THI}{\left(\frac{Intake_{ing}}{RfD_{oral}}\right) + \left(\frac{Intake_{derm}}{RfD_{derm}}\right) + \left(\frac{Intake_{inh}}{RfC}\right)}$$

$$Intake_{ing} = \frac{IR \times EF \times ED}{BW \times AT}$$

$$Intake_{derm} = \frac{DA_{Event} \times EV \times ED \times EF \times SA}{BW \times AT}$$

$$Intake_{inh} = \frac{K \times ET \times EF \times ED}{AT \times 24\ hrs/day}$$

For Inorganics DAevent = Kp x CF x tevent

For Organics If $tevent \leq t^*$, then $DAevent = 2 \times Kp \times FA \times CF \times \sqrt{\frac{6 \times tau \div tevent}{\pi}}$

If $tevent > t^*$, then $DAevent = Kp \times FA \times CF \times \left[\frac{tevent}{1+B} + 2 \times tau \times \left(\frac{1+3B+3B^2}{(1+B)^2}\right)\right]$

Where:

Parameter	Child	Adult	Definition
TCR = :	1.0E-06	1.0E-06	Target Cancer Risk
THI = :	1	1	Target Hazard Index
IR = :	1	2	Ingestion rate (L/day)
SA = :	6,600	18,000	Skin surface available for contact (cm^2)
DAevent = :	Chemical Specific		Absorbed dose per event (mg/cm^2-event)
EV = :	1	1	Event frequency (events/days)
EF = :	350	350	Exposure frequency (days/year)
ED = :	6	24	Exposure duration (years)
ET = :	24	24	Exposure time (hrs/day)
BW = :	15	70	Body weight (kg)
ATc = :	25,550	25,550	Averaging time for carcinogenic exposures (days)
ATn = :	2,190	8,760	Averaging time for noncarcinogenic exposures (days)
CF = :	0.001	0.001	Conversion Factor (L/m^3)
Kp =:	Chemical Specific		Permeability coefficient (cm/hr)
Cw = :	Chemical Specific		Concentration of chemical in water (mg/L)
tevent = :	1	0.58	duration of event (hr/event)
K = :	0.5	0.5	Volatilization Factor (L/m3)
tau = :	Chemical Specific		Lag time (hr)
t* = :	Chemical Specific		Time it takes to reach steady state (hr)
B = :	Chemical Specific		Dimensionless constant
FA = :	Chemical Specific		Fraction absorbed (dimensionless)

RISK ASSESSMENT SPREADSHEET - DIRECT DERMAL CONTACT WITH GROUNDWATER (PAGE 2 OF 2)

SITE NAME: NAVAL STATION NEWPORT, MIDDLETOWN, RHODE ISLAND
LOCATION: TANK FARM 5
EXPOSURE SCENARIO: LIFELONG RESIDENTS
MEDIA: GROUNDWATER
DATE: NOVEMBER 12, 2012

CHEMICAL	Organic or Inorganic	Estimated Kp (cm/hr)	FA	tau-event (hr)	B	t* (hr)	DAevent (L/cm^2- event)	
							Child	Adult
Arsenic	Inorganic	1.00E-03	1.00E+00	NA	NA	NA	1.00E-06	1.00E-06

CHEMICAL	Cancer Slope Factor			Reference Dose			Volatile
	Oral $(mg/kg/day)^{-1}$	Dermal $(mg/kg/day)^{-1}$	Inhalation $(ug/m^3)^{-1}$	Oral (mg/kg/day)	Dermal (mg/kg/day)	Inhalation (mg/m^3)	Yes or No
Arsenic	1.50E+00	1.50E+00	4.30E-03	3.00E-04	3.00E-04	1.50E-05	No

CHEMICAL	Carcinogenic Intakes			Noncarcinogenic Intakes		
	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)	Ingestion (L/kg/day)	Dermal (L/kg/day)	Inhalation (L/m^3)
Arsenic	1.49E-02	1.21E-04	0.00E+00	6.39E-02	4.22E-04	0.00E+00

CHEMICAL	Groundwater Concentration	
	Carcinogenic (ug/L)	Noncarcinogenic (ug/L)
Arsenic	0.044	4.7

APPENDIX C

COST AND VOLUME ESTIMATES FOR REMEDIAL ALTERNATIVES

C1 – COST ESTIMATES FOR SOIL ALTERNATIVES

CLIENT: NAVSTA NEWPORT			JOB NUMBER: 112G02698	
SUBJECT: Site 13 Tank Farm 5 DU 5-1 FS - Basis of Cost Estimates for Soil Alternatives				
BASED ON: DGA Report			DRAWING NUMBER:	
BY: MJH Date: 07-2012	Revised Date:	4/24/13	APPROVED BY:	DATE:

SOIL ALTERNATIVES

Alternative SO1: No Action

No action; no costs associated.

CLIENT: **NAVSTA NEWPORT**		JOB NUMBER: 112G02698	
SUBJECT: Site 13 Tank Farm 5 DU 5-1 FS - Basis of Cost Estimates for Soil Alternatives			
BASED ON: DGA Report		DRAWING NUMBER:	
BY: MJH Date: 07-2012	Revised Date: 4/24/13	APPROVED BY:	DATE:

Alternative SO2: Land Use Controls (LUCs) and Inspections, Long-Term Groundwater Monitoring, Fencing and Signs.

Capital Cost

Refer to capital cost detail sheet for itemized costs.

Annual Cost

Yearly Site Inspection/Visit for LUCs implementation (1 person)

Assume out of town travel to site, site interior and perimeter walk, interview of key personnel.

Rental Car for 1 day	$100
1 person @ $75.00 per hour for one 12 hour day	$900
Report	$1,200
Misc	$150
	$2,350

Groundwater Monitoring *(note, GW monitoring would not be duplicated if required for a GW alternative.)*

Labor & Materials

Assume 2 days to sample with 2 people, local plus 1 day of preparations

2 people @ $75.00 per hour for one 10 hour day =	$1,500
Data eval & Draft report @ $75.00 per hour for 44 hours =	$3,300
IDW disposal =	$150
Comment resolution, & Final 40 hours =	$3,000
Misc supplies, copying, etc. =	$5,000
	$12,950

Analytical

Analyze 4 groundwater samples for metals

type	cost each	number	total
metals	$130	4	$520
			$520
40% QA/QC & Data Validation			$208
			$728

Five year cost

5-year review:

Assumes that this is a component of the Five-year review for all the IRP sites at NAVSTA Newport
Summarize inspections, describe findings, update history and regulatory information
Publish report as a part of the Five year review for IRP sites.
Item Cost = $23,000

TOTAL ANNUAL COST: $16,028
TOTAL 5-YEAR COST: $23,000

CLIENT: NAVSTA NEWPORT		JOB NUMBER: 112G02698	
SUBJECT: Site 13 Tank Farm 5 DU 5-1 FS - Basis of Cost Estimates for Soil Alternatives			
BASED ON: DGA Report		DRAWING NUMBER:	
BY: MJH Date: 07-2012	Revised Date: 4/24/13	APPROVED BY:	DATE:

Alternative SO3: Cover at Target Areas, LUCs and Monitoring

Capital Cost

Refer to capital cost sheet for itemized costs for preperation of work plans, health and safety plans, specs, wetland restoration plan, LUC RD document, LTM work Plan, and construction costs.

Pre-Design Investigation

Additional surface soil sampling to confirm the extent of arsenic contamination for cap design. Assume an additional 40 surface soil samples will be collected in a grid pattern along the extent of the cap as shown on Figure 4-2 of this FS.

PDI Work Plan/UFP SAP

2 people @ $75.00 per hour for 8 hour preparatory meeting =	$1,200
analytical specifications, 1 chemist, 16 hours =	$1,200
SAP preparation/review/revise, 2 people @ $75.00 per hour 80 hours =	$12,000
miscelaneous supplies, coppies, etc. =	$500
	$14,900

PDI Investigation

Collection of 40 surface samples for metals by XRF (25 % for lab confirmation)

Labor and Materials

2 people @ $75.00 per hour for 10 hours per day for 4 days =	$6,000
truck for 3 days =	$300
report @ $75.00 per hour for 80 hours =	$6,000
IDW disposal =	$450
PDI Report Production =	$750
Submit Draft, Comment resolution, Revision, Final =	$3,000
Misc supplies, copying, etc. =	$4,000
	$20,500

Analytical

Analyze 10 soil samples for metals (plus QC)

type	cost each	number	total
metals	$130	12	$1,560
			$1,560
40% QA/QC & Data Validation			$624
			$2,184

Annual Cost

Yearly Site Inspection/Visit for LUCs implementation (1 person)

Assume out of town travel to site, site interior and perimeter walk, interview of key personnel.

Rental Car for 1 day	$100
1 person @ $75.00 per hour for one 12 hour day	$900
Report	$1,200
Misc	$150
	$2,350

CLIENT: NAVSTA NEWPORT		JOB NUMBER: 112G02698	
SUBJECT: Site 13 Tank Farm 5 DU 5-1 FS - Basis of Cost Estimates for Soil Alternatives			
BASED ON: DGA Report		DRAWING NUMBER:	
BY: MJH Date: 07-2012	Revised Date: 4/24/13	APPROVED BY:	DATE:

Alternative SO3 (con't): Cover at Select Exceedance Areas, LUCs, and Monitoring

Annual Cost (con't)

Groundwater Monitoring *(note, GW monitoring would not be duplicated if required for a GW alternative.)*

Labor & Materials

Assume 2 days to sample with 2 people, local plus 1 day of preparations

2 people @ $75.00 per hour for one 10 hour day =	$1,500
Data eval & Draft report @ $75.00 per hour for 44 hours =	$3,300
IDW disposal =	$150
Comment resolution, & Final 40 hours =	$3,000
Misc supplies, copying, etc. =	$5,000
	$12,950

Analytical

Analyze 4 groundwater samples for metals

type	cost each	number	total
metals	$130	4	$520
			$520
40% QA/QC & Data Validation			$208
			$728

Five year cost

5-year review:

Assumes that this is a component of the Five-year review for all the IRP sites at NAVSTA Newport
Summarize inspections, describe findings, update history and regulatory information
Publish report as a part of the Five year review for IRP sites.

Item Cost = $23,000

TABLE C1-1
Cost Backup - Capital Costs
Soil Alternative SO-1
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal	Source
NO ACTION							$0	$0	$0	$0	$0	
. **Subtotal**							$0	$0	$0	$0	$0	
Overhead on Labor Cost @ 30%									$0		$0	
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$0	$0	$0	$0	$0	
Tax on Materials and Equipment Cost @ 6%								$0		$0	$0	
Total Direct Cost							$0	$0	$0	$0	$0	
Indirects on Total Direct Cost @ 0%											$0	
Profit on Total Direct Cost @ 10%											$0	
Subtotal											$0	
Health & Safety Monitoring @ 0%											$0	
Total Field Cost											$0	
Contingency on Total Field Costs @ 10%											$0	
Engineering on Total Field Cost @ 0%											$0	
TOTAL CAPITAL COST											**$0**	

TABLE C1-2
Cost Backup - Annual and Five - Year Costs
Soil Alternative SO-1 - No Action
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Item	Item Cost Every 5 Years	Notes
No Action	$0	No Action
Five Year Review	$0	Not applicable
Subtotal	$0	
Contingency @ 10%	$0	
TOTAL	**$0**	

TABLE C1-3
Cost Backup - Present Worth Analysis
Soil Alternative SO-1 - No Action
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$0		$0	1.000	$0
1			$0	0.980	$0
2			$0	0.961	$0
3			$0	0.942	$0
4			$0	0.924	$0
5		$0	$0	0.906	$0
6			$0	0.888	$0
7			$0	0.871	$0
8			$0	0.853	$0
9			$0	0.837	$0
10		$0	$0	0.820	$0
11			$0	0.804	$0
12			$0	0.788	$0
13			$0	0.773	$0
14			$0	0.758	$0
15		$0	$0	0.743	$0
16			$0	0.728	$0
17			$0	0.714	$0
18			$0	0.700	$0
19			$0	0.686	$0
20		$0	$0	0.673	$0
21			$0	0.660	$0
22			$0	0.647	$0
23			$0	0.634	$0
24			$0	0.622	$0
25		$0	$0	0.610	$0
26			$0	0.598	$0
27			$0	0.586	$0
28			$0	0.574	$0
29			$0	0.563	$0
30		$0	$0	0.552	$0
				TOTAL PRESENT WORTH	**$0**

TABLE C1-4
Cost Backup - Capital Costs
Soil Alternative SO-2 - Fencing, Land Use Controls and Monitoring
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

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			Unit Cost				Extended Cost				
Item	Quantity	Unit	Subcontract	Material	Labor	Equipment	Subcontract	Material	Labor	Equipment	Subtotal
1 PROJECT PLANNING & DOCUMENTS											
1.1 Prepare LUC RD Documents	1	ls			$9,100.00		$0	$0	$9,100	$0	$9,100
1.2 Prepare LTM Plan (UFP SAP and LTMP)	1	ls			$17,140.00		$0	$0	$17,140	$0	$17,140
2 FENCE INSTALLATION											
2.1 Clearing	1	ls	$5,000.00				$5,000	$0	$0	$0	$5,000
2.2 Fence Install	950	ft	$9.00				$8,550	$0	$0	$0	$8,550
2.3 Warning Signs Similar to Existing	4	ea	$350.00				$1,400	$0	$0	$0	$1,400
. **Subtotal**							$14,950	$0	$26,240	$0	$41,190
Overhead on Labor Cost @ 30%									$7,872		$7,872
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$1,495	$0	$2,624	$0	$4,119
Tax on Materials and Equipment Cost @ 6%								$0		$0	$0
Total Direct Cost							$1,495	$0	$10,496	$0	$53,181
Indirects on Total Direct Cost @ 0%											$0
Profit on Total Direct Cost @ 10%											$5,318
Subtotal											$58,499
Health & Safety Monitoring @ 0%											$0
Total Field Cost											$58,499
Contingency on Total Field Costs @ 10%											$5,850
Engineering on Total Field Cost @ 0%											$0
TOTAL CAPITAL COST											**$64,349**

TABLE C1-5
Cost Backup - Annual and Five - Year Costs
Soil Alternative SO-2 - Land Use Controls and Monitoring
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Item	Item Cost Annual	Item Cost every 5 years	Notes
LUCs Inspection & Report	$2,350		One-day visit to verify LUCs with Report
Five -Year Review		$23,000	Assumes that this is a component of the NAVSTA Newport IRP Five Year Reivew
LTM	$13,678		
Subtotal	$16,028	$23,000	
Contingency @ 10%	$1,603	$2,300	
TOTAL	**$17,631**	**$25,300**	Cost with contingency is used for Present Worth Analysis.

TABLE C1-6
Cost Backup - Present Worth Analysis
Soil Alternative SO-2 - Land Use Controls and Monitoring
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$64,349		$64,349	1.000	$64,349
1		$17,631	$17,631	0.980	$17,285
2		$17,631	$17,631	0.961	$16,946
3		$17,631	$17,631	0.942	$16,614
4		$17,631	$17,631	0.924	$16,288
5		$42,931	$42,931	0.906	$38,884
6		$17,631	$17,631	0.888	$15,656
7		$17,631	$17,631	0.871	$15,349
8		$17,631	$17,631	0.853	$15,048
9		$17,631	$17,631	0.837	$14,753
10		$42,931	$42,931	0.820	$35,218
11		$17,631	$17,631	0.804	$14,180
12		$17,631	$17,631	0.788	$13,902
13		$17,631	$17,631	0.773	$13,629
14		$17,631	$17,631	0.758	$13,362
15		$42,931	$42,931	0.743	$31,898
16		$17,631	$17,631	0.728	$12,843
17		$17,631	$17,631	0.714	$12,591
18		$17,631	$17,631	0.700	$12,344
19		$17,631	$17,631	0.686	$12,102
20		$42,931	$42,931	0.673	$28,891
21		$17,631	$17,631	0.660	$11,632
22		$17,631	$17,631	0.647	$11,404
23		$17,631	$17,631	0.634	$11,181
24		$17,631	$17,631	0.622	$10,961
25		$42,931	$42,931	0.610	$26,168
26		$17,631	$17,631	0.598	$10,536
27		$17,631	$17,631	0.586	$10,329
28		$17,631	$17,631	0.574	$10,127
29		$17,631	$17,631	0.563	$9,928
30		$42,931	$42,931	0.552	$23,701
				TOTAL PRESENT WORTH	**$568,099**

TABLE C1-7
Cost Backup - Capital Costs
Soil Alternative SO3: Cover Surface Soils Exceeding Criteria, LUCs, and Inspections
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
1 DOUMENTS AND CONSTRUCTION PLANNING											
1.1 Prepare RAWP, HASP, Specs,	240	hr			$75.00		$0	$0	$18,000	$0	$18,000
1.2 Weltand restoration plan	75	hr			$75.00		$0	$0	$5,625	$0	$5,625
1.3 LUC RD	1	ls			$9,100.00		$0	$0	$9,100	$0	$9,100
1.4 LTM Work Plan	1	ls			$17,140.00		$17,140	$0	$0	$0	$17,140
2 PRE-DESIGN INVESTIGATION											
2.1 SAP preparation	1	ls			$14,900.00		$0	$0	$14,900	$0	$14,900
2.2 Sampling labor and materials	1	ls		$4,000.00	$16,500.00		$0	$4,000	$16,500	$0	$20,500
2.3 Analytical analysis of soil samples	1	ls	$2,184.00				$2,184	$0	$0	$0	$2,184
3 MOBILIZATION AND DEMOBILIZATION											
3.1 Equipment Mobilization/Demobilization	4	ea			$177.00	$610.00	$0	$0	$708	$2,440	$3,148
4 FIELD SUPPORT AND SITE ACCESS											
4.1 Storage Trailer	1	mo				$92.50	$0	$0	$0	$93	$93
4.2 Survey Support	2	day	$1,075.00				$2,150	$0	$0	$0	$2,150
4.3 Site Superintendent	14	day		$206.00	$384.64		$0	$2,884	$5,385	$0	$8,269
4.4 Site Health & Safety and QA/QC	14	day		$206.00	$307.68		$0	$2,884	$4,308	$0	$7,192
4.5 Underground Utility Clearance	1	ls	$10,525.00				$10,525	$0	$0	$0	$10,525
5 DECONTAMINATION											
5.1 Decontamination Services	1.0	ls		$1,220.00	$2,245.00	$1,550.00	$0	$1,220	$2,245	$1,550	$5,015
6 SITE PREPARATION											
6.1 Back-Hoe	2	day			$355.20	$1,784.00	$0	$0	$710	$3,568	$4,278
6.2 Skid-Steer	2	day			$333.40	$291.00	$0	$0	$667	$582	$1,249
6.3 Site Labor, (3 laborers)	2	day			$264.80		$0	$0	$530	$0	$530
6.4 Clear & Chip Brush	2	day			$333.40	$689.60	$0	$0	$667	$1,379	$2,046
6.5 Grub Stumps and Chip	1	day				$190.90	$0	$0	$0	$191	$191
6.6 Off-Site Disposal of Chipped Brush	10	ton	$45.00				$450	$0	$0	$0	$450
7 PLACE COVER AND SINAGE											
7.1 Back-Hoe	4	day			$355.20	$1,784.00	$0	$0	$1,421	$7,136	$8,557
7.3 Site Labor, (3 laborers)	4	day			$264.80		$0	$0	$1,059	$0	$1,059
7.4 Backfill, common fill	702	cy		$17.96			$0	$12,608	$0	$0	$12,608
7.5 Backfill, vegetative soil	842	cy		$27.67			$0	$23,298	$0	$0	$23,298
7.6 Revegetation, seed	45.4	msf	$77.50				$3,519	$0	$0	$0	$3,519
7.7 Dozer, 300 hp	4	day			$343.90	$1,592.00	$0	$0	$1,376	$6,368	$7,744
7.8 Compactor, 120 hp	4	day			$343.90	$560.60	$0	$0	$1,376	$2,242	$3,618
7.9 Install Sinage	4	ea		$350.00			$0	$1,400	$0	$0	$1,400
9 POST CONSTRUCTION COST											
9.1 Contractor Completion Report	150	hr			$75.00		$0	$0	$11,250	$0	$11,250
9.2 Remedial Action Closeout Report	200	hr			$75.00		$0	$0	$15,000	$0	$15,000
Subtotal							$35,968	$48,294	$110,825	$25,549	$220,636
Overhead on Labor Cost @ 30%									$33,248		$33,248
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$3,597	$4,829	$11,083	$2,555	$22,064
Tax on Materials and Equipment Cost @ 7.0%								$3,381		$1,788	$5,169

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
Total Direct Cost							$39,564	$56,504	$155,155	$29,892	$281,116
Indirects on Total Direct Cost @ 25%		(excluding transportation and disposal cost)									$70,279.01
Profit on Total Direct Cost @ 10%											$28,112
Subtotal											$379,507
Health & Safety Monitoring @ 2%											$7,590
Total Field Cost											$387,097
Engineering on Total Field Cost @ 5%											$19,355
Contingency on Total Field Cost @ 20%											$77,419
TOTAL CAPITAL COST											**$483,871**

TABLE C1-8
Cost Backup - Annual and Five - Year Costs
Soil Alternative SO3: Cover Surface Soils Exceeding Criteria, LUCs, and Inspections
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Item	Item Cost years 1 - 30	Item Cost every 5 years	Notes
LUCs Inspection & Report	$2,350		One-day visit to verify LUCs with Report
Five -Year Review		$23,000	Assumes that this is a component of the NAVSTA Newport IRP Five Year Reivew
LTM	$13,678		
Subtotal	$16,028	$23,000	
Contingency @ 10%	$1,603	$2,300	Cost with contingency is used for Present Worth Analysis.
TOTAL	**$17,631**	**$25,300**	

TABLE C1-9
Cost Backup - Present Worth Analysis
Soil Alternative SO3: Cover Surface Soils Exceeding Criteria, LUCs, and Inspections
Site 13, Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$483,871		$483,871	1.000	$483,871
1		$17,631	$17,631	0.980	$17,285
2		$17,631	$17,631	0.961	$16,946
3		$17,631	$17,631	0.942	$16,614
4		$17,631	$17,631	0.924	$16,288
5		$42,931	$42,931	0.906	$38,884
6		$17,631	$17,631	0.888	$15,656
7		$17,631	$17,631	0.871	$15,349
8		$17,631	$17,631	0.853	$15,048
9		$17,631	$17,631	0.837	$14,753
10		$42,931	$42,931	0.820	$35,218
11		$17,631	$17,631	0.804	$14,180
12		$17,631	$17,631	0.788	$13,902
13		$17,631	$17,631	0.773	$13,629
14		$17,631	$17,631	0.758	$13,362
15		$42,931	$42,931	0.743	$31,898
16		$17,631	$17,631	0.728	$12,843
17		$17,631	$17,631	0.714	$12,591
18		$17,631	$17,631	0.700	$12,344
19		$17,631	$17,631	0.686	$12,102
20		$42,931	$42,931	0.673	$28,891
21		$17,631	$17,631	0.660	$11,632
22		$17,631	$17,631	0.647	$11,404
23		$17,631	$17,631	0.634	$11,181
24		$17,631	$17,631	0.622	$10,961
25		$42,931	$42,931	0.610	$26,168
26		$17,631	$17,631	0.598	$10,536
27		$17,631	$17,631	0.586	$10,329
28		$17,631	$17,631	0.574	$10,127
29		$17,631	$17,631	0.563	$9,928
30		$42,931	$42,931	0.552	$23,701
				TOTAL PRESENT WORTH	**$987,621**

C2 – COST ESTIMATES FOR GROUNDWATER ALTERNATIVES

CLIENT: NAVSTA NEWPORT		JOB NUMBER: 112G02698	
SUBJECT: DU 5-1 Site 13 Tank Farm 5 FS - Basis of Cost Estimates for Groundwater Alternatives			
BASED ON:		DRAWING NUMBER:	
BY: BES Date: 10-2011	CHECKED BY: SSP Date: 1/30/13	APPROVED BY:	DATE:

Groundwater Alternatives

Alternative GW 1: No Action

No action; no costs associated.

Alternative GW 2: Land Use Controls (LUCs) and Monitored Natural Attenuation

Capital Cost

LUCs

Establish LUCs to restrict site use to restrict groundwater use
Prepare LUC Remedial Design (LUC RD) in Draft, Draft Final and Final versions
Total Direct Cost = $9,100

MNA Work Plan

Prepare MNA Work Plan (UFP SAP) Draft and Final Documents
Assumes monitoring only for COCs and MNA parameters
Prepare Site Specific Health and Safety Plan
Total Direct Cost = $17,140

Field Cost

Drilling Subcontractor
Assume 2 days at a day rate of $7,500

Well installation & development (one geologist, 3 days, $85/hr) =	$2,550	labor
Misc supplies, equipment, copying, etc. =	$2,500	material, equip
Drilling contractor @ $7,550/day for 2 days =	$15,100	subcontract
	$20,150	

Annual Cost - Inspections

Yearly Site Inspection/Visit for LUCs implementation (1 person)

Assume out of town travel to site.

Car	$100	
Hours	$900	(12 hours * $75/hr)
Report	$1,200	
Misc	$150	
	$2,350	

CLIENT: NAVSTA NEWPORT			JOB NUMBER: 112G02698
SUBJECT: DU 5-1 Site 13 Tank Farm 5 FS - Basis of Cost Estimates for Groundwater Alternatives			
BASED ON:			DRAWING NUMBER:
BY: BES	CHECKED BY: SSP	APPROVED BY:	DATE:
Date: 10-2011	Date: 1/30/13		

Alternative GW 2: Land Use Controls (LUCs) and Monitored Natural Attenuation (con't)

Annual Cost - Monitored Natural Attenuation

Labor & Materials

Assume 2 days to sample with 2 people, local plus 1 day of preparations

2 people @ $85.00 per hour for 30 hours =	$5,100	Labor
Data eval & Draft report @ $105.00 per hour for 44 hours =	$4,620	Labor
IDW disposal =	$150	Sub
Comment resolution, & Final 40 hours =	$4,200	Labor
Misc supplies, copying, etc. =	$3,000	material, equip
	$17,070	

Analytical

Analyze 8 groundwater samples for metals, PAHs, misc parameters

type	cost each	number	total
PAHs	$150	8	$1,200
DO, ORP, pH, conductivity, etc.	$50	8	$400
metals	$130	8	$1,040
			$2,640
40% QA/QC & Data Validation			$1,056
			$3,696

Years 1-2 - Quarterly monitoring	$20,766	Per event
	$83,064	Per year
Years 3-30- Semiannual monitoring	$20,766	per event
	$20,766	Per year

CLIENT: NAVSTA NEWPORT		JOB NUMBER: 112G02698	
SUBJECT: DU 5-1 Site 13 Tank Farm 5 FS - Basis of Cost Estimates for Groundwater Alternatives			
BASED ON:		DRAWING NUMBER:	
BY: BES	CHECKED BY: SSP	APPROVED BY:	DATE:
Date: 10-2011	Date: 1/30/13		

Alternative GW 3: In-Situ Bioprecipitation, LUCs and Monitoring

Capital Cost

LUCs - See GW2
In -Situ Treatment - See Below and Tables C2-7 and C2-8
Design documents
Pilot study (20 Injection wells)
Full Treatment (60 additional Wells) year 0
Quarterly Long Term Monitoring (LTM) years 0 and 1
Second Treatment Year 2
Quarterly LTM years 2 and 3
Semiannual LTM Years 4-30
Annual LTM Reports

LTM Work Plan
Prepare MNA Work Plan (UFP SAP) Draft and Final Documents
Assumes monitoring only for COCs and MNA parameters
Prepare Site Specific Health and Safety Plan
Total Direct Cost = $17,140

Field Cost
Drilling Subcontractor
Assume 2 days at a day rate of $7,500

Well installation & Development (one geologist, 2 days, $85/hr) =	$2,550	labor
Misc supplies, equipment, copying, etc. =	$2,500	material, equip
Drilling contractor @ $7,550/day for 2 days =	$15,100	subcontract
	$20,150	

CLIENT: NAVSTA NEWPORT		JOB NUMBER: 112G02698	
SUBJECT: DU 5-1 Site 13 Tank Farm 5 FS - Basis of Cost Estimates for Groundwater Alternatives			
BASED ON:		DRAWING NUMBER:	
BY: BES	CHECKED BY: SSP	APPROVED BY:	DATE:
Date: 10-2011	Date: 1/30/13		

Alternative GW 3: In-Situ Bioprecipitation, LUCs and Monitoring (con't)

LTM - Per Sampling Event

Labor & Materials

Assume 3 days to sample with 2 people, local plus 1 day of preparations

2 people @ $85.00 per hour for 20 hours =	$3,400	Labor
Data eval & Draft report @ $105.00 per hour for 44 hours =	$4,620	Labor
IDW disposal =	$150	Sub
Comment resolution, & Final 40 hours =	$4,200	Labor
Misc supplies, copying, etc. =	$3,000	material, equip
	$15,370	

Analytical

Analyze 12 groundwater samples for metals, PAHs, misc parameters

type	cost each	number	total
PAHs	$150	8	$1,200
DO, ORP, pH, conductivity, etc.	$50	8	$400
metals	$130	8	$1,040
			$2,640
40% QA/QC & Data Validation			$1,056
			$3,696

Years 0-3 - Quarterly monitoring	$19,066	Per event
	$76,264	Per year
Years 4-30- Annual monitoring	$19,066	per event
	$38,132	Per year

CLIENT: NAVSTA NEWPORT				JOB NUMBER: 112G02698	
SUBJECT: DU 5-1 Site 13 Tank Farm 5 FS - Basis of Cost Estimates for Groundwater Alternatives					
BASED ON:				DRAWING NUMBER:	
BY:	BES	CHECKED BY:	SSP	APPROVED BY:	DATE:
Date:	10-2011	Date:	1/30/13		

Other Annual Cost

Yearly Site Inspection/Visit for LUCs implementation (1 person)

Assume out of town travel to site, site interior and perimiter walk, interview of key personnel.

Car	$100	
Hours	$900	(12 hours * $75/hr)
Report	$1,200	
Misc	$150	
Total Cost	**$2,350**	

Five year cost

5-year review:

Assumes that this is a component of the Five-year review for all the IRP sites at NAVSTA Newport
Summarize inspections, describe findings, update history and regulatory information
Publish report as a part of the Five year review for IRP sites.
Total Cost = $23,000

TABLE C2-1
Cost Backup: Capital Costs
Groundwater Alternative 1 - No Action
Site 12 - Tank Farm 4, DU 4-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

11/30/2013 10:51 AM

Item	Quantity	Unit	Unit Cost				Extended Cost				Subtotal
			Subcontract	Material	Labor	Equipment	Subcontract	Material	Labor	Equipment	
NO ACTION							$0	$0	$0	$0	$0
. **Subtotal**							$0	$0	$0	$0	$0
Overhead on Labor Cost @ 30%									$0		$0
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$0	$0	$0	$0	$0
Tax on Materials and Equipment Cost @ 6%								$0		$0	$0
Total Direct Cost							$0	$0	$0	$0	$0
Indirects on Total Direct Cost @ 0%											$0
Profit on Total Direct Cost @ 10%											$0
Subtotal											$0
Health & Safety Monitoring @ 0%											$0
Total Field Cost											$0
Contingency on Total Field Costs @ 10%											$0
Engineering on Total Field Cost @ 0%											$0
TOTAL CAPITAL COST											**$0**

TABLE C2-2
Cost Backup: Annual 1 & 5 Year Costs
Groundwater Alternative 1 - No Action
Site 12 - Tank Farm 4, DU 4-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

11/30/2013 10:51 AM

Item	Item Cost Annual	Item Cost every 5 years	Notes
Subtotal	$0	$0	
Contingency @ 10%	$0	$0	
TOTAL	**$0**	**$0**	

TABLE C2-3
Cost Backup: Present Worth Cost
Groundwater Alternative 1 - No Action
Site 12 - Tank Farm 4, DU 4-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$0		$0	1.000	$0
1		$0	$0	0.980	$0
2		$0	$0	0.961	$0
3		$0	$0	0.942	$0
4		$0	$0	0.924	$0
5		$0	$0	0.906	$0
6		$0	$0	0.888	$0
7		$0	$0	0.871	$0
8		$0	$0	0.853	$0
9		$0	$0	0.837	$0
10		$0	$0	0.820	$0
11		$0	$0	0.804	$0
12		$0	$0	0.788	$0
13		$0	$0	0.773	$0
14		$0	$0	0.758	$0
15		$0	$0	0.743	$0
16		$0	$0	0.728	$0
17		$0	$0	0.714	$0
18		$0	$0	0.700	$0
19		$0	$0	0.686	$0
20		$0	$0	0.673	$0
21		$0	$0	0.660	$0
22		$0	$0	0.647	$0
23		$0	$0	0.634	$0
24		$0	$0	0.622	$0
25		$0	$0	0.610	$0
26		$0	$0	0.598	$0
27		$0	$0	0.586	$0
28		$0	$0	0.574	$0
29		$0	$0	0.563	$0
30		$0	$0	0.552	$0
				TOTAL PRESENT WORTH	**$0**

TABLE C2-4
Cost Backup: Capital Cost
Groundwater Alternative 2 - LUCs & MNA
Site 13 - Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

11/30/2013 10:51 AM

			Unit Cost				Extended Cost				
Item	Quantity	Unit	Subcontract	Material	Labor	Equipment	Subcontract	Material	Labor	Equipment	Subtotal
1 Capital Costs											
1.1 LUCs	1	ea			$9,100.00		$0	$0	$9,100	$0	$9,100
1.2 MNA Work Plan											
planning meeting (2 people)	16	hr			$85.00		$0	$0	$1,360	$0	$1,360
analytical specs	16	hr			$105.00		$0	$0	$1,680	$0	$1,680
SAP preperation (Draft/Final)	160	hr			$85.00		$0	$0	$13,600	$0	$13,600
misc supplies, equipment, copying etc.	1	ea		$500.00			$0	$500	$0	$0	$500
1.3 Drilling Subcontractor											
well installation oversight	30	hr			$85.00		$0	$0	$2,550	$0	$2,550
misc supplies, equipment, copying etc.	1	ea		$1,000.00		$1,500.00	$0	$1,000	$0	$1,500	$2,500
drilling subcontractor	2	day	$7,550.00				$15,100	$0	$0	$0	$15,100
. **Subtotal**							$15,100	$1,500	$28,290	$1,500	$46,390
G & A on Labor, Material, Equipment, & Subs Cost @ 10%							$1,510	$150	$2,829	$150	$4,639
Tax on Materials and Equipment Cost @ 6%								$90		$90	$180
Total Direct Cost							$1,510	$240	$2,829	$240	$51,209
Indirects on Total Direct Cost @ 0%											$0
Profit on Total Direct Cost @ 10%											$5,121
Subtotal											$56,330
Health & Safety Monitoring @ 0%											$0
Total Field Cost											$56,330
Contingency on Total Field Costs @ 10%											$5,633
Engineering on Total Field Cost @ 0%											$0
TOTAL CAPITAL COST											**$61,963**

TABLE C2-5
Cost Backup: Annual and Five Year Costs
Groundwater Alternative 2 - LUCs & MNA
Site 13 - Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

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Item	Item Cost Years 1-2	Item Cost Years 3-30	Item Cost every 5 years	Notes
Annual Site Inspection & Report, Years 1-30	$2,350	$2,350		Labor and supplies once a year to inspect Land Use Controls with report
Groundwater Sampling, Analysis and Report (Year 1 - 2)	$83,064			LUCs and Monitoring at 8 monitoring wells, Quarterly
Groundwater Sampling, Analysis and Report (Year 3-30)		$20,766		LUCs and Monitoring at 8 monitoring wells (annually)
Five Year Review			$23,000	Assumes five year review is a component of the Newport Five Year Review
Subtotal	$85,414	$23,116	$23,000	
Contingency @ 10%	$8,541	$2,312	$2,300	
TOTAL	**$93,955**	**$25,428**	**$25,300**	

20766 per event

TABLE C2-6
Cost Backup: Present Worth Cost
Groundwater Alternative 2 - LUCs & MNA
Site 13 - Tank Farm 5, DU 5-1
NAVAL STATION (NAVSTA) NEWPORT
NEWPORT, RI

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$61,963	$0	$61,963	1.000	$61,963
1		$93,955	$93,955	0.980	$92,113
2		$93,955	$93,955	0.961	$90,307
3		$25,428	$25,428	0.942	$23,961
4		$25,428	$25,428	0.924	$23,491
5		$50,728	$50,728	0.906	$45,946
6		$25,428	$25,428	0.888	$22,579
7		$25,428	$25,428	0.871	$22,136
8		$25,428	$25,428	0.853	$21,702
9		$25,428	$25,428	0.837	$21,277
10		$50,728	$50,728	0.820	$41,614
11		$25,428	$25,428	0.804	$20,450
12		$25,428	$25,428	0.788	$20,049
13		$25,428	$25,428	0.773	$19,656
14		$25,428	$25,428	0.758	$19,271
15		$50,728	$50,728	0.743	$37,691
16		$25,428	$25,428	0.728	$18,523
17		$25,428	$25,428	0.714	$18,159
18		$25,428	$25,428	0.700	$17,803
19		$25,428	$25,428	0.686	$17,454
20		$50,728	$50,728	0.673	$34,138
21		$25,428	$25,428	0.660	$16,777
22		$25,428	$25,428	0.647	$16,448
23		$25,428	$25,428	0.634	$16,125
24		$25,428	$25,428	0.622	$15,809
25		$50,728	$50,728	0.610	$30,920
26		$25,428	$25,428	0.598	$15,195
27		$25,428	$25,428	0.586	$14,897
28		$25,428	$25,428	0.574	$14,605
29		$25,428	$25,428	0.563	$14,319
30		$50,728	$50,728	0.552	$28,005
				TOTAL PRESENT WORTH	**$873,385**

Table C2-7
Cost Backup - Capital Cost
Site 13 - Decision Unit 5-1 at Tank Farm 5
Alternative GW3: In-Situ Bioprecipitation, Monitoring, and LUCs
NAVAL STATION (NAVSTA) NEWPORT

			Unit Cost				Extended Cost				
Item	Quantity	Unit	Subcontract	Material	Labor	Equipment	Subcontract	Material	Labor	Equipment	Subtotal
A LUCs and Monitoring											
1 LUCs, LUC RD	1	ea			$9,100.00		$0	$0	$9,100	$0	$9,100
2.1 LTM Work Plan	192	hr			$48.00		$0	$0	$9,216	$0	$9,216
2.2 misc supplies, equipment, copying etc.	1	ea		$500.00			$0	$500	$0	$0	$500
2.3 well installation oversight	30	hr			$35.00		$0	$0	$1,050	$0	$1,050
2.4 misc supplies, equipment, copying etc.	1	ea		$1,000.00		$1,500.00	$0	$1,000	$0	$1,500	$2,500
2.5 Subcontract Drilling	3	day	$7,550.00				$22,650	$0	$0	$0	$22,650
B IN SITU TREATMENT											
1 PROJECT PLANNING & DOCUMENTS											
1.1 Design	1	ls	$4,000.00				$4,000	$0	$0	$0	$4,000
1.2 Design Documents	200	hr			$39.00		$0	$0	$7,800	$0	$7,800
1.3 Prepare Documents & Plans including Permits	350	hr			$39.00		$0	$0	$13,650	$0	$13,650
2 MOBILIZATION AND DEMOBILIZATION											
2.1 Site Support Facilities (trailers, phone, electric, etc.)	1	ls	$560.00	$1,000.00	$200.00	$3,500.00	$560	$1,000	$200	$3,500	$5,260
2.2 Equipment Mobilization/Demobilization	2	ea			$188.00	$566.00	$0	$0	$376	$1,132	$1,508
2.3 Drill Rig Mobilization/Demobilization	2	ea	$2,000.00				$4,000	$0	$0	$0	$4,000
3 SITE SUPPORT											
3.1 Office Trailer	3.0	mo				$365.00	$0	$0	$0	$1,095	$1,095
3.2 Field Office Equipment, Utilities, & Support	3.0	mo		$380.00			$0	$1,140	$0	$0	$1,140
3.3 Storage Trailer	3.0	mo				$94.00	$0	$0	$0	$282	$282
3.4 Survey Support	5	day	$1,150.00				$5,750	$0	$0	$0	$5,750
3.5 Site Superintendent	60	day		$220.00	$480.00		$0	$13,200	$28,800	$0	$42,000
3.6 Site Health & Safety and QA/QC (1/2 time)	30	day		$220.00	$360.00		$0	$6,600	$10,800	$0	$17,400
3.7 Site Labor, (2 laborers)	120	day			$280.80		$0	$0	$33,696	$0	$33,696
4 DECONTAMINATION											
4.1 Decontamination Services	3	mo		$1,220.00	$2,245.00	$1,550.00	$0	$3,660	$6,735	$4,650	$15,045
4.2 Equipment Decon Pad	1	ls		$4,500.00	$3,000.00	$725.00	$0	$4,500	$3,000	$725	$8,225
4.3 Decon Water	4,000	gal		$0.20			$0	$800	$0	$0	$800
4.4 Decon Water Storage Tank, 6,000 gallon	3	mo				$813.00	$0	$0	$0	$2,439	$2,439
4.5 Clean Water Storage Tank, 4,000 gallon	3	mo				$731.00	$0	$0	$0	$2,193	$2,193
4.6 Disposal of Decon Waste (liquid & solid)	3	mo	$985.00				$2,955	$0	$0	$0	$2,955
5 PILOT STUDY											
5.1 Pilot Study Work Plan	1	ls			$15,000.00		$0	$0	$15,000	$0	$15,000
5.2 Injection Well Installation (20)	400	lf	$40.00				$16,000	$0	$0	$0	$16,000
5.3 Injection Well Heads	20	ea	$150.00				$3,000	$0	$0	$0	$3,000
5.4 Injection Labor/Equipment	5	day	$4,000.00				$20,000	$0	$0	$0	$20,000
5.5 Nutrient	1,000	lb		$3.51			$0	$3,510	$0	$0	$3,510
5.6 Injection Water	1,000	gal		$0.20			$0	$200	$0	$0	$200
5.7 Water Tank Truck	5	day				$430.00	$0	$0	$0	$2,150	$2,150
5.8 Skid-Steer	5	day			$358.00	$281.20	$0	$0	$1,790	$1,406	$3,196
5.9 IDW Disposal	16	drum	$200.00				$3,200	$0	$0	$0	$3,200
5.10 Pavement Coring & Repair	0	ea	$90.00				$0	$0	$0	$0	$0

Table C2-7
Cost Backup - Capital Cost
Site 13 - Decision Unit 5-1 at Tank Farm 5
Alternative GW3: In-Situ Bioprecipitation, Monitoring, and LUCs
NAVAL STATION (NAVSTA) NEWPORT

	Item	Quantity	Unit	Unit Cost				Extended Cost				
				Subcontract	Material	Labor	Equipment	Subcontract	Material	Labor	Equipment	Subtotal
6	**FULL TREATMENT**											
6.1	Injection Well Installation (20)	400	lf	$40.00				$16,000	$0	$0	$0	$16,000
6.2	Injection Well Heads	40	ea	$150.00				$6,000	$0	$0	$0	$6,000
6.3	Injection Labor/Equipment	30	day	$4,000.00				$120,000	$0	$0	$0	$120,000
6.4	Nutrient	2,500	lb		$3.51			$0	$8,775	$0	$0	$8,775
6.5	Injection Water	2,500	gal		$0.20			$0	$500	$0	$0	$500
6.6	Water Tank Truck	20	day				$430.00	$0	$0	$0	$8,600	$8,600
6.7	Skid-Steer	20	day			$358.00	$281.20	$0	$0	$7,160	$5,624	$12,784
6.8	IDW Disposal	50	drum	$200.00				$10,000	$0	$0	$0	$10,000
6.9	Road access/brush clearing	5	day	$550.00				$2,750	$0	$0	$0	$2,750
6.10	Site Restoration (grade, seed)	12.0	msf	$96.50				$1,158	$0	$0	$0	$1,158
6.11	Post-Injection Sampling Labor, 2 events	60	hr			$39.00		$0	$0	$2,340	$0	$2,340
6.12	Post-Injection Sampling ODCs	14	ea		$500.00			$0	$7,000	$0	$0	$7,000
6.13	Post-Injection Analysis	14	ea	$1,000.00				$14,000	$0	$0	$0	$14,000
6.14	Post-Injection Report	80	hr			$39.00		$0	$0	$3,120	$0	$3,120
7	**POST CONSTRUCTION COST**											
7.1	Contractor Completion Report	150	hr			$39.00		$0	$0	$5,850	$0	$5,850
7.2	Remedial Action Closeout Report	200	hr			$39.00		$0	$0	$7,800	$0	$7,800
	Subtotal							$252,023	$52,385	$167,483	$35,296	$507,187
	Overhead on Labor Cost @ 30%									$50,245		$50,245
	G & A on Cost @ 10%							$25,202	$5,239	$16,748	$3,530	$50,719
	Tax on Materials and Equipment Cost @ 7%								$3,667		$2,471	$6,138
	Total Direct Cost							$277,225	$61,290	$234,476	$41,296	$614,288
	Indirects on Total Direct Cost @ 20%											$122,858
	Profit on Total Direct Cost @ 10%											$61,429
	Total Field Cost											$798,575
	Engineering on Total Field Costs @ 10%											$79,857
	Contingency on Total Field Costs @ 15%											$119,786
	TOTAL CAPITAL COST (INITIAL TREATMENT)											**$998,218**

Table C2-8
Cost Backup - Capital Cost (Second Injection)
Site 13 - Decision Unit 5-1 at Tank Farm 5
Alternative GW3: In-Situ Bioprecipitation, Monitoring, and LUCs
NAVAL STATION (NAVSTA) NEWPORT

Item	Quantity	Unit	Unit Cost Subcontract	Unit Cost Material	Unit Cost Labor	Unit Cost Equipment	Extended Cost Subcontract	Extended Cost Material	Extended Cost Labor	Extended Cost Equipment	Subtotal
1 PROJECT PLANNING & DOCUMENTS											
1.1 Design Documents	100	hr			$39.00		$0	$0	$3,900	$0	$3,900
1.2 Prepare Documents & Plans including Permits	150	hr			$39.00		$0	$0	$5,850	$0	$5,850
2 MOBILIZATION AND DEMOBILIZATION											
2.1 Site Support Facilities (trailers, phone, electric, etc.)	1	ls		$1,000.00		$3,500.00	$0	$1,000	$0	$3,500	$4,500
2.2 Equipment Mobilization/Demobilization	2	ea			$183.00	$518.00	$0	$0	$366	$1,036	$1,402
3 SITE SUPPORT											
3.1 Office Trailer	1.0	mo				$365.00	$0	$0	$0	$365	$365
3.2 Field Office Equipment, Utilities, & Support	1.0	mo		$380.00			$0	$380	$0	$0	$380
3.3 Storage Trailer	1.0	mo				$94.00	$0	$0	$0	$94	$94
3.4 Site Superintendent	20	day		$220.00	$480.00		$0	$4,400	$9,600	$0	$14,000
3.5 Site Labor, (2 laborers)	40	day			$280.80		$0	$0	$11,232	$0	$11,232
4 DECONTAMINATION											
4.1 Decontamination Services	1	mo		$1,220.00	$2,245.00	$1,550.00	$0	$1,220	$2,245	$1,550	$5,015
4.2 Equipment Decon Pad	0	ls		$4,500.00	$3,000.00	$725.00	$0	$0	$0	$0	$0
4.3 Decon Water	1,000	gal		$0.20			$0	$200	$0	$0	$200
4.4 Decon Water Storage Tank, 6,000 gallon	1	mo				$813.00	$0	$0	$0	$813	$813
4.5 Clean Water Storage Tank, 4,000 gallon	1	mo				$731.00	$0	$0	$0	$731	$731
4.6 Disposal of Decon Waste (liquid & solid)	1	mo	$985.00				$985	$0	$0	$0	$985
5 SECOND TREATMENT											
5.1 Injection Labor/Equipment	20	day	$4,000.00				$80,000	$0	$0	$0	$80,000
5.2 Nutrient	2,500	lb		$3.51			$0	$8,775	$0	$0	$8,775
5.3 Injection Water	2,500	gal		$0.20			$0	$500	$0	$0	$500
5.4 Water Tank Truck	10	day				$430.00	$0	$0	$0	$4,300	$4,300
5.5 Skid-Steer	10	day			$358.00	$281.20	$0	$0	$3,580	$2,812	$6,392
5.6 IDW Disposal	25	drum	$200.00				$5,000	$0	$0	$0	$5,000
5.7 Contractor Completion Report	150	hr			$39.00		$0	$0	$5,850	$0	$5,850
Subtotal							$85,985	$16,475	$42,623	$15,201	$160,284
Overhead on Labor Cost @ 30%									$12,787		$12,787
G & A on Cost @ 10%							$8,599	$1,648	$4,262	$1,520	$16,028
Tax on Materials and Equipment Cost @ 7%								$1,153		$1,064	$2,217
Total Direct Cost							$94,584	$19,276	$59,672	$17,785	$191,317
Indirects on Total Direct Cost @ 20%											$38,263
Profit on Total Direct Cost @ 10%											$19,132
Total Field Cost											$248,712
Engineering on Total Field Costs @ 2%											$4,974
Contingency on Total Field Costs @ 10%											$24,871
TOTAL CAPITAL COST (Second Injection)											**$278,557**

Table C2-9
Cost Backup - Annual Cost
Site 13 - Decision Unit 5-1 at Tank Farm 5
Alternative GW3: In-Situ Bioprecipitation, Monitoring, and LUCs
NAVAL STATION (NAVSTA) NEWPORT

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Item	Item Cost Years 0 & 1	Item Cost Years 2 & 3	Item Cost Years 4 - 30	Item Cost Five Year Cost	Notes
Groundwater LTM	$76,264	$76,264	$19,066	$0	Labor and supplies for groundwater samples using a crew of three.
LUC Inspection & Report	$2,350	$2,350	$2,350	$0	
Five Year Review	NA	NA	NA	$23,000	Five year reviews are are required until LTM shows that RGs are met.
Subtotal	$78,614	$78,614	$21,416	$23,000	
Contingency @ 10%	$7,861	$7,861	$2,142	$2,300	
TOTAL	**$86,475**	**$86,475**	**$23,558**	**$25,300**	

LTM during Years 0-3 are currently assumed to be the same effort, however, this may change after Design and Pilot Study

Table C2-10
Cost Backup - Present Worth Cost
Site 13 - Decision Unit 5-1 at Tank Farm 5
Alternative GW3: In-Situ Bioprecipitation, Monitoring, and LUCs
NAVAL STATION (NAVSTA) NEWPORT

Year	Capital Cost	Annual Cost	Total Year Cost	Annual Discount Rate 2.0%	Present Worth
0	$998,218	$76,264	$998,218	1.000	$1,074,482
1		$86,475	$86,475	0.980	$84,780
2	$278,557	$86,475	$365,032	0.961	$350,858
3		$86,475	$86,475	0.942	$81,488
4		$23,558	$23,558	0.924	$21,764
5		$48,858	$48,858	0.906	$44,252
6		$23,558	$23,558	0.888	$20,918
7		$23,558	$23,558	0.871	$20,508
8		$23,558	$23,558	0.853	$20,106
9		$23,558	$23,558	0.837	$19,712
10		$48,858	$48,858	0.820	$40,080
11		$23,558	$23,558	0.804	$18,947
12		$23,558	$23,558	0.788	$18,575
13		$23,558	$23,558	0.773	$18,211
14		$23,558	$23,558	0.758	$17,854
15		$48,858	$48,858	0.743	$36,302
16		$23,558	$23,558	0.728	$17,160
17		$23,558	$23,558	0.714	$16,824
18		$23,558	$23,558	0.700	$16,494
19		$23,558	$23,558	0.686	$16,171
20		$48,858	$48,858	0.673	$32,880
21		$23,558	$23,558	0.660	$15,543
22		$23,558	$23,558	0.647	$15,238
23		$23,558	$23,558	0.634	$14,939
24		$23,558	$23,558	0.622	$14,646
25		$48,858	$48,858	0.610	$29,780
26		$23,558	$23,558	0.598	$14,078
27		$23,558	$23,558	0.586	$13,802
28		$23,558	$23,558	0.574	$13,531
29		$23,558	$23,558	0.563	$13,266
30		$48,858	$48,858	0.552	$26,973
				TOTAL PRESENT WORTH	**$2,160,160**

Assumes one retreatment period in year 2. Other treatment periods may be required.
Annual cost in year 0 is for establishing baseline groundwater conditions, four rounds of LTM.
Cost basis assumes that two treatments will attain RGs, and LTM will be downgraded to an annual frequency.
LUCs and inspections can be discontinued if COC concentrations remain below RGs.

C3 – VOLUME ESTIMATES FOR GROUNDWATER AND SOIL

TABLE C-3.1
VOLUME ESTIMATE OF SOIL EXCEEDING PRGS
DU 5- 1 AT SITE 13, TANK FARM 5
NAVAL STATION NEWPORT, MIDDLETOWN RI

Area of Interest	Area (ft^2)	Avg Depth (ft)	Volume (ft^3)	Volume (yd^3)	Weight (tons)	Reference
ESTIMATE OF SURFACE SOIL						
Surface soil as 0-2 feet	45,436	2.0	90,872	3,366	4,038.8	Figure C-3.1
Surface soil as 0-1 foot	45,436	1.0	45,436	1,683	2,019.4	Figure C-3.1
ESTIMATE OF SUBSURFACE SOIL						
Measured as 0 feet to top of BR	143,100	8.6	1,226,571	45,429	54,514.3	Figure C-3.2
Measured as 1 foot to top of BR	143,100	7.6	1,087,560	40,280	48,336.0	Figure C-3.2
Measued as 2 feet to top of BR	143,100	6.6	944,460	34,980	41,976.0	Figure C-3.2
ESTIMATE OF GROUNDWATER (Using average saturated thickness of each unit)						
Unit of Interest	**Area (ft^2)**	**Avg Depth (ft)**	**Porosity**	**Volume (ft^3)**	**Volume (gal)**	**Reference**
shale	261,360	12.75	0.05	166,617.0	1,246,295.2	Figure C-3.3
sandy gravel	261,360	4.25	0.35	388,773.0	2,908,022.0	Figure C-3.3
sandy silt	261,360	3.8	0.4	397,267.2	2,971,558.7	Figure C-3.3
				TOTAL=	7,125,875.9	
ESTIMATE OF GROUNDWATER (Using maximum saturated thickness of each unit)						
Unit of Interest	**Area (ft^2)**	**Max Depth (ft)**	**Porosity**	**Volume (ft^3)**	**Volume (gal)**	**Reference**
shale	261,360	21	0.05	274,428.0	2,052,721.4	Figure C-3.3
sandy gravel	261,360	5	0.35	457,380.0	3,421,202.4	Figure C-3.3
sandy silt	261,360	5	0.4	522,720.0	3,909,945.6	Figure C-3.3
				TOTAL=	9,383,869.4	

Notes:

The depth limit established for subsurface soil estimated is the average of depth to competent bedrock at borings within the site boundary

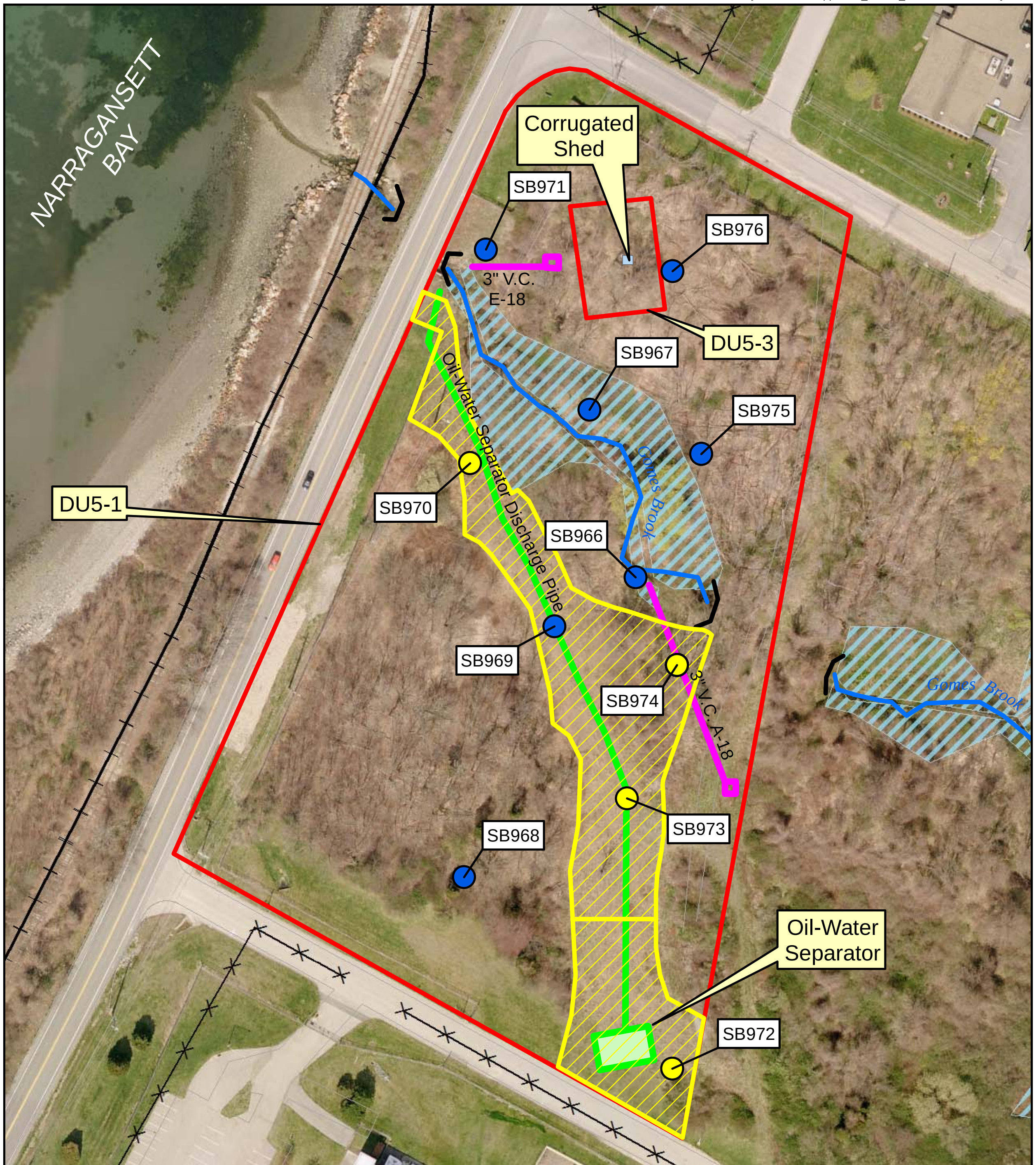
The site boundary was used for horizontal extent of exceedance of PRGs because the data for COCs in soil (arsenic and manganese) do not otherwise bound the concentrations >PRGs.

The area boundary for surface soil is demonstrated on Figure C-3.1 and is the same area that is estimated for cover under Alternative SO2.

Surface soil is defined by RIDEM as 0-2 feet, and by EPA as 0-1 foot, so both are presented for informational purposes.

1.2 tons per cubic yard of soil assumed
porosity taken from Freeze and Cherry, 1979
area of DU taken from data gaps report: DU5-1 is 6 acres
depth of shale taken as distance between top of fractured/ weatherd shale and the bottom of the well

Path: O:\CLEAN\NEWPORT\Sites 12 and 13 TFs 4 and 5\Catetory 1\FS's\GIS\Appendix_DU5-1_SoilExceedancePoly2.mxd



- Exceeds 100 x PRG
- Exceeds 10 x PRG
- Exceeds PRG
- Below PRG
- Soil Cover Area
- Gomes Brook
- Former Oil/Water Separator Discharge Pipe
- Historic Discharge Pipe
- Wetland
- Railroad Tracks
- Fence
- Decision Unit Boundary

The colored dots represent the ratio of the maximum concentration detected at a location to the Preliminary Remediation Goal (PRG) for industrial and residential surface soil.

Aerial imagery: RI E911 System, Pictometry International Corporation, 2008.

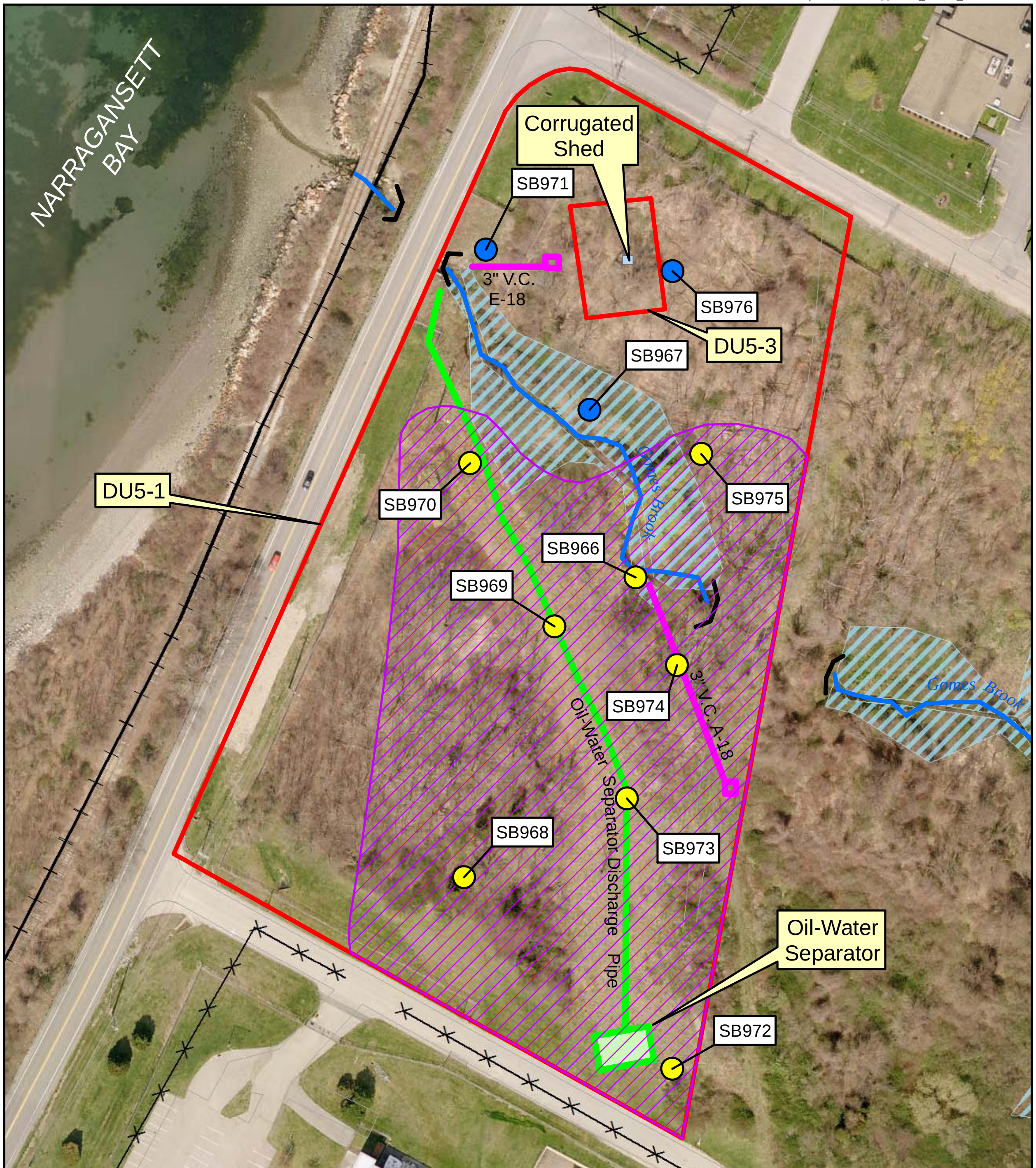
0 100 200 Feet

APPENDIX C-3-1
ESTIMATED SURFACE SOIL INDUSTRIAL AND RESIDENTIAL PRG EXCEEDANCE AREA
DU5-1, TANK FARM 5
FEASIBILITY STUDY
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Author: MJH/NEC

Date: 11/27/2013

TETRA TECH



Exceeds PRG
Below PRG
Extent of Subsurface Soil Exceeding PRG
Gomes Brook
Decision Unit Boundary
Former Oil/Water Separator Discharge Pipe
Historic Discharge Pipe
Wetland
Railroad Tracks
Fence

The colored dots represent the ratio of the maximum concentration detected at a location to the Preliminary Remediation Goal (PRG) for industrial and residential subsurface soil.

Aerial imagery: RI E911 System, Pictometry International Corporation, 2008.

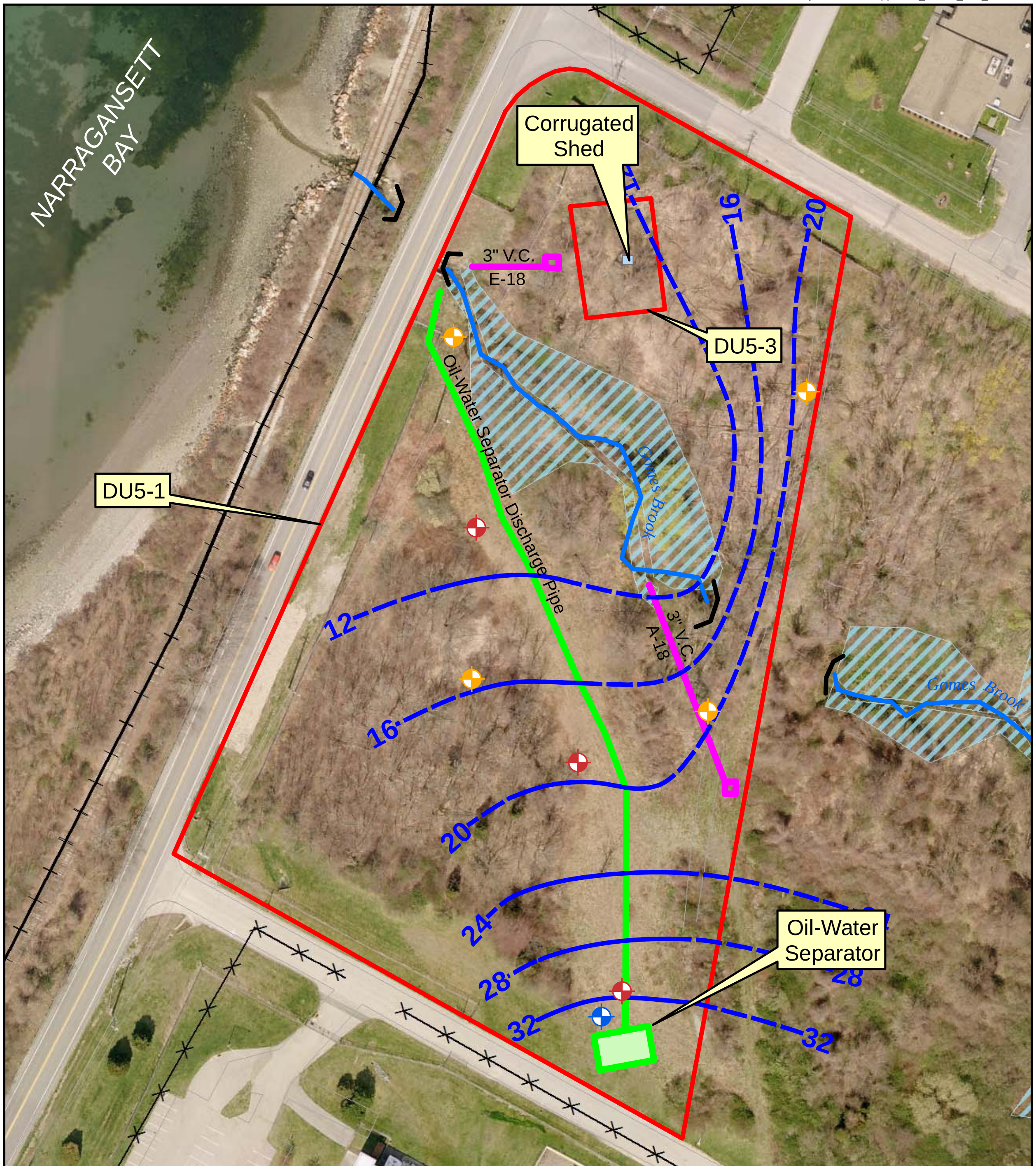
0 100 200 Feet

APPENDIX C-3-2
ESTIMATED SUBSURFACE SOIL
INDUSTRIAL AND RESIDENTIAL
PRG EXCEEDANCE AREA
DU5-1, TANK FARM 5
FEASIBILITY STUDY
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Author: MJH/NEC

Date: 11/27/2013

TETRA TECH



Proposed Monitoring Well

Monitoring Well where at least one residential PRG was exceeded

Monitoring Well where no residential PRGs were exceeded

Groundwater Contour Inferred

Groundwater Contour In Feet Mean Low Water

Gomes Brook

Decision Unit Boundary

Former Oil/Water Separator Discharge Pipe

Historic Discharge Pipe

Wetland

Railroad Tracks

Fence

Estimate of groundwater volume to be addressed by remedy based on area within LUC boundary.

Aerial imagery: RI E911 System, Pictometry International Corporation, 2008.

0 100 200 Feet

APPENDIX C-3-3
ESTIMATED GROUNDWATER RESIDENTIAL PRG EXCEEDANCE AREA
DU 5-1, TANK FARM 5
FEASIBILITY STUDY
NAVSTA NEWPORT
NEWPORT, RHODE ISLAND

Author: MJH/NEC Date: 11/27/2013

TETRA TECH