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FINAL REMEDIAL INVESTIGATION REPORT SITE 66 TURKEY RUN DISPOSAL AREA

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CH2M HILL

Final

Remedial Investigation Report
Site 66 – Turkey Run Disposal Area

Naval Support Facility Indian Head
Indian Head, Maryland

Contract Task Order JU04

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Prepared by

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Executive Summary

Introduction

This report presents the results of a Remedial Investigation (RI) conducted at Site 66, the Turkey Run Disposal Area, at Naval Support Facility Indian Head (NSF-IH), in Indian Head, Maryland. This RI report was prepared by CH2M HILL under the United States Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Atlantic Division, Comprehensive Long-Term Environmental Action Navy 1000 Contract N62470-08-D-1000, Contract Task Order JU04, in accordance with the *Final Uniform Federal Policy-Sampling and Analysis Plan (UFP-SAP) for Site 66 Turkey Run Disposal Area* (CH2M HILL, 2010). This RI report is being submitted to NAVFAC Washington, NSF-IH, the United States Environmental Protection Agency (USEPA) Region III, and the Maryland Department of the Environment to support a site management decision for the site.

The activities described herein are part of the overall Installation Restoration (IR) Program being implemented at NSF-IH. The work was conducted pursuant to the Federal Facility Agreement between the Navy and USEPA Region III (USEPA/Navy, 2000). This RI report presents the data collected during the field investigation and likewise, interpretations and evaluations relating to the nature and extent of contamination (i.e., contaminant types, concentrations, distribution, and migration pathways) and contaminant fate and transport. Additionally, the report presents an assessment of the potential risks to human health and the environment and recommendations regarding additional activities.

Site Background

Site 66, the Turkey Run Disposal Area, is defined as the area where wastes were observed on the land surface during Site Inspection (SI) activities in 2007, and covers approximately 8.2 acres. It was designated as an IR Program site following discovery of the site by NSF-IH personnel during RI activities at Site 11, the Caffee Road Landfill, south of Site 66, and discussion with the Indian Head Installation Restoration Team (IHIRT). Site 66 is an unregulated dump area that contains various solid wastes, including ash, construction debris, metal scrap, lead flooring, scrap wood, asphalt, and laboratory bottles.

Environmental sampling was conducted at Site 66 in April 2007 as part of the SI to identify potential contaminants in surface soil, subsurface soil, ash material, groundwater, surface water, and sediment at the site. Analytical results were evaluated and compared against human health and ecological screening criteria and installation-specific background concentrations in a two-step screening process. Based on the results of the human health and ecological screening processes, the collection and analysis of additional surface soil, subsurface soil, *in-situ* groundwater, and sediment samples were recommended to further characterize the extent of environmental impacts. The collection of additional ash samples was also recommended to further characterize the content of the waste, based on IHIRT discussion of the SI findings. Surface water was not recommended for further assessment, because the risk screening suggested that exposure to surface water was unlikely to result in unacceptable human health or ecological risks. Based on the proposed level of effort needed to address site media recommended for further assessment, the Team agreed that an RI should be conducted for Site 66.

Objectives and Scope of Work

Field activities associated with the RI were conducted between September 7 and October 1, 2010. The work consisted of surface and subsurface soil sampling, sediment and ash sampling, and monitoring well installation and groundwater sampling. The objectives of the RI were to answer the following specific questions:

- What is the nature and extent of contamination in the surface and subsurface soil, including ash, within and outside the current Site 66 boundary?
- What is the nature and extent of contamination in the shallow groundwater at Site 66?
- What is the extent of sediment contamination within and downstream of the current Site 66 boundary?

- What is the extent and thickness of the buried waste material within and outside the current Site 66 boundary?
- Do the concentrations of constituents detected in soil, groundwater, sediment, or ash material present unacceptable human health or ecological risk?
- Do the constituent concentrations in the soil, groundwater, sediment, or ash material warrant further action?
- The data collected as part of the SI were used, as appropriate, to supplement the RI data in describing the physical setting of Site 66, the nature and extent of contamination at the site, and to evaluate potential human health and ecological risks from exposure to site media.

Conclusions and Recommendations

Based on the findings of this RI, fill material is found within the site boundary at depths of up to approximately 20.5 feet below ground surface. The horizontal and vertical extent of waste material is generally consistent with the findings of the 2007 SI. However, an additional area of subsurface fill material and ash was observed in two locations during the installation of downgradient monitoring wells; the lateral extent of the fill material in these two areas was not delineated during the RI field activities.

Although the extent of the buried waste material was not fully delineated, the characterization of the soil and groundwater was sufficient to complete the risk characterization. The baseline human health risk assessment concluded that there are no unacceptable risks or hazards for current receptors (adult and adolescent trespassers and visitors) exposed to site media. Potentially unacceptable risks are associated with future industrial and hypothetical residential use of the site. The screening ecological risk assessment concluded that there are potential risks to ecological receptors from exposure to site-related contaminants in surface soil, sediment, and ash.

Based on the results of the risk assessments, a feasibility study is recommended to evaluate remedial alternatives for those exposure scenarios that potentially pose an unacceptable risk. Further investigation also is recommended to delineate the extent of buried fill and ash-like material downgradient of the site, south of Olsen Road, and to further characterize the extent of groundwater contamination downgradient of the site.

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Abbreviations and Acronyms

ADAF	age-dependent adjustment factor
ALM	adult lead methodology
amsl	above mean sea level
ATSDR	Agency for Toxic Substances and Disease Registry
BAF	bioaccumulation factors
BCF	bioconcentration factors
BERA	baseline ecological risk assessment
bgs	below ground surface
BTAG	Biological Technical Assistance Group
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COPC	constituents of potential concern
CR	carcinogenic risk
CSF	cancer slope factor
CTE	central tendency exposure
DABS	dermal absorption factor
DPT	direct-push technology
Eco-SSLs	ecological soil screening levels
ELCR	excess lifetime cancer risk
EPC	exposure point concentration
ERA	ecological risk assessment
GSD	geometric standard deviation
HHRA	human health risk assessment
HI	hazard index
HQ	hazard quotient
IDW	investigation-derived waste
IEUBK	Integrated Exposure Uptake Biokinetic
IHIRT	Indian Head Installation Restoration Team
IR	Installation Restoration
IRIS	Integrated Risk Information System
IUR	inhalation unit risk factor
K_{oc}	organic carbon partition coefficient
K_{ow}	octanol-water partition coefficient
LOAEL	lowest-observed-adverse-effect level
MATC	maximum acceptable toxicant concentration
MCL	maximum contaminant level
MMOA	mutagenic mode of action
NAVFAC	Naval Facilities Engineering Command
Navy	Department of the Navy
NSF-IH	Naval Support Facility Indian Head
NOAEL	no-observed-adverse-effect level
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl

PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RAGS	Risk Assessment Guidance for Superfund
RfC	reference concentration
RfD	reference dose
RI	remedial investigation
RME	reasonable maximum exposure
RSL	regional screening level
SERA	screening–level ecological risk assessment
SI	site inspection
SSL	soil-screening level
SVOC	semivolatile organic compounds
TAL	target analyte list
TCL	target compound list
TEF	toxicity equivalence factor
TEQ	toxicity equivalence concentration
TOC	total organic carbon
TRV	toxicity reference values
UCL	upper confidence limit
UF	uncertainty factor
UFP-SAP	Uniform Federal Policy-Sampling and Analysis Plan
USEPA	U.S. Environmental Protection Agency
VOC	volatile organic compound

SECTION 1

Introduction

This report presents the results of a Remedial Investigation (RI) conducted at Site 66, the Turkey Run Disposal Area, at Naval Support Facility Indian Head (NSF-IH), in Indian Head, Maryland. This RI report was prepared by CH2M HILL under the United States Department of the Navy (Navy), Naval Facilities Engineering Command (NAVFAC), Atlantic Division, Comprehensive Long-Term Environmental Action Navy 1000 Contract N62470-08-D-1000, Contract Task Order JU04, in accordance with the *Final Uniform Federal Policy-Sampling and Analysis Plan* (UFP-SAP) *for Site 66 Turkey Run Disposal Area* (CH2M HILL, 2010). This RI report is being submitted to NAVFAC Washington, NSF-IH, the United States Environmental Protection Agency (USEPA) Region III, and the Maryland Department of the Environment to support a site management decision for the site.

The activities described herein are part of the overall Installation Restoration (IR) Program being implemented at NSF-IH under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). The work was conducted pursuant to the Federal Facility Agreement between the Navy and USEPA Region III (USEPA/Navy, 2000). This RI report presents the data collected during the field investigation and, likewise, interpretations and evaluations relating to the nature and extent of contamination (i.e., contaminant types, concentrations, distribution, and migration pathways) and contaminant fate and transport. Additionally, the report presents an assessment of the potential risks to human health and the environment and recommendations regarding additional activities.

1.1 Objectives and Scope of Work

Based on historical information, including analytical data collected during the Site 66 Site Inspection (SI), a source of CERCLA-related release(s) was determined to exist at Site 66. While historical data indicated release(s) had contaminated surrounding media, the nature and extent (and associated human health and ecological risks) had not been sufficiently delineated. Further, the limits (both horizontal and vertical) of the source area (i.e., waste material) had not been delineated. Therefore, an RI was conducted to further characterize site conditions.

The objectives of the RI were to answer the following specific questions:

- What is the nature and extent of contamination in the surface and subsurface soil, including ash, within and outside the current Site 66 boundary?
- What is the nature and extent of contamination in the shallow groundwater at Site 66?
- What is the extent of sediment contamination within and downstream of the current Site 66 boundary?
- What is the extent and thickness of the buried waste material within and outside the current Site 66 boundary?
- Do the concentrations of constituents detected in soil, groundwater, sediment, or ash material present unacceptable human health or ecological risk?
- Do the constituent concentrations in the soil, groundwater, sediment, or ash material warrant further action?
- These objectives were pursued through the following field and laboratory activities: (1) collection and analysis of surface and subsurface soil samples, both within and outside of the previously defined Site 66 boundary; (2) installation and sampling of permanent groundwater monitoring wells; (3) collection and analysis of sediment samples from the unnamed stream within, as well as downstream of the previously defined Site 66 boundary; (4) collection and analysis of ash samples from previously defined ash piles; and (5) advancement of additional soil borings to determine depth to native soil and stratigraphy purposes. All soil borings, as well as monitoring well locations, were logged for stratigraphy.

The analytical data collected as part of the RI, as well as data collected previously as part of the SI (as appropriate) were evaluated as part of a baseline human health risk assessment (HHRA) and screening-level ecological risk

assessment (SERA) to assess whether the concentrations of constituents detected in the soil, groundwater, sediment, or ash materials present potentially unacceptable risks to current and potential future receptors at Site 66.

1.2 Report Organization

This report summarizes the data collected during the RI, presents an interpretation of the data, documents the nature and extent of contamination for affected media, and provides recommendations for further activities at the site. Contaminant-migration pathways and transport mechanisms for affected media are also evaluated, as part of an assessment of potential human-health and environmental risks associated with current site conditions.

This report is divided into the following eight sections:

1. **Introduction:** Describes the objectives and scope of the RI, as well as the organization of the RI report.
2. **Environmental Setting:** Describes the current and historical land uses associated with NSF-IH and Site 66, discusses previous investigations conducted at the site, and summarizes the physical characteristics of the site, such as climate, geology, hydrology and ecology.
3. **Remedial Investigation Activities:** Provides details of the sampling and data-gathering methods and approaches used during the field activities.
4. **Investigation Findings:** Presents the analytical data pertaining to each media type and assesses the nature and extent of contamination at the site.
5. **Contaminant Fate and Transport:** Describes contaminant migration at the site in the context of the mobility and persistence of the contamination.
6. **Human Health Risk Assessment:** Describes the potential effects of identified contaminants on human health.
7. **Ecological Risk Assessment:** Describes the potential effects of identified contaminants on the environment.
8. **Conclusions and Recommendations:** Summarizes the results of the RI and the potential risks posed to human health and the environment, as well as provides recommendations for additional activities at the site.

Supplemental information, such as figures, tables, soil-boring and well-construction logs, well permits, survey data, raw analytical data obtained during the RI investigation, and the human health and environmental risk assessment supporting calculations, are included as appendices to this report.

SECTION 2

Environmental Setting

This section discusses the physical characteristics of NSF-IH and Site 66, including the topography and climate, soils, hydrology, geology, hydrogeology, and ecology. A summary of ecological receptors and exposure pathways specific to Site 66 are presented in Section 7.

2.1 Activity Background

2.1.1 General

NSF-IH is a Navy facility located in northwestern Charles County, Maryland, approximately 25 miles southwest of Washington, D.C. The facility consists of two tracts of land: the Main Area on the Cornwallis Neck Peninsula and the Stump Neck Annex across Mattawoman Creek from the Main Area (Figure 2-1).

The Main Area is approximately 2,500 acres and is bounded by the Potomac River to the northwest, west, and south; Mattawoman Creek to the south and east; and the town of Indian Head to the northeast. Included as part of the Main Area are Marsh Island and Thoroughfare Island in Mattawoman Creek. Elevations range from sea level to approximately 125 feet above mean sea level (amsl). The Stump Neck Annex is approximately 1,084 acres and is bounded by Mattawoman Creek to the northeast, the Potomac River to the northwest, and Chicamuxen Creek to the south-southwest. Elevations range from sea level to approximately 10 feet amsl. Both the Main Area and the Annex are on the National Priorities List, but they are separated by Mattawoman Creek (noncontiguous), have separate USEPA identification numbers, and perform dissimilar operations.

Site 66, the Turkey Run Disposal Area, is in the Main Area, west of West Caffee Road, and extends approximately 900 feet north of Olsen Road along both sides of the unnamed creek that discharges into Mattawoman Creek, a tributary of the Potomac River (Figure 2-2). The site is defined as the area that includes visible wastes present on the land surface, and it covers approximately 8.2 acres.

2.1.2 Current and Historical Uses of NSF-IH

NSF-IH was established in 1890 and is the Navy's oldest continuously operating ordnance station. At various times during its operation, NSF-IH has served as a gun and armor proving ground, a powder factory, a propellant plant, and a research facility. The U.S. Government purchased Stump Neck Annex in 1901. The property provided a safety buffer for the testing of larger naval guns that were tested by firing into the Potomac River, and at Stump Neck.

The Indian Head installation was enlarged by another 1,160 acres of adjacent land in 1918, during World War I. This expansion included the purchase of Hopewell Farm and Hog Island, which was then an islet in the Mattawoman Creek and has since become attached to the Cornwallis Neck peninsula. When the Dahlgren Naval Proving Ground was established as a separate command in 1932, NSF-IH was re-designated the Naval Powder Factory (Parsons Engineering-Science, Inc., 2000).

The production of gunpowder and development of new explosives during the onset of World War II resulted in the construction of several new facilities at Indian Head, as well as the construction of Route 210 as a Defense Access Road in 1943. Development and improvements at Indian Head continued throughout the 1950s and 1960s, and in 1966, NSF-IH was renamed the Naval Ordnance Station. Rum Point, an 80-acre promontory in the Mattawoman Creek near Stump Neck, was also acquired in this year. Bullitts Neck was obtained in five small acquisitions between 1965 and 1966 in order to meet safety and security needs arising from explosive magazines at the Indian Head station (Parsons Engineering-Science, Inc., 2000).

After the Vietnam conflict, the mission of NSF-IH shifted from primarily a production facility to a highly technical engineering support operation. In 1987, the Naval Ordnance Station was established as a Center for Excellence to promote technological excellence in the following specialized fields: energetic chemicals; guns, rockets and missile propulsion; ordnance devices; explosives; safety and environmental protection; and simulators and training

(Parsons Engineering-Science, Inc., 2000). Current military land use includes operations and training; production; maintenance and utilities; research, development, testing and evaluation; explosive storage; supply and non-explosive storage; administration; community facilities and services; housing; and open space.

Forest stands comprise approximately 47 percent, or 1,603 acres, of NSF-IH and include pine, pine-hardwood, and hardwood forest cover types. Recreation areas at Indian Head include approximately 1,150 acres of designated hunting areas, approximately 2 miles of shoreline fishing areas, and 1.5 miles of nature trails.

2.1.3 Surrounding Land Uses

NSF-IH is generally surrounded by commercial, residential, and State Park land to the east and south of the main installation and Stump Neck Annex. The town of Indian Head is located just east of NSF-IH, where most residential developments are located. The Indian Head Highway (Route 210) extends eastward from the NSF-IH main gate, attracting businesses and providing access to residential areas off the main highway. The Potomac River borders the main installation to the north and west and Stump Neck to the west. Mason Neck National Wildlife Refuge is located across the Potomac River, north of the main installation. The Mattawoman Natural Environment Area is state-owned property located along the southern edge of the Mattawoman Creek east of the main installation.

The Stump Neck Annex is bordered to the north by the Mattawoman Creek, to the east by General Smallwood State Park and Sweden Point Marina, and to the south by Chicamuxen Creek, agricultural lands, and low-density residential development. The Chicamuxen Wildlife Management Area is located adjacent to and south of the Stump Neck Annex.

2.2 Site-Specific Description

2.2.1 Turkey Run Disposal Area

On October 8, 2004, Site 66 was designated as a new IR Program site following discovery of the site by members of the Indian Head Installation Restoration Team (IHIRT) during a site visit in January 2003 in support of the remedial investigation of Site 11, the Caffee Road Landfill. The site appeared to be an unregulated dump area that contained various solid wastes, including construction debris, metal scrap, lead flooring, scrap wood, asphalt, and laboratory bottles.

2.2.2 Previous Investigations

An initial site reconnaissance was conducted by CH2M HILL, NAVFAC Washington, NSF-IH, and the Maryland Department of the Environment on October 11, 2006. Waste materials such as lead flooring, roofing debris, ash/slag, metal debris (sheeting, pipes, copper pieces, rebar), laboratory bottles and empty 5-gallon containers, concrete pads and debris, creosote telephone poles, land-clearing debris, and other miscellaneous materials (tires, trash cans, appliances) were observed at the site. The IHIRT discussed the observations during the November 8, 2006, partnering team meeting and developed a proposed sampling approach for the site. Previous environmental investigations had not been conducted at this site.

A SI was conducted at Site 66 in April 2007 to identify the potential contaminants in site surface soil, subsurface soil, groundwater, surface water, and sediment. During the SI, co-located surface soil, subsurface soil, and *in situ* groundwater samples were collected from 10 direct-push technology (DPT) soil boring locations across the site. In addition, 5 co-located surface water and sediment samples and an additional 10 surface soil grab samples were collected. Three samples were also collected from the ash-like material observed at the site. All soil, groundwater, surface water, and sediment samples were analyzed for USEPA SW-846 target compound list (TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and pesticides/ polychlorinated biphenyls (PCBs); target analyte list (TAL) total metals and cyanide; explosives including nitroglycerine and nitroguanidine; and perchlorate. In addition, soil and sediment samples were analyzed for pH and total organic carbon (TOC), and surface water samples were analyzed for TAL dissolved metals and hardness. TAL dissolved metals were also analyzed in groundwater samples. The ash-like samples were analyzed for dioxins and furans. The analytical results were validated by a third party in accordance with applicable USEPA guidance.

Following the completion of the fieldwork, field observations, field measurements, and analytical data from the site were reviewed and interpreted. Analytical results were evaluated and compared against human health and ecological screening criteria and installation-specific background concentrations in a two-step screening process.

Based on the results of the human health risk screening, surface soil, subsurface soil, and groundwater were recommended for further assessment. The risk screening concluded that exposure to surface water or sediment is unlikely to result in any unacceptable human health risks because of the spatial distribution of the detected constituents and the maximum detected concentrations of the constituents. Dioxins and furans did not exceed human health risk screening criteria and were not recommended for further assessment in the SI. The IHIRT later decided that it was premature to eliminate any analyses in the RI stage of investigation, given the nature of the site.

Based on the results of the ecological risk screening, surface soil and sediment were recommended for further assessment. The screening results suggested that the chemicals detected in groundwater either are not migrating to surface water or are not persisting in surface water and therefore do no warrant further consideration for ecological risk. In addition, the screening results suggested that the inorganics detected in surface water likely are related to background conditions and do not warrant further consideration for ecological risk. The risk screening results indicated a potentially unacceptable risk to mammals from dioxin and furan compounds in the ash material; however, the risk estimate was driven by high detection limits, and the sum of the detected congeners did not exceed the screening value. Therefore, it was concluded that the potential risk is probably overestimated and an unacceptable risk is unlikely.

Although not recommended for further assessment in the SI, ash was recommended for further assessment, based on IHIRT discussion of the SI findings.

2.3 Climate

The climate is typical of the humid temperate continental climatic zone in which the facility lies. This zone has hot, humid summers and relatively mild winters. Because of its proximity to the Potomac River and its tributaries, NSF-IH experiences less extreme temperatures, higher precipitation, and higher humidity than inland areas. The average daily maximum temperature is 67.5°F, and the average daily minimum temperature is 45°F. The warmest part of the year is in late July, and the coldest is in late January and early February. The growing season is approximately 190 days, from mid-April through mid-October (U.S. Department of Agriculture, 1974).

2.4 Topography

The local topography of NSF-IH includes an upland area in the northern portion of the facility, extending northeast beyond the main gate. This upland area slopes to the north and northwest ending as bluffs along the shore of the Potomac River. The upland gently slopes to the southeast toward the southern boundary of the facility, where low-lying swampy areas are located along Mattawoman Creek. Along the eastern portion of NSF-IH, the eroded edge of the upland forms steep slopes along Mattawoman Creek (Ensafe/Allen and Hoshall, 1994).

Topography at Site 66 is gently to steeply sloping. The site appears to be hummocky along the banks of the unnamed creek because of mounds of waste and ash material, which are partially overgrown with vegetation. Surface water flows to several surface water bodies across the site (associated with the unnamed creek) which eventually discharges to Mattawoman Creek.

2.5 Soils

The soils at NSF-IH consist of silty and sandy loams with minor amounts of gravel and tend to have low permeability and low shrink-swell potential. Four dominant soil associations are found at Indian Head (U.S. Department of Agriculture, 1974):

- **Beltsville-Gravelly Land-Bourne:** Level to moderately sloping soils, moderately well-drained and loamy, and moderately deep. They also include dense, root-inhibiting fragipans and steep, gravelly soil materials.

- **Beltsville-Exum-Wickham:** Level to moderately sloping, moderately well-drained and well-drained loamy soils. Soils within this association are moderately deep, and include dense, root-inhibiting fragipans and steep, gravelly soil materials.
- **Evesboro-Keyport-Elkton:** Level to moderately sloping, excessively drained, sandy soils and moderately well-drained and poorly drained, level to gently sloping, loamy soils with clayey subsoil.
- **Bibb-Tidal Marsh-Swamp:** Level or nearly level, poorly drained soils, generally located on floodplains and in miscellaneous unclassified wetlands.

2.6 Hydrology

There are three principal waterways located in the immediate vicinity of NSF-IH: the Potomac River, Mattawoman Creek, and Chicamuxen Creek. A number of natural drainage channels on the station receive rapid flow during intense summer storms, but usually flow intermittently with discharges from storm and industrial sewers. These natural drainage channels tend to flow toward Mattawoman Creek, the lowest hydraulic point in the area (Naval Energy and Environment Support Activity, 1992).

2.7 Geology

2.7.1 NSF-IH Geology

The surficial geology of NSF-IH comprises Cretaceous fluviodeltic, Tertiary marine, and Quaternary fluvial deposits, which include the Cretaceous Upper Patapsco Formation, the Tertiary Aquia Formation, and the Quaternary deposits of the Potomac River System. The upland is an erosional remnant of the Upper Patapsco Formation capped by a thin layer of Tertiary Aquia Formation. The Quaternary sediments make up the majority of the surficial exposures and are generally thickest in the lower relief areas.

The U.S. Geological Survey reports that the early Potomac River cut paleochannels across the Indian Head Peninsula during the Quaternary (Hiortdahl, 1990). A paleochannel is evident where Quaternary deposits form a belt along the northeast end and the southeastern part of the facility. The southern section of the paleochannel extends across the entire southern region of the facility. Portions of these units subsequently have been eroded by the current Potomac River and Mattawoman Creek systems.

Soils at NSF-IH are typically loams; however, some sandy soils prevail at lower surface elevations. The soils in the northern part of the Indian Head peninsula area have fragipan in the lower part of the subsoil (3 to 4 feet), which minimizes the downward movement of water. Generally, the loamy soils have low permeability.

Foundation soil borings from 10 to over 100 feet deep show the presence of extensive zones of fine-grained sediment such as clay, silt, and sandy or silty clay. Where interbedded lenses of sand were found, extensive layers of fine-grained clays were encountered below the interbedded coarse-grained materials (NEESA, 1993). At depths generally greater than 40 to 60 feet, sand deposits are typically encountered beneath the extensive zones of clay discussed above. These sands are most likely the top of the upper Raritan and Patapsco Formation.

2.7.2 Site-Specific Geology

The following distinct geological units were identified at the site during the SI and RI:

- **Soil** – Soil at Site 66 consists of a mixture of silt, clay, and sand. Surface soil (0-6 inches) mostly consists of sandy silt and organic matter in the form of leaf debris and root mass from plants. Though large chunks of waste debris were observed to be buried or partially buried by surface soil, small particles of waste do not appear to be mixed within the soil unit. The subsurface lithology consists of mottled, yellowish brown and gray silt and clay interbedded with thin lenses or layers of poorly graded fine sand. The silt and clay tend to have medium to low plasticity and are medium stiff to hard. The characteristics of these silt and clay soils are similar in nature to native soils encountered elsewhere across NSF-IH.
- **Fill** – Fill material at Site 66 consists of concrete, brick, gravel, cinders, charred wood, and steel. This debris was found primarily throughout the central portion of the site at depths up to 20.5 feet below ground surface

(bgs), yet is overlain in some areas by varying thicknesses of yellowish brown to grayish brown sand, silt and clay. Areas of buried and partially buried debris were found within the central portion of the site, primarily along the banks of the unnamed stream and within depressions in the original surface topography. Fill materials were observed to be interspersed with soil in some locations, which could have been the result of re-grading.

- **Ash** – Ash material at Site 66 is composed of dark gray to black, loose, fine to very fine silty sand-sized particles. Surficial ash piles were observed at three locations within the site boundary. As was observed at varying depths and thicknesses in several of the soil borings completed within the site boundary and in two locations south of the site boundary, across Olsen Road.

2.8 Hydrogeology

2.8.1 NSF-IH Hydrogeology

The shallow, water-bearing zones (water table aquifer) of the facility are controlled by the shallow soil deposits. In general, the water table appears to be between 7 and 10 feet bgs within the Quaternary sediment belt. Lithologies of the water-bearing zones are usually restricted to silty and sandy clay zones. A thin layer of the Tertiary deposits overlie the Upper Patapsco confining unit along the upland. Soils in this area are very stiff, with lithologies ranging from silt to silty clays. A marker bed on top of the Upper Patapsco Formation, an iron-cemented reddish sand unit, was encountered in three borings in the upland area at depths ranging from 30 to 40 feet. Interception of this unit indicated the Upper Patapsco confining unit. It also indicated that the Patapsco aquifer would be the uppermost aquifer. The Patapsco aquifer is estimated to be more than 100 feet bgs in the upland area (Hiortdahl, 1993).

Data collected during Phase I and Phase II of the NSF-IH SI (Ensafe/Allen and Hoshall, 1994) generally indicated that the inorganic quality of the water table aquifer is poor. Analytical results of groundwater samples indicate elevated concentrations of total dissolved solids in the water table aquifer, suggesting that water from the surficial zones is not suitable as a potable water source. The water table aquifer is not used as a potable water source on the peninsula (Hiortdahl, 1993).

2.8.2 Site-Specific Hydrogeology

Based on water level measurements collected in September 2010 (Table 3-3), the static water table at the site ranges from approximately 5.40 feet bgs at IS66MW02 to 10.88 feet bgs at IS66MW03, as shown on Figure 2-3. This groundwater level range corresponds to an approximate elevation range of 23.96 feet amsl at IS66MW01 to 3.58 feet bgs at IS66MW04. Based on this, shallow groundwater flows to the south and southwest toward the unnamed creek.

2.9 NSF-IH Ecology

2.9.1 Terrestrial Systems

NSF-IH comprises approximately 2,000 acres of terrestrial ecological communities on Cornwallis Neck and about 1,000 acres on Stump Neck. Terrestrial habitats in these areas are classified as forested uplands, open uplands, and terrestrial cultural uplands. The forested areas on NSF-IH are dominated by oaks (*Quercus* spp.), hickories (*Carya* spp.), tulip trees (*Liriodendron tulipifera*), and pine (*Pinus* spp.). Flowering dogwood (*Cornus florida*), redbud (*Cercis canadensis*), and American holly (*Ilex opaca*) are typical of the upland understory. The forests are heavily fragmented by buildings, roads, and other structures. Terrestrial cultural uplands consist of areas that have been created, maintained, or modified by human activities. These areas are characterized as either mowed grass/landscaped areas, wildlife food plots, or successional fields and roadsides.

2.9.2 Wetland Systems

National Wetland Inventory maps identify approximately 290 acres of wetlands on NSF-IH. Of this acreage, tidal estuarine systems total 234 acres, forested wetlands total 42 acres, emergent marshes and shrub swamps total

5.5 acres, and lacustrine systems make up the remaining acreage. There are also approximately 17 miles of riverine systems in this area.

At NSF-IH, the tidal estuarine systems are associated with the Potomac River, Mattawoman Creek, and Chicamuxen Creek. Mattawoman Creek marshes are typically dominated by wild rice (*Zizania aquatica*), big cordgrass (*Spartina cynosuriodes*), cattail (*Typha* spp.), rose-mallow (*Hibiscus moscheutos*), tickseed sunflowers (*Bidens* spp.), pickerelweed (*Pontederia cordata*), and arrow arum (*Peltandra virginica*). Intertidal shoreline fringe marshes are extremely rare and are dominated by water willow (*Justica americana*) or American threesquare (*Scirpus pungens*). The broad expansive marsh of Chicamuxen Creek contains an extremely diverse flora. An informal survey of this marsh conducted in 1988 identified more than 80 species of plants (Maryland Department of Natural Resources, 1992).

2.9.3 Fauna

The diverse ecological communities at NSF-IH support many wildlife species. Faunal inventories were conducted by Maryland Natural Heritage Program as part of the 1991–1992 rare, threatened, and endangered species survey. NSF-IH natural resources staff have conducted additional waterfowl and amphibian surveys. Currently, an estimated 15 species of damselflies, 26 of dragonflies, 48 of butterflies, 29 of mammals, 23 of reptiles, 20 of amphibians, and 119 of birds utilize the available habitat at NSF-IH (Maryland Department of Natural Resources, 1992; Parsons Engineering-Science, Inc., 2000).

2.9.4 Rare, Threatened, and Endangered Species

A survey of rare, threatened, and endangered species was conducted by the Maryland Natural Heritage Program in 1991 and 1992. The survey focused on areas with a high potential for supporting rare, threatened, and endangered species. None of the federally listed threatened species have been identified on NSF-IH. The remainder of the species listed includes five state-listed endangered plants, two state-listed threatened plants, one state-listed endangered invertebrate and 18 species of regional concern.

Three additional rare tree species were identified during the 1995 Urban Tree Inventory: the state-threatened eastern arborvitae (*Thuja occidentalis*), state-rare shingle oak (*Quercus imbricaria*), and potentially state-rare pussy willow (*Salix discolor*).

The 1991–1992 survey also identified 10 areas of ecological significance (totaling 614 acres) that have the potential to support the long-term protection of the rare, threatened, and endangered species. These protection areas are Bullitt Neck Point, Cornwallis Neck Marshes, Hog Island Cove, Thoroughfare Island, Chicamuxen Creek Marsh, Magnolia Seep, Porter Woods, Rum Point, Stump Neck Beaver Marsh, and West Stump Neck Shoreline.

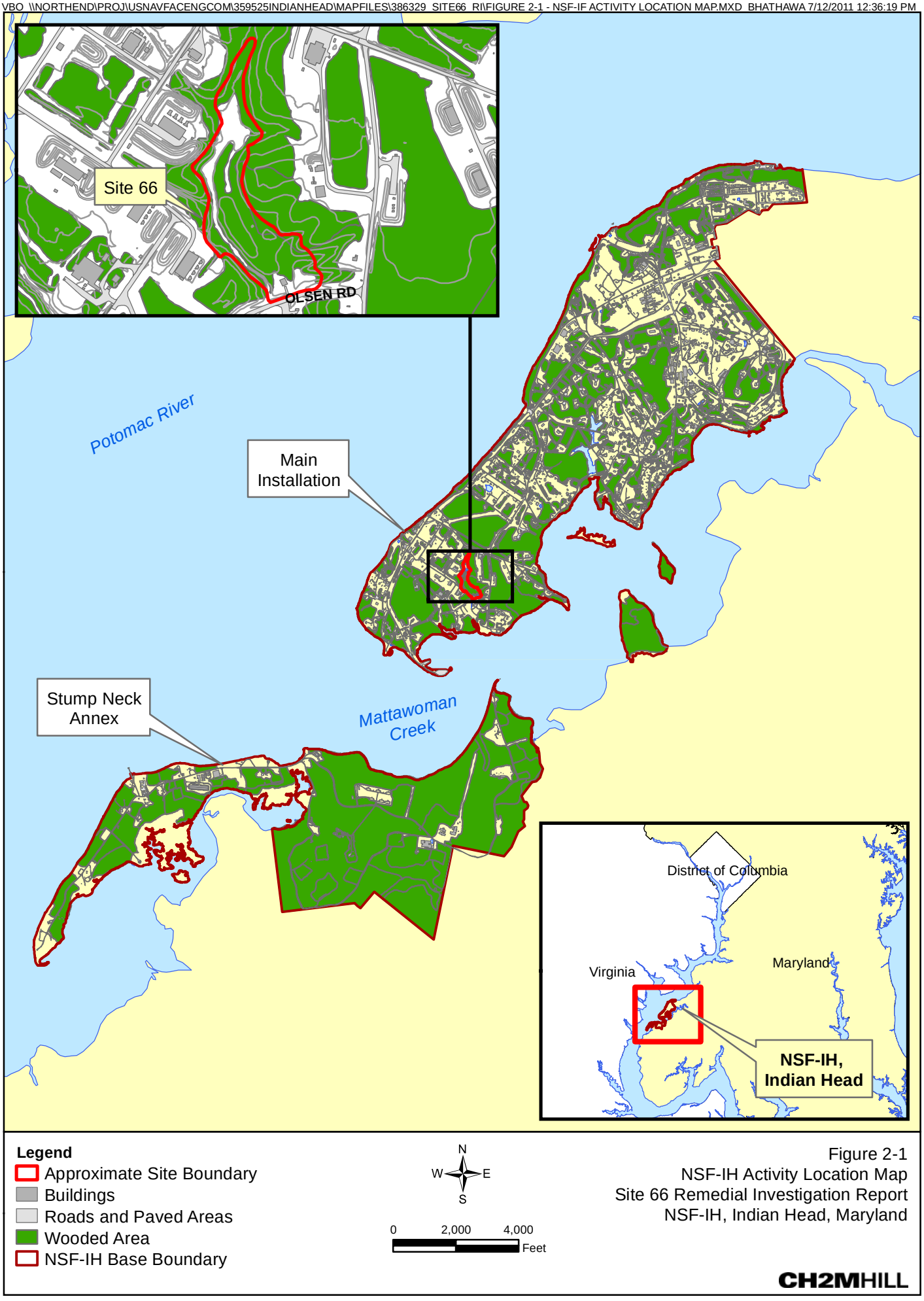

Figure 2-1
NSF-IH Activity Location Map
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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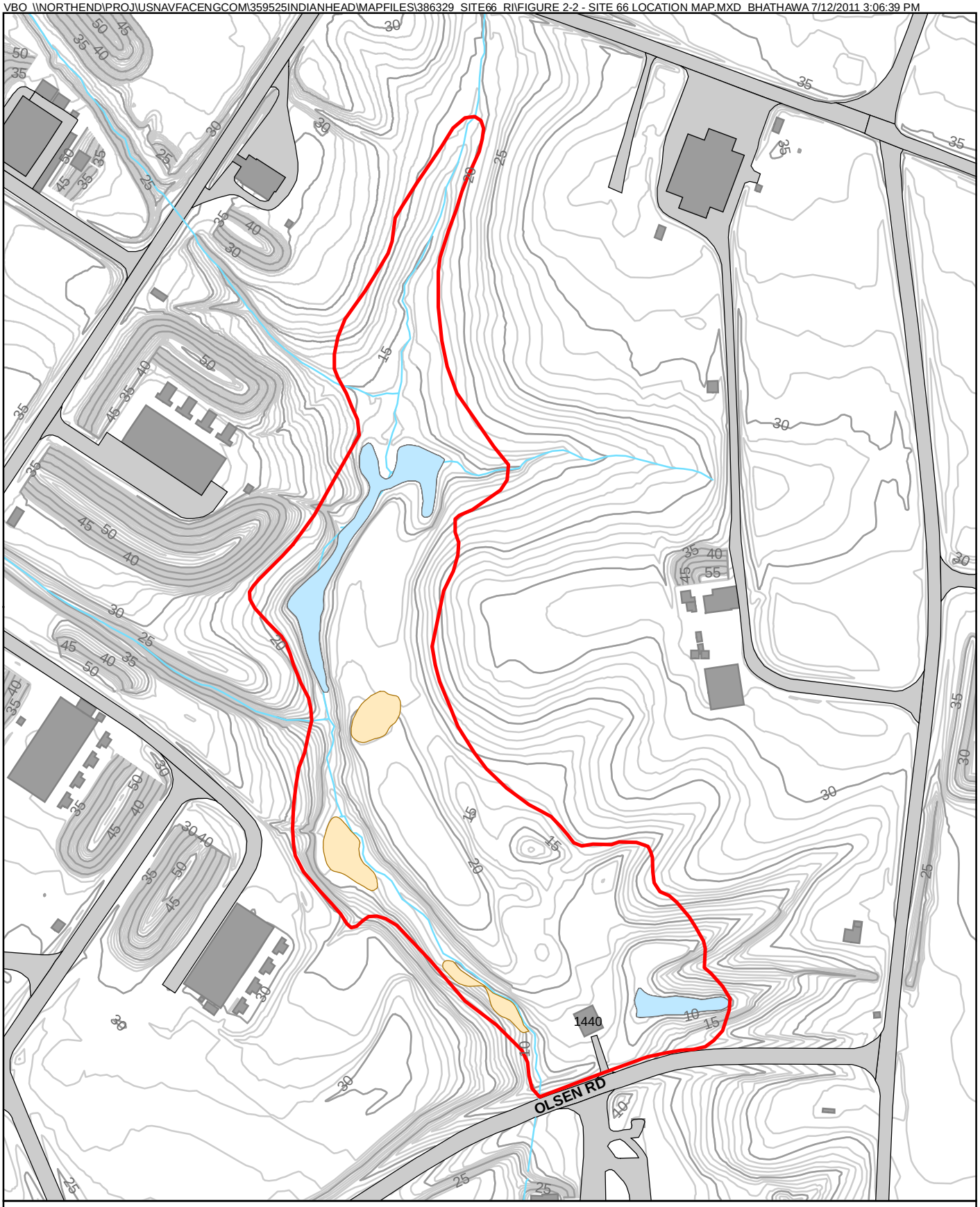

Legend

- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour
- Roads
- Buildings
- Surface Waterbodies

N
W E
S

0 100 200
Feet

Figure 2-2
Site 66 Location Map
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 2-3 - WATER TABLE ELEVATION CONTOURS.MXD BHATHAWA 7/13/2011 12:45:08 PM

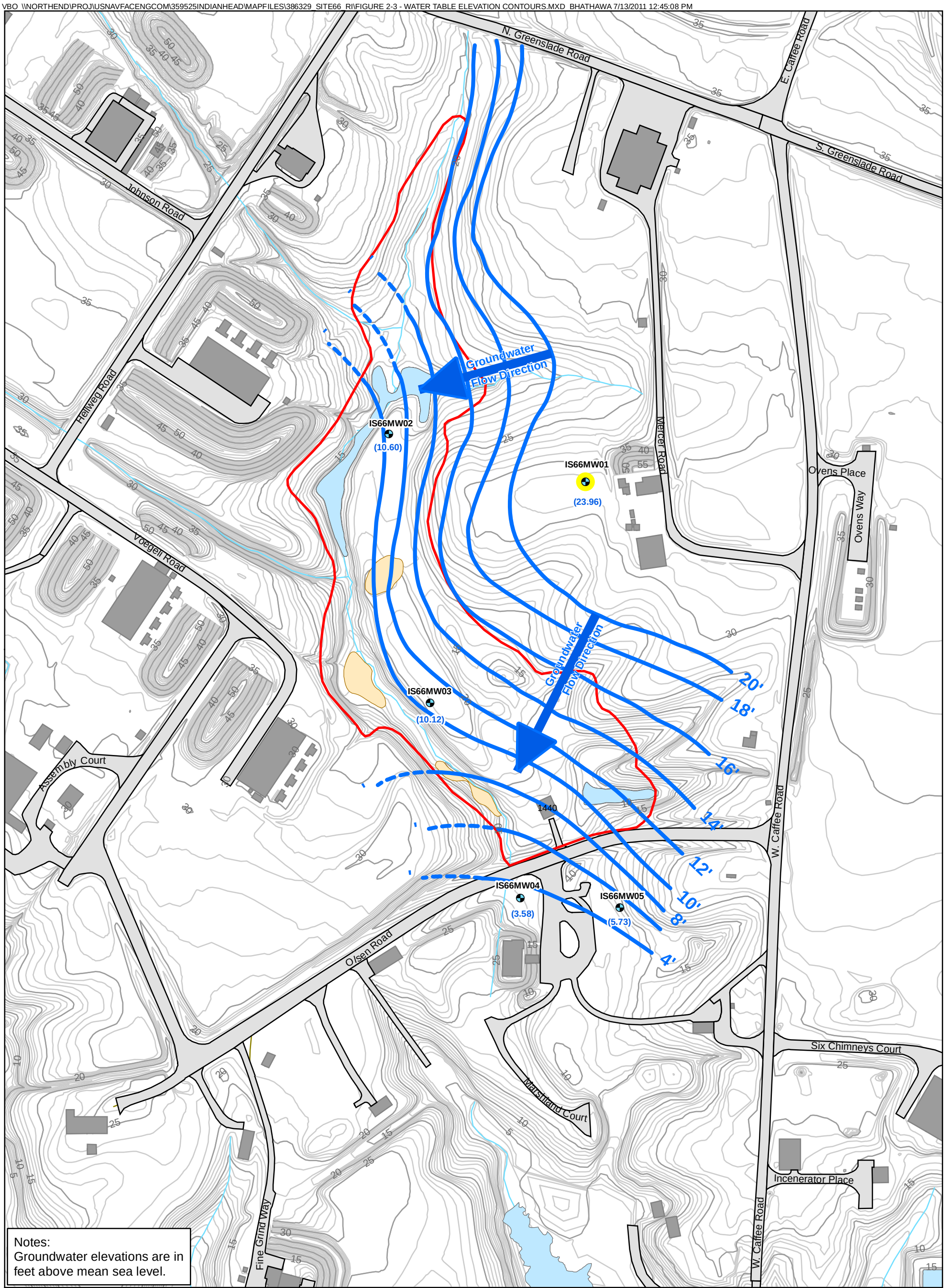

Figure 2-3
Water Table Elevation Contours
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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SECTION 3
Field Activities

3.1 Field Investigation Details

Fieldwork for the RI was conducted at Site 66 from September 7 through October 1, 2010, to augment the data collected during the 2007 SI to define the nature and extent of potential contaminants in site surface soil, subsurface soil, groundwater, sediment, and ash. In addition to the collection of environmental samples, soil borings also were advanced to further define the limits of buried waste at the site. Sample locations were chosen based on the April 2007 SI results, as well as field conditions observed during the RI field activities. Table 3-1 provides a summary of the sampling and analysis conducted during the SI and RI. All soil borings were logged for stratigraphy. The detailed soil boring logs and monitoring well construction diagrams are included in Appendices A and B, respectively. All locations were professionally surveyed by Thoth of Silver Spring, Maryland, following sample collection. The complete survey report is found in Appendix C.

Samples were collected in accordance with the master plans for environmental investigations at NSF-IH (TetraTech NUS, 2004) and the standard operating procedures and guidelines in the UFP-SAP (CH2M HILL, 2010), except as noted in Section 3.2, Deviations from the Work Plan. All samples were collected using clean, dedicated sampling devices, and placed in certified-clean containers provided by the laboratory. Quality assurance/quality control (QA/QC) samples were collected, as specified in the *UFP-SAP*, for each medium. Samples were placed in clean coolers and shipped to the laboratories via overnight courier under executed chains-of-custody. All samples complied with method holding time requirements. Samples collected for dioxin analysis were sent to Columbia Analytical Sevices of Houston, Texas. All other environmental samples were analyzed by Katahdin Analytical Services of Scarborough, Maine. Field activities are described in more detail in the following sections.

3.1.1 Surface Soil Sampling

A total of 44 surface soil samples were collected throughout Site 66 during the SI and RI field activities. Samples were collected from 20 locations during the SI (IS66DP01 through IS66DP10; IS66SO11 through IS66SO17; and IS66SO19 through IS66SO21) and 24 locations during the RI (IS66DP22 through IS66DP41 and IS66SO42 through IS66SO45). Surface soil sampling locations are shown on Figure 3-1.

A detailed description of the surface soil samples collected during the SI field activities is presented in the SI report (CH2M HILL, 2008). During the RI, surface soil samples were collected from a depth interval of 0 to 0.5 feet bgs. Twenty of the samples (IS66SS220001 through IS66SS410001) were collected from co-located surface/subsurface soil boring locations (IS66DP22 through IS66DP41)using a two-inch diameter DPT macro-core sampler fitted with disposable acetate liners. The samples were collected from locations outside the site boundary to supplement the soil data collected from locations within the site boundary during the SI. The remaining four surface soil samples (IS66SO420001 through IS66SO450001) were collected from areas of visible waste material at locations IS66SO42 through IS66SO45 using a hand trowel. All surface soil samples were analyzed for TCL VOCs, SVOCs, and pesticides/ PCBs; TAL metals (including mercury and cyanide); and explosives (including nitroglycerine, nitroguanidine and perchlorate). In addition, the surface soil samples collected during the RI were analyzed for dioxins/furans.

3.1.2 Subsurface Soil Sampling

A total of 30 subsurface soil samples were collected throughout the site during the SI and RI field activities. Samples were collected from 10 locations during the SI (IS66DP01 through IS66DP10) and 20 locations during the RI (IS66DP22 through IS66DP41). Sampling locations are shown on Figure 3-2.

A detailed description of the subsurface soil samples collected during the SI field activities is presented in the SI report (CH2M HILL, 2008). During the RI, a total of 20 subsurface soil samples (IS66SB221112 through IS66SB410607) were collected from the co-located surface/subsurface soil boring locations IS66DP22 through IS66DP41. The borings were advanced in locations outside the site boundary to supplement the soil data collected

from locations within the site boundary during the SI. Samples were collected from the one-foot depth interval just above the shallow groundwater and ranged from 6 to 17 feet bgs. All subsurface soil samples were collected using a two-inch diameter DPT macro-core sampler fitted with disposable acetate liners.

All subsurface soil samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL metals (including mercury and cyanide); and explosives (including nitroglycerine, nitroguanidine and perchlorate). In addition, the subsurface soil samples collected during the RI were analyzed for dioxins/furans.

3.1.3 Monitoring Well Installation

Five shallow groundwater-monitoring wells (IS66MW01 through IS66MW05) were installed during the RI at the locations shown on Figure 3-3. Monitoring well locations were based on site hydrogeology and *in situ* groundwater analytical results from the SI (CH2M HILL, 2008). Well IS66MW01 was installed both topographically and hydrogeologically upgradient of the site boundary. Wells IS66MW02 and IS66MW03 were placed within the site boundary, just east of the unnamed stream, which runs southward through the site. Monitoring wells IS66MW04 and IS66MW05 were installed approximately 90 feet downgradient of the site boundary, south across Olsen Road.

The monitoring wells were installed within the shallow water-bearing unit, according to guidelines in the *UFP-SAP* (CH2M HILL, 2010). All monitoring well boreholes were first advanced for lithologic characterization, using a two-inch diameter DPT macro-core sampler. The borings were then over-drilled using a 4.25-inch inner-diameter, hollow-stem auger and installed with 2-inch diameter, 0.010-inch slotted well screens (10 feet in length), straddling the water table. The screens were then extended to the surface with solid polyvinyl chloride (PVC) riser, surrounded with a sand pack, bentonite seal, and a grouted plug. Surface completion consisted of concrete well pads, stick-up style steel covers and protective bollards. A well construction summary is provided in Table 3-2. Copies of the State of Maryland well completion reports are found in Appendix D.

Following installation and curing of the grouted plug, the wells were developed by surging and pumping approximately three well volumes of groundwater from each well. Groundwater purging continued until fine-grained material was removed and reasonable stability of field parameters was obtained. All wells were surveyed for vertical and horizontal reference. Elevation points surveyed were the top of the PVC well riser, the top of protective casing, and the top surface of the concrete pad.

3.1.4 Groundwater Sampling

Following an equilibration period of at least two days, groundwater samples (IS66GW010910 through IS66GW050910) were collected from the five newly constructed monitoring wells (IS66MW01 through IS66MW05). Static groundwater depths were measured from the top of the PVC casing using an electronic water level meter graduated in increments of 0.01 foot. Groundwater elevations are summarized in Table 3-3.

At each sample location, the field parameters pH, specific conductivity, turbidity, oxidation-reduction potential, dissolved oxygen, and temperature were measured using an electronic water–quality meter, equipped with a flow-through cell. Groundwater was purged from each monitoring well until field parameters remained stabilized for three consecutive readings, as defined in the *UFP-SAP* (CH2M HILL, 2010). The stabilized water quality parameters are shown on Table 3-4. Samples were collected using a peristaltic pump and tubing set at the midpoint of each saturated well screen interval.

Groundwater samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL metals, dissolved metals (including cyanide); dioxins/furans; explosives (including nitroglycerine, nitroguanidine and perchlorate); TOC; pH; and hardness.

3.1.5 Sediment Sampling

A total of 15 sediment samples were collected from the unnamed tributary which runs north to south through the site, continuing south toward Site 11 and Mattawoman Creek, during the SI and RI field activities. During the SI, co-located surface water and sediment samples were collected from 5 locations (IS66SWSD01 through IS66SWSD05) within the site boundary. During the RI, sediment only samples were collected from 6 locations

(IS66SD06 through IS66SD11) from the unnamed creek within the current site boundary, and 4 locations (IS66SD12 though IS66SD15) from the unnamed creek between the southern boundary of Site 66 and the northern boundary of Site 11. All sediment sampling locations are shown on Figure 3-4.

A detailed description of the sediment samples collected during the SI field activities can be found in the SI report (CH2M HILL, 2008). For the RI, sediment samples were collected using dedicated disposable equipment.

All sediment samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL metals (including cyanide); explosives (including nitroglycerine, nitroguanidine, and perchlorate); TOC; pH; and grain size. In addition, the sediment samples collected during the RI were analyzed for dioxins/furans.

3.1.6 Ash Sampling

A total of 9 samples were collected from the three identified ash piles at Site 66 during the SI and RI field activities. During the SI, one ash sample was collected from each of the three ash piles (IS66ASH01 through IS66ASH03) and analyzed for dioxins/furans. During the RI, 3 samples were collected from the locations sampled during the SI, and 3 additional samples were collected from ash material (IS66AH04 through IS66AH09). Ash sample locations are shown on Figure 3-5.

A detailed description of the ash samples collected during the SI field activities can be found in the SI report (CH2M HILL, 2008). RI samples were collected from a depth of 0 to 0.5 feet bgs using dedicated disposable equipment. Samples collected from the locations sampled during the SI were analyzed for TAL metals, including cyanide (SI samples were analyzed only for dioxins and furans). The three additional samples (IS66AH07 through IS66AH09) were analyzed for dioxins/furans and TAL metals, including cyanide.

3.1.7 Extent of Fill Material Delineation

In addition to the soil borings advanced to collect environmental samples, 14 additional DPT soil borings (IS66GB01 through IS66GB12, IS66GB14 and IS66GB15) were advanced within and outside the site boundary to determine the depth to native soil and delineate the extent of fill material (Figure 3-6). Soils at each location were characterized in the field to complete a physical description of subsurface materials, thickness of fill material, and stratigraphy based on visual observations (debris, staining, etc.). No analytical samples were collected from these soil boring locations. Soil boring logs are included in Appendix A.

3.1.8 Investigation-derived Waste Management

Investigation-derived waste (IDW) generated during the RI field activities consisted of soil cuttings, purged groundwater, decontamination water, and disposable sampling equipment, such as polyethylene tubing, acetate macro-core liners, trowels, etc. All materials were placed in 55-gallon drums in preparation for characterization and proper disposal. Samples from both the aqueous (IS66-WW-100110) and solid (IS66-WS-100110) IDW drums were submitted for full toxicity characterization leaching procedure, as well as reactivity, corrosivity and ignitability analysis. All IDW was reported to be nonhazardous and was disposed offsite at Environmental Recovery Corporation of Lancaster, Pennsylvania.

3.2 Deviations from the Work Plan

The following deviations occurred:

1. Several of the proposed sampling locations and wells were adjusted in the field because of their proximity to trees, severe sloping, obstruction of the site access road and shallow refusal. Additionally, dense overhead vegetation caused interference with GPS and caused the following sampling locations to shift: IS66SD06 (approximately 50 feet west), IS66DP32 (approximately 50 feet north) and IS66GB06 (approximately 50 feet north).

2. Two of the proposed sediment sampling locations (IS66SD14 and IS66SD15) were located within deep water. These locations were shifted approximately 50 feet eastward; sediment samples were collected from shallow water areas along the eastern shoreline.

TABLE 3-1
Summary of Sampling and Analysis
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID	Sample Date	Medium	Depth (feet bgs)	Analyses											
					VOCs	SVOCs	Pesticides/PCBs	Dioxins/Furans	Total Metals	Dissolved Metals	Cyanide	Explosives	Hardness	TOC & pH	Grain Size	Full TCLP & RCI
IS66DP01	IS66SS010001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP02	IS66SS020001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP03	IS66SS030001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP04	IS66SS040001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP05	IS66SS050001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP06	IS66SS060001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP07	IS66SS070001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP08	IS66SS080001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP09	IS66SS090001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP10	IS66SS100001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66DP22	IS66SS220001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP22	IS66SS22P0001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP23	IS66SS230001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP24	IS66SS240001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP25	IS66SS250001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP26	IS66SS260001	9/24/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP27	IS66SS270001	9/24/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP28	IS66SS280001	9/23/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP29	IS66SS290001	9/24/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP30	IS66SS300001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP31	IS66SS310001	9/23/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP32	IS66SS32P0001	9/29/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP32	IS66SS320001	9/29/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP33	IS66SS330001	9/28/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP34	IS66SS340001	9/28/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP35	IS66SS350001	9/29/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP36	IS66SS360001	9/28/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP37	IS66SS370001	9/28/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP38	IS66SS380001-01	9/22/2010	Surface Soil	0-0.5	X											
IS66DP38	IS66SS380001	9/21/2010	Surface Soil	0-0.5		X	X	X	X		X	X				
IS66DP39	IS66SS390001	9/28/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP40	IS66SS400001	9/30/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP41	IS66SS410001	9/30/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66SO11	IS66SS110001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO12	IS66SS120001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO13	IS66SS130001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO14	IS66SS140001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO15	IS66SS150001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO15	IS66SS15P0001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO16	IS66SS160001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO17	IS66SS170001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO19	IS66SS190001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO19	IS66SS19P0001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO20	IS66SS200001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO21	IS66SS210001	4/12/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X		
IS66SO42	IS66SS42P0001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66SO42	IS66SS420001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66SO43	IS66SS430001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66SO44	IS66SS440001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66SO45	IS66SS450001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X				
IS66DP01	IS66SB010710	4/11/2007	Subsurface Soil	7-10	X	X	X		X		X	X		X		
IS66DP02	IS66SB020205	4/11/2007	Subsurface Soil	2-5	X	X	X		X		X	X		X		
IS66DP03	IS66SB030306	4/11/2007	Subsurface Soil	3-6	X	X	X		X		X	X		X		
IS66DP04	IS66SB040912	4/11/2007	Subsurface Soil	9-12	X	X	X		X		X	X		X		
IS66DP05	IS66SB050812	4/11/2007	Subsurface Soil	8-12	X	X	X		X		X	X		X		
IS66DP05	IS66SB05P0812	4/11/2007	Subsurface Soil	8-12	X	X	X		X		X	X		X		
IS66DP06	IS66SB061216	4/11/2007	Subsurface Soil	12-16	X	X	X		X		X	X		X		
IS66DP07	IS66SB070103	4/12/2007	Subsurface Soil	1-3	X	X	X		X		X	X		X		
IS66DP08	IS66SB081014	4/11/2007	Subsurface Soil	10-14	X	X	X		X		X	X		X		
IS66DP09	IS66SB090104	4/12/2007	Subsurface Soil	1-4	X	X	X		X		X	X		X		
IS66DP10	IS66SB101214	4/11/2007	Subsurface Soil	12-14	X	X	X		X		X	X		X		
IS66DP22	IS66SB221112	10/1/2010	Subsurface Soil	11-12	X	X	X	X	X		X	X				
IS66DP22	IS66SB22P1112	10/1/2010	Subsurface Soil	11-12	X	X	X	X	X		X	X				
IS66DP23	IS66SB231516	10/1/2010	Subsurface Soil	15-16	X	X	X	X	X		X	X				
IS66DP24	IS66SB240708	10/1/2010	Subsurface Soil	7-8	X	X	X	X	X		X	X				
IS66DP25	IS66SB251011	10/1/2010	Subsurface Soil	10-11	X	X	X	X	X		X	X				
IS66DP26	IS66SB260708	9/24/2010	Subsurface Soil	7-8	X	X	X	X	X		X	X				
IS66DP27	IS66SB270910	9/24/2010	Subsurface Soil	9-10	X	X	X	X	X		X	X				
IS66DP28	IS66SB280607	9/23/2010	Subsurface Soil	6-7	X	X	X	X	X		X	X				
IS66DP29	IS66SB291617	9/24/2010	Subsurface Soil	16-17	X	X	X	X	X		X	X				
IS66DP30	IS66SB300910	9/22/2010	Subsurface Soil	9-10	X	X	X	X	X		X	X				
IS66DP31	IS66SB311415	9/23/2010	Subsurface Soil	14-15	X	X	X	X	X		X	X				
IS66DP32	IS66SB320809	9/29/2010	Subsurface Soil	8-9	X	X	X	X	X		X	X				
IS66DP32	IS66SB32P0809	9/29/2010	Subsurface Soil	8-9	X	X	X	X	X		X	X				
IS66DP33	IS66SB331415	9/28/2010	Subsurface Soil	14-15	X	X	X	X	X		X	X				
IS66DP34	IS66SB340809	9/28/2010	Subsurface Soil	8-9	X	X	X	X	X		X	X				
IS66DP35	IS66SB351415	9/29/2010	Subsurface Soil	14-15	X	X	X	X	X		X	X				
IS66DP36	IS66SB360809	9/28/2010	Subsurface Soil	8-9	X	X	X	X	X		X	X				
IS66DP37	IS66SB371314	9/28/2010	Subsurface Soil	13-14	X	X	X	X	X		X	X				
IS66DP38	IS66SB381213	9/21/2010	Subsurface Soil	12-13		X	X	X	X		X	X				
IS66DP38	IS66SB381213-01	9/22/2010	Subsurface Soil	12-13	X											
IS66DP39	IS66SB391213	9/28/2010	Subsurface Soil	12-13	X	X	X	X	X		X	X				
IS66DP40	IS66SB400910	9/30/2010	Subsurface Soil	9-10	X	X	X	X	X		X	X				

TABLE 3-1
Summary of Sampling and Analysis
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID	Sample Date	Medium	Depth (feet bgs)	Analyses											
					VOCs	SVOCs	Pesticides/PCBs	Dioxins/Furans	Total Metals	Dissolved Metals	Cyanide	Explosives	Hardness	TOC & pH	Grain Size	Full TCLP & RCI
IS66DP41	IS66SB410607	9/30/2010	Subsurface Soil	6-7	X	X	X	X	X		X	X				
IS66ASH01	IS66AH01	4/10/2007	Ash	0-0.5				X								
IS66ASH02	IS66AH02	4/10/2007	Ash	0-0.5				X								
IS66ASH02	IS66AH02P	4/10/2007	Ash	0-0.5				X								
IS66ASH03	IS66AH03	4/10/2007	Ash	0-0.5				X								
IS66ASH04	IS66AH04P	9/21/2010	Ash	0-0.5					X		X					
IS66ASH04	IS66AH04	9/21/2010	Ash	0-0.5					X		X					
IS66ASH05	IS66AH05	9/21/2010	Ash	0-0.5					X		X					
IS66ASH06	IS66AH06	9/21/2010	Ash	0-0.5					X		X					
IS66ASH07	IS66AH07	9/21/2010	Ash	0-0.5				X	X		X					
IS66ASH08	IS66AH08	9/21/2010	Ash	0-0.5				X	X		X					
IS66ASH09	IS66AH09	9/21/2010	Ash	0-0.5				X	X		X					
IS66DP01	IS66GW010407	4/11/2007	Groundwater	--		X	X		X	X						
IS66DP02	IS66GW020407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP02	IS66GW020407P	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP03	IS66GW030407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP04	IS66GW040407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP05	IS66GW050407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP06	IS66GW060407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP07	IS66GW070407	4/12/2007	Groundwater	--		X	X		X	X		X				
IS66DP08	IS66GW080407	4/11/2007	Groundwater	--		X	X		X	X		X				
IS66DP09	IS66GW090407	4/12/2007	Groundwater	--		X	X		X	X		X				
IS66DP10	IS66GW100407	4/11/2007	Groundwater	--					X							
IS66MW01	IS66GW010910	9/29/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66MW02	IS66GW020910	9/29/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66MW03	IS66GW03P0910	9/28/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66MW03	IS66GW030910	9/28/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66MW04	IS66GW040910	9/28/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66MW05	IS66GW050910	9/27/2010	Groundwater	--	X	X	X	X	X	X	X	X	X	X		
IS66SWSD01	IS66SW01	4/12/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SWSD02	IS66SW02	4/10/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SWSD03	IS66SW03	4/10/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SWSD03	IS66SW03P	4/10/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SWSD04	IS66SW04	4/10/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SWSD05	IS66SW05	4/10/2007	Surface Water	--	X	X	X		X	X	X	X	X			
IS66SD06	IS66SD06P	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD06	IS66SD06	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD07	IS66SD07	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD08	IS66SD08	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD09	IS66SD09	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD10	IS66SD10	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD11	IS66SD11	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD12	IS66SD12	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD13	IS66SD13	10/1/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD14	IS66SD14	9/30/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SD15	IS66SD15	9/30/2010	Sediment	0-0.5	X	X	X	X	X		X	X	X	X	X	
IS66SWSD01	IS66SD01	4/12/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66SWSD02	IS66SD02	4/10/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66SWSD02	IS66SD02P	4/10/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66SWSD03	IS66SD03	4/10/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66SWSD04	IS66SD04	4/10/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66SWSD05	IS66SD05	4/10/2007	Sediment	0-0.5	X	X	X		X		X	X		X		
IS66IDW	IS66-WW-100110	10/1/2010	IDW	--												X
IS66IDW	IS66-WS-100110	10/1/2010	IDW	--												X
ISIDW	IS66IS041207	4/12/2007	IDW	--												X
ISIDW	IS66IW041707	4/17/2007	IDW	--												X
IH-QC	IS66EB01-041007	4/10/2007	QC	--	X	X	X		X	X	X	X				
IH-QC	IS66EB02-041007	4/10/2007	QC	--	X	X	X		X		X	X				
IH-QC	IS66EB03-041007	4/10/2007	QC	--				X								
IH-QC	IS66FB041007	4/10/2007	QC	--	X	X	X	X	X		X	X				
IH-QC	IS66TB041007	4/10/2007	QC	--	X											
IH-QC	IS66EB01-041107	4/11/2007	QC	--	X	X	X		X	X	X	X				
IH-QC	IS66EB02-041107	4/11/2007	QC	--	X	X	X		X		X	X				
IH-QC	IS66TB041107	4/11/2007	QC	--	X											
IH-QC	IS66TB041207	4/12/2007	QC	--	X											
IH-QC	IS66EB01-041207	4/12/2007	QC	--	X	X	X		X		X	X				
IH-QC	IS66TB041307	4/13/2007	QC	--	X											
IH-QC	IS66TB041607	4/16/2007	QC	--	X											
IH-QC	IS66FB041707	4/17/2007	QC	--	X	X	X		X		X	X				
IH-QC	IS66TB041707	4/17/2007	QC	--	X											
IS66-QC	IS66EB02-092110	9/21/2010	QC	--				X	X							
IS66-QC	IS66EB01-092110	9/21/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66EB092210	9/22/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66FB092210	9/22/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB092210	9/22/2010	QC	--	X											
IS66-QC	IS66EB092310	9/23/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB092310	9/23/2010	QC	--	X											
IS66-QC	IS66EB092410	9/24/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB092410	9/24/2010	QC	--	X											
IS66-QC	IS66FB092710	9/27/2010	QC	--	X	X	X		X		X	X				
IS66-QC	IS66FB092710	9/27/2010	QC	--	X	X	X	X	X	X	X	X				
IS66-QC	IS66TB092710	9/27/2010	QC	--	X											
IS66-QC	IS66EB092710	9/27/2010	QC	--	X	X	X		X	X	X	X				
IS66-QC	IS66EB01-092810	9/28/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB092810	9/28/2010	QC	--	X											
IS66-QC	IS66EB02-092810	9/28/2010	QC	--	X	X	X		X	X	X	X				
IS66-QC	IS66EB01-092910	9/29/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66EB02-092910	9/29/2010	QC	--	X	X	X		X	X	X	X				
IS66-QC	IS66TB092910	9/29/2010	QC	--	X											

TABLE 3-1
Summary of Sampling and Analysis
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID	Sample Date	Medium	Depth (feet bgs)	Analyses											
					VOCs	SVOCs	Pesticides/PCBs	Dioxins/Furans	Total Metals	Dissolved Metals	Cyanide	Explosives	Hardness	TOC & pH	Grain Size	Full TCLP & RCI
IS66-QC	IS66EB02-093010	9/30/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB01-093010	9/30/2010	QC	--	X											
IS66-QC	IS66TB02-093010	9/30/2010	QC	--	X											
IS66-QC	IS66EB01-093010	9/30/2010	QC	--	X	X	X	X	X	X		X				
IS66-QC	IS66TB02-100110	10/1/2010	QC	--	X											
IS66-QC	IS66EB01-100110	10/1/2010	QC	--				X								
IS66-QC	IS66EB02-100110	10/1/2010	QC	--	X	X	X	X	X	X	X	X				
IS66-QC	IS66TB01-100110	10/1/2010	QC	--	X											

Sample IDs containing "P" are duplicate samples.
bgs - below ground surface
QC - quality control
IDW - investigation-derived waste
VOCs - volatile organic compounds
SVOCs - semivolatile organic compounds
PCBs - polychlorinated biphenyls
TOC - total organic carbon
TCLP - Toxicity Characteristic Leaching Procedure
RCI - reactivity, corrosivity, ignitability
Groundwater samples collected from stations DP01 through DP10 are in situ groundwater samples used only for characterization purposes in the SI; they are not evaluated in the RI.

TABLE 3-2
Summary of Monitoring Well Construction
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Well ID	Date of Construction	Well Diameter (in.)	Total Depth (ft bgs)	Top of Screen (ft. bgs)	Bottom of Screen (ft. bgs)	Depth of Surface Casing (ft. bgs)	Ground Elevation (ft. amsl)	Top of Casing Elevation (ft. amsl)
IS66MW01	9/22/2010	2	20	10	20	10	30.46	33.31
IS66MW02	9/10/2010	2	20	10	20	10	16.41	18.97
IS66MW03	9/20/2010	2	20	10	20	10	19.68	22.48
IS66MW04	9/8/2010	2	24	14	24	14	11.94	14.95
IS66MW05	9/9/2010	2	32	22	32	22	12.2	14.98

in. —inches
ft.— feet
bgs—below ground surface
amsl—above mean sea level

TABLE 3-3
Groundwater Elevation Summary - September 2010
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Well ID	Ground Elevation (ft. amsl)	Top of Casing Elevation (ft. amsl)	Depth to Groundwater (ft. btoc)	Depth to Groundwater (ft. bgs)	Groundwater Elevation (ft. amsl)	Date
IS66MW01	30.46	33.31	9.89	7.04	23.96	9/29/2010
IS66MW02	16.41	18.97	7.96	5.40	10.60	9/29/2010
IS66MW03	19.68	22.48	13.68	10.88	10.12	9/28/2010
IS66MW04	11.94	14.95	12.43	9.42	3.58	9/28/2010
IS66MW05	12.2	14.98	11.05	8.27	5.73	9/27/2010

in. —inches
ft.— feet
bgs—below ground surface
amsl—above mean sea level
btoc—below top of casing

TABLE 3-4
Monitoring Well Water Quality Parameters - September 2010
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Well	Date	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Redox Potential (mV)
IS66MW01	9/29/2010	4.72	0.129	167	4.57	18.02	264
IS66MW02	9/29/2010	5.41	0.129	217	2.34	17.3	-34
IS66MW03	9/28/2010	5.88	0.898	145	4.38	19.69	-134
IS66MW04	9/28/2010	5.06	0.537	105	5.23	20.54	174
IS66MW05	9/27/2010	5.04	0.333	37.2	8.2	18.09	99

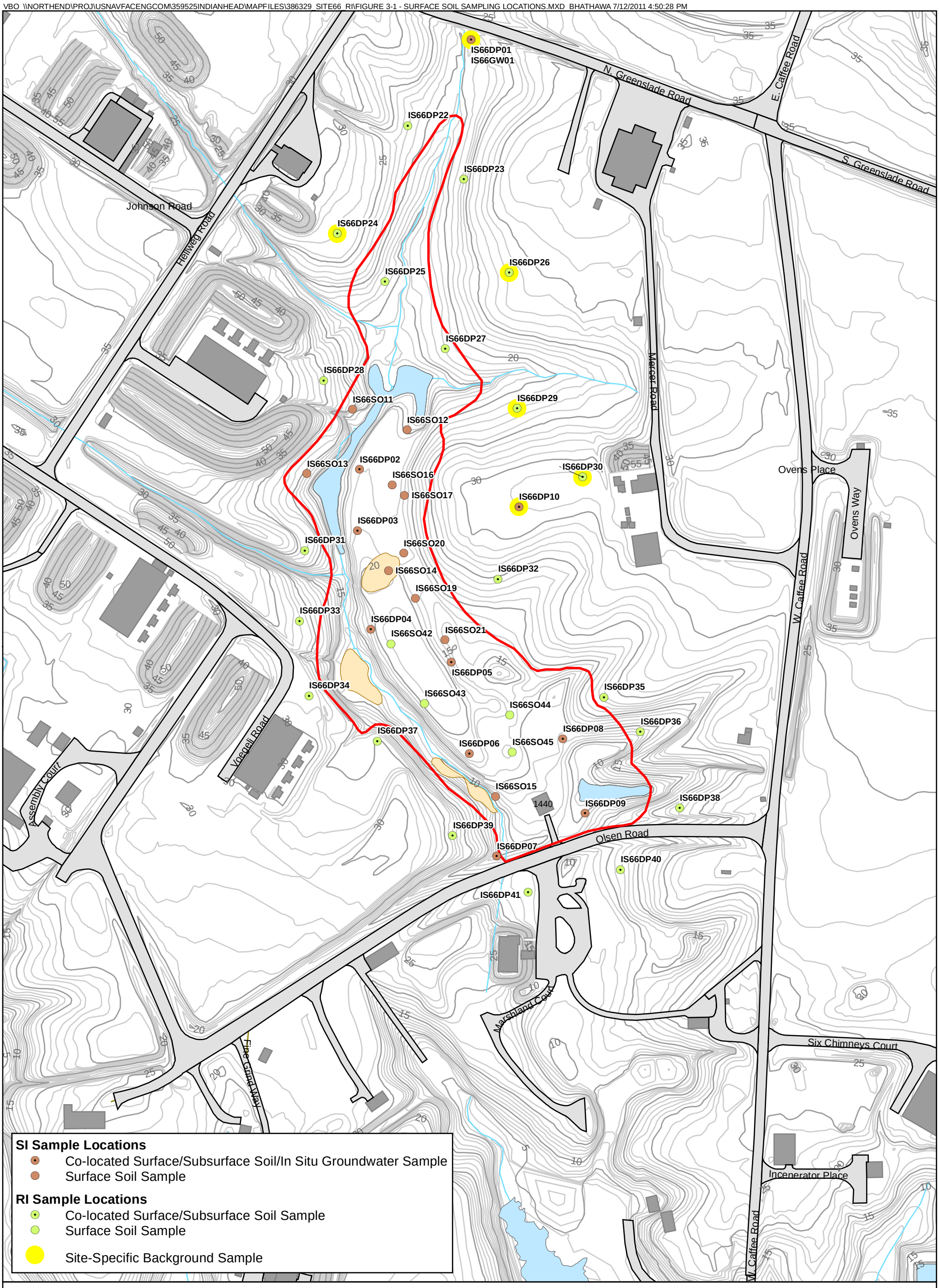
mg/L—milligrams per liter.

mS/cm—millisiemens per centimeter.

mV—millivolts.

NTU—nephelometric turbidity units.

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-1 - SURFACE SOIL SAMPLING LOCATIONS.MXD BHATHAWA 7/12/2011 4:50:28 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

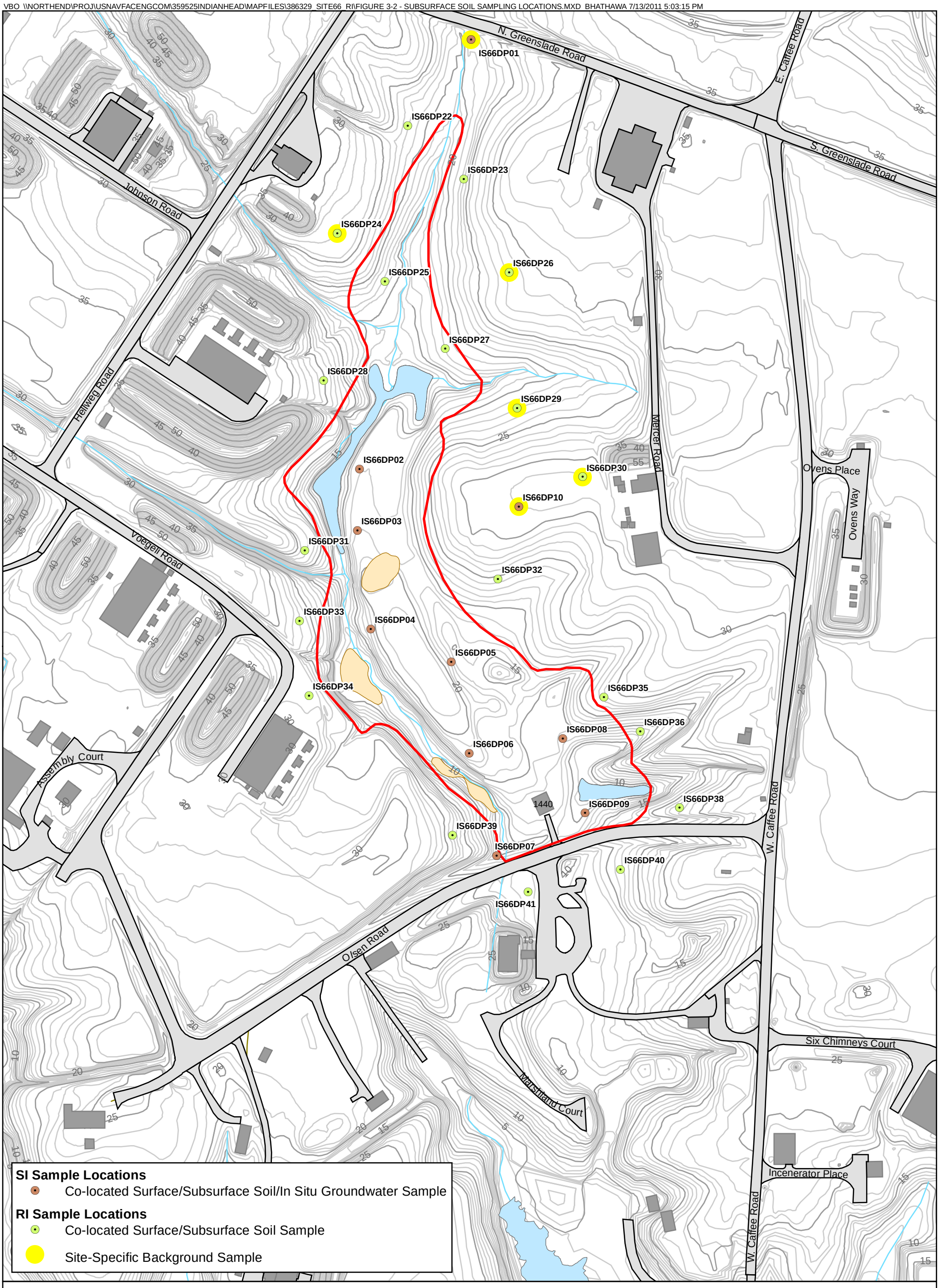
N
W E
S

0 90 180
Feet

Figure 3-1
Surface Soil Sampling Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-2 - SUBSURFACE SOIL SAMPLING LOCATIONS.MXD BHATHAWA 7/13/2011 5:03:15 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

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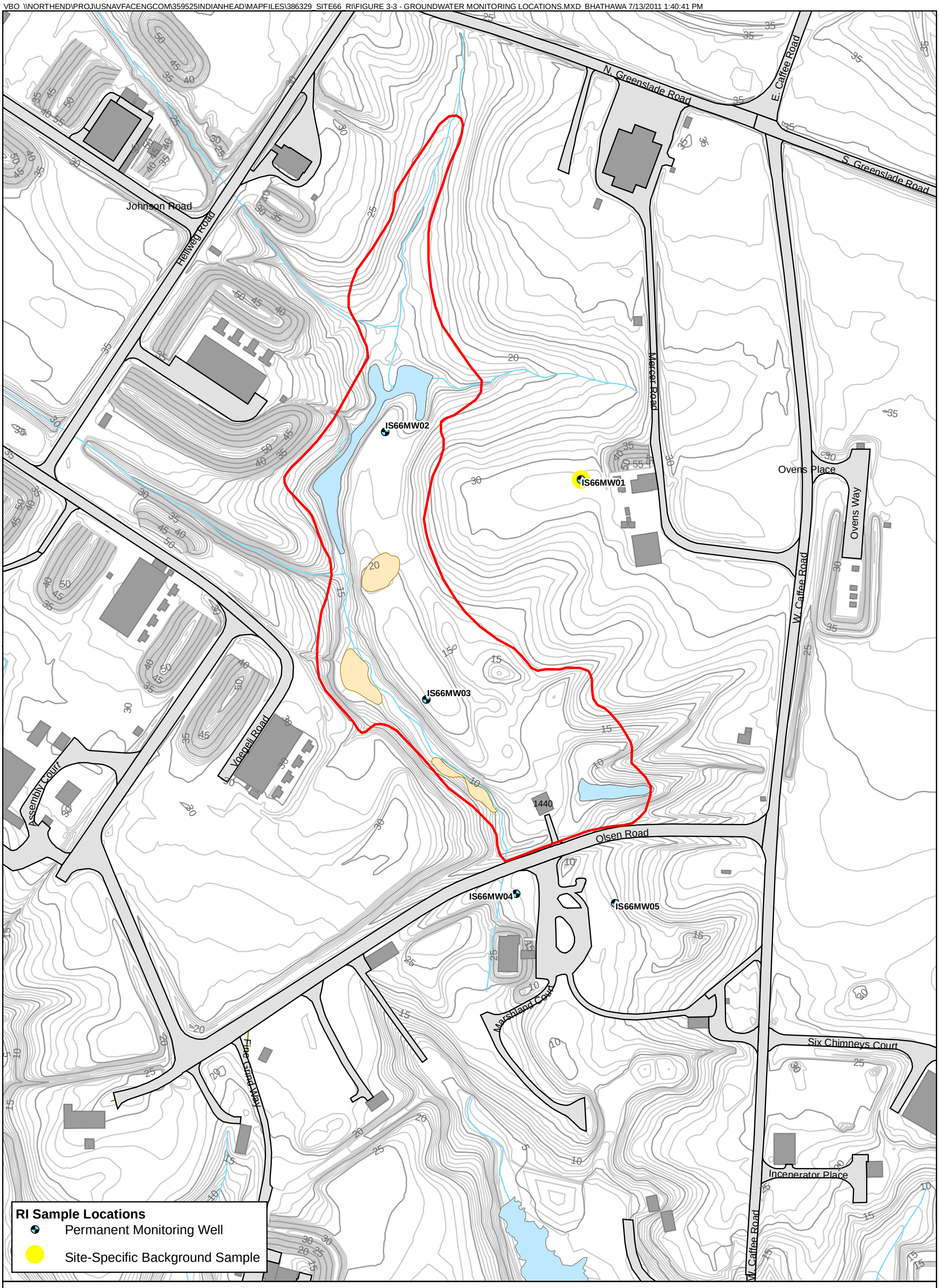
0 90 180
Feet

Figure 3-2
Subsurface Soil Sampling Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-3 - GROUNDWATER MONITORING LOCATIONS.MXD BHATHAWA 7/13/2011 1:40:41 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

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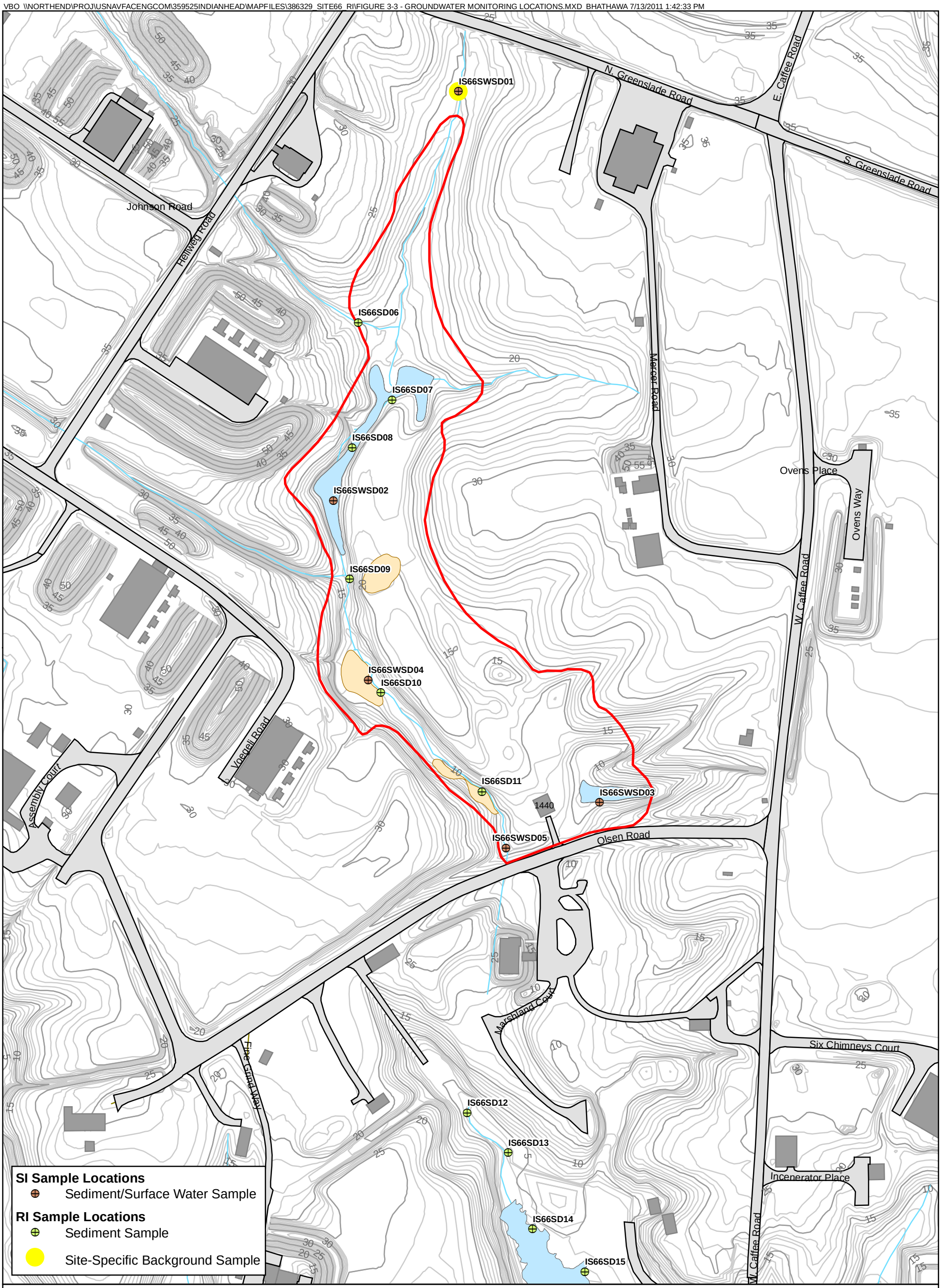
Feet

Figure 3-3
Groundwater Monitoring Well Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-3 - GROUNDWATER MONITORING LOCATIONS.MXD BHATHAWA 7/13/2011 1:42:33 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

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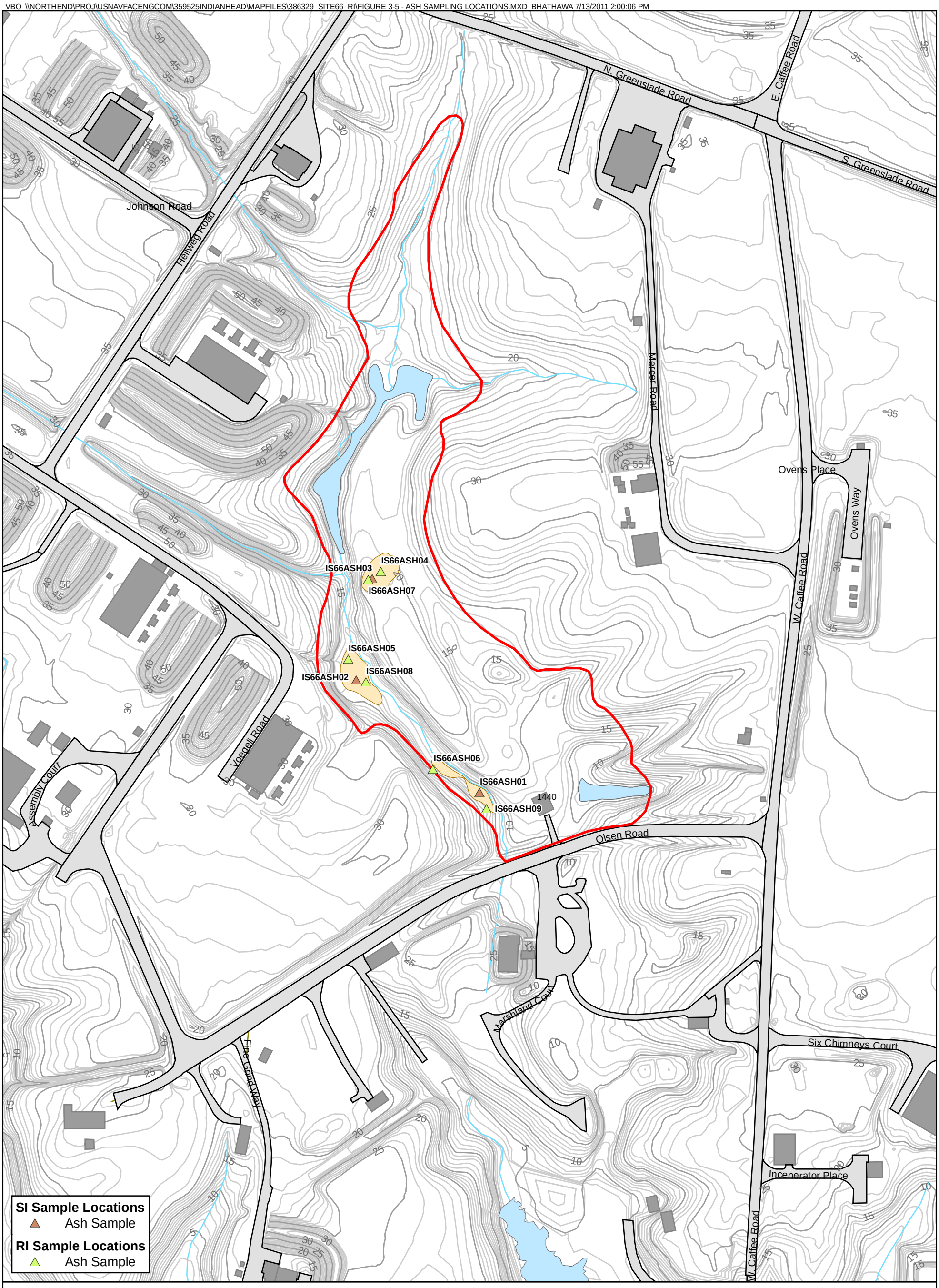
Figure 3-4
Sediment Sampling Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-5 - ASH SAMPLING LOCATIONS.MXD BHATHAWA 7/13/2011 2:00:06 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

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0 90 180
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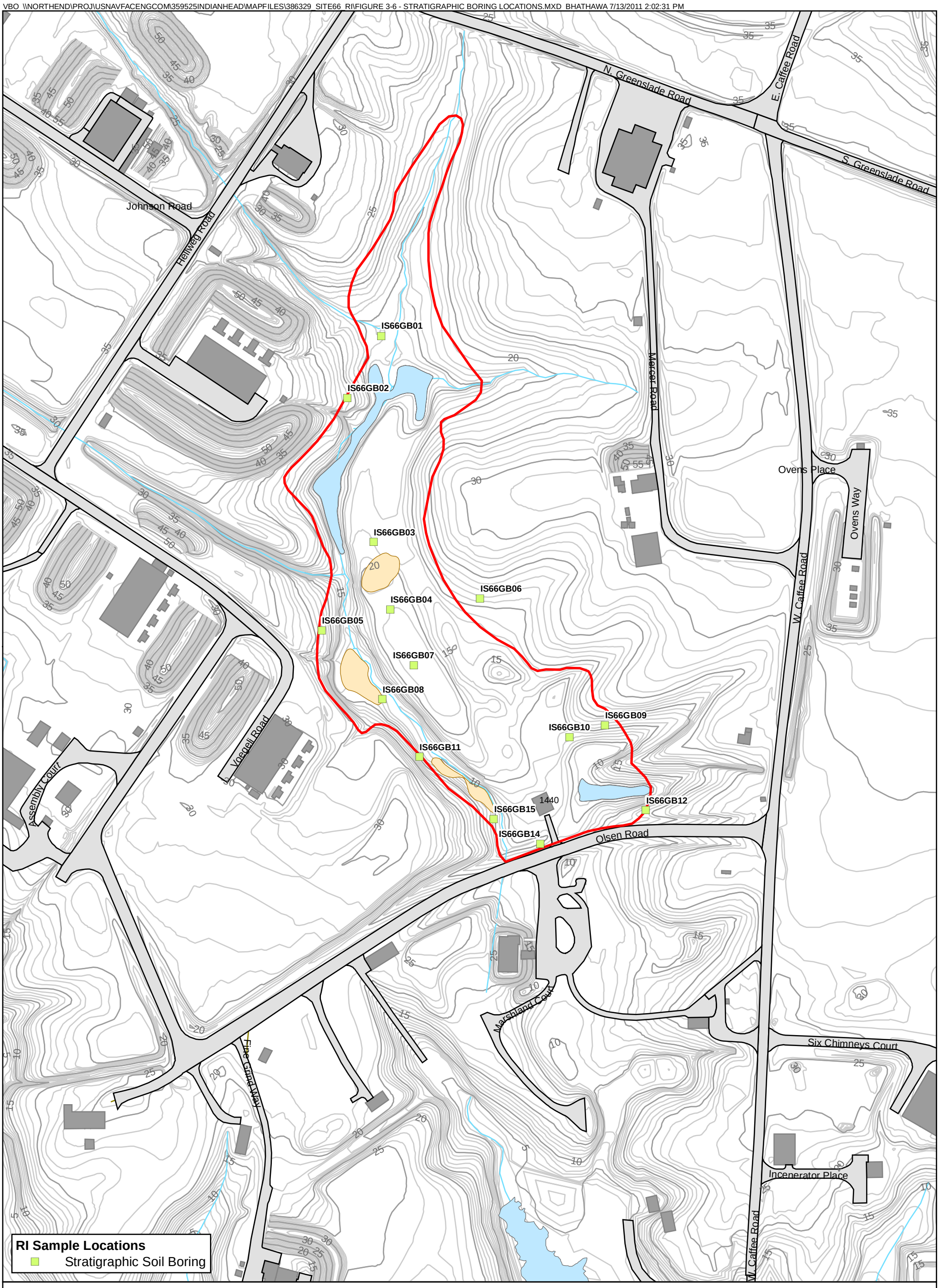
Figure 3-5
Ash Sampling Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 3-6 - STRATIGRAPHIC BORING LOCATIONS.MXD BHATHAWA 7/13/2011 2:02:31 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

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Feet

Figure 3-6
Stratigraphic Boring Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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SECTION 4

Investigation Findings

4.1 Introduction

This section presents the nature and extent of contamination found at Site 66 based on sampling activities and data analyses from both the SI and RI field events. Since this RI is intended to supplement the findings of the SI, the analytical results from both events have been combined into one data set for each of the following media types: surface soil, subsurface soil, groundwater from monitoring wells, sediment, and ash. Surface water at the site was eliminated from further analysis, based on the results of human health and ecological risk screening conducted as part of the SI, and is not discussed further in this RI report. In addition, the in-situ groundwater samples collected during the SI are not included in this RI report, since these samples were used solely for screening purposes during the SI. A description of the stratigraphy at the site and a discussion of analytical results for each media type are provided below.

4.2 Data Management and Evaluation

The data quality was evaluated to assess the usability of the analytical results. The analytical data quality is dependent on laboratory performance, matrix interference, ambient laboratory and field conditions, and field sampling technique. Data quality is used to assess whether the project's data quality objectives were met. The data quality assessment comprised reviewing the results of the laboratory QC review, the data validation reports, and the data validation qualifiers applied to the data.

4.2.1 Laboratory Quality Control Review

Prior to the release of the analytical results, the laboratory reviewed the sample and QC data to verify sample identity, instrument calibration, detection limits, dilution factors, numerical computations, accuracy of transcriptions, and chemical interpretations. Additionally, the QC data were reduced and the results were reviewed to ascertain whether they were within the laboratory-defined limits for accuracy and precision. Nonconforming results were identified and were discussed in the data package cover letter and associated case narrative.

4.2.2 Data Validation

The management and tracking of data from the time of field collection to receipt of validated electronic analytical results are of primary importance because these activities determine the overall quality of the analytical results. Field samples and their corresponding analytical tests were recorded on chain-of-custody forms. Chain-of-custody entries were checked against the SI and RI work plans. In addition, a check was made to ensure that the proper number and types of QA/QC samples were collected for each media. QA/QC samples were comprised of field blanks, equipment blanks, trip blanks, duplicate samples, matrix spike/matrix spike duplicates, and laboratory blanks.

The samples collected during the SI and RI were analyzed for various groups of parameters. Analytical data reports for these samples were submitted for data validation. Data reports were submitted in hard copy and electronic versions. Procedures used for the validation process were *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-media, Multi-concentration* (USEPA Region III, 1994a), and *Region III Modifications to Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (USEPA Region III, 1993a). These steps (data validation and electronic data handling) serve to reduce inherent uncertainties associated with data authenticity and usability. The complete data validation report for the RI data can be found in Appendix E. Details of the SI data validation can be found in the SI report (CH2M HILL, 2008).

4.2.3 Data Quality Evaluation

CH2M HILL conducted a data quality evaluation, which consisted of reviewing the analytical data for systematic errors. An evaluation of the data quality is made based on the number of, severity of, and distribution of data

qualifiers. Though the “J,” “K,” “L,” “UJ,” and “UL” qualifiers indicate that the data values are estimated, they can indicate the presence of a quality control issue and are considered usable by risk assessors when determining risk to human health and the environment. The following is a brief interpretation of the data validation qualifiers, which have been identified.

- Data qualified with a “B” indicate that the analyte has not been detected above the level reported in a field, equipment, or trip blank, or in a laboratory QA/QC sample. The concentration of a “B-qualified” result is less than 5 times the concentration of the constituent (10 times for common lab contaminants) for an associated QA/QC result. If the sample concentration is less than 5 times (10 times for common lab contaminants) the associated blank concentration, the conclusion is that the parameter was not detected.
- Data qualified with a “J” indicate that the analyte was positively identified, but the concentration value was either measured below the contract-required quantification limit or contract-required detection limit, or estimated due to QA/QC deficiencies. The vast majority of the “J” qualifiers are present because the analyte concentration is between the method detection limit and the instrument reporting limit.
- Data qualified with a “K” indicate that the analyte was positively identified, but the reported value may be biased high. Therefore, the actual value may be lower.
- Data qualified with a “L” indicate that the analyte was positively identified, but the reported value may be biased low. Therefore, the actual value may be higher.
- Data qualified with an “R” indicate an unreliable result. The analyte may or may not be present in the sample and the result is rejected. All rejected data were excluded from the RI evaluation and risk assessments.
  - For the SI data set, only 0.13 percent of the data were “R”-qualified
  - For the RI data set, only 0.51 percent of the data were “R”-qualified
  - For the combined SI/RI data set, this resulted in 99.64 percent complete and useable data.
- Data qualified with a “U” indicate that the analyte was not detected. The associated concentration value indicates the approximate sample concentration necessary to be detected.
- Data qualified with an “X” indicate the estimated maximum possible concentration that may be present in the sample. “X-qualified” results pertain to dioxin analysis only.
- Data qualified with a “UJ” indicate that the analyte was not detected, but the laboratory quantitation limit may be inaccurate. Therefore, the reported value is estimated due to QA/QC deficiencies.
- Data qualified with a “UL” indicate that the analyte was not detected, but the laboratory quantitation limit is probably higher. Therefore, the reported value is estimated due to QA/QC deficiencies.

With the exception of the “R” qualified results (and with caution regarding the “B” qualified results), the RI and SI data for Site 66 are of sufficient quality to support risk and site assessment. The data quality objectives for this project were to collect data of adequate quality to perform human health and ecological risk assessments, and to define the nature and extent of contamination of the site. In this case, data quality did not hinder any of these objectives and therefore, met the data quality objectives for the project.

4.3 Extent of Fill Material Delineation

As part of the SI, a site boundary survey was conducted to define the limits of surficial and/or partially buried visible debris and ash piles. The site boundary was observed to be narrow at the northern end of the site and wider at the southern end. Likewise, a limited understanding of the approximate limit of fill material was also gained by collecting subsurface soil samples at 10 locations (IS66DP01 through IS66DP10). Fill material, which consists of yellowish brown to grayish brown sand, silt, and clay mixed with varying amounts of debris (concrete, brick, gravel, cinder, charred wood, pieces of wood, and ash), was determined to predominantly exist near the central portion of the site.

During the RI, the lateral extent of subsurface fill material and ash was further delineated, based on stratigraphic data obtained during subsurface soil sampling, installation of groundwater monitoring wells, and advancement of additional stratigraphic soil borings at locations IS66GB01 through IS66GB12, IS66GB14 and IS66GB15. Visual observations confirm that the extent of subsurface fill material is generally consistent with the findings of the SI and is horizontally limited to the central portion of the site; no fill material was observed in the soil borings outside the approximate limit of buried fill material shown on Figure 4-1, with the exception of two areas south of Olsen Road. Subsurface fill material and ash were observed in two locations during the installation of downgradient monitoring wells: IS66DP41/IS66MW04, located southwest of Site 66, and IS66DP40/IS66MW05, located southeast of Site 66. The lateral extent of the fill material in these two areas was not delineated during the RI field activities.

The depth of buried fill material and ash was also delineated during the RI. At the deepest location (IS66GB07, located in the central portion of the site), fill material was observed extending up to 20.5 feet bgs; no buried fill material was observed at locations further to the north (IS66DP02 and IS66GB03) and south (IS66GB14) (Figure 4-2). Fill material was also found to sporadically exist at depths of up to 9 feet bgs at IS66DP03, IS66MW02 and IS66GB10. Cross-section lines are shown on Figure 4-2. Cross-section diagrams of the subsurface are shown on Figure 4-2a through Figure 4-2d.

Though fill material and ash were observed at multiple locations throughout the central portion of the site, surface and subsurface observations suggest that greater volumes this material are likely to exist along the northern and southwestern banks of the unnamed stream in the central portion of the site, as well as within depressions in the original surface topography. Given that fill material was observed in site soil borings at various depths up to 20.5 feet bgs, it is unlikely fill was placed at the site in a uniform manner. Rather these observations suggest that historically low areas throughout the site were filled, and many of the remaining areas were re-graded during onsite activities.

4.4 Grain-Size Distribution and Total Organic Carbon Content

Grain size distribution results for the sediment samples collected in 2010 for the RI are shown in Table 4-1. Grain size was not analyzed for the sediment samples collected in 2007 to support the SI. TOC results are presented for all the sediment samples. The amount of TOC in the sediment samples generally correlates well with the percentage fines (silt and clay) in the samples. Higher amounts of fines and TOC are generally indicative of depositional, low-energy areas in stream systems. Conversely, low amounts of fines and TOC are generally indicative of higher energy areas that may be scoured in streams. Many contaminants also correlate well with higher TOC areas where they accumulate through sediment transport and adsorption to fines and organic matter in the sediment.

The grain size results show a general trend of increasing fines and TOC with distance downstream, particularly downstream of Olsen Road. These results agree with site observations that the stream habitat upstream of Olsen Road is dominated by a sand substrate and downstream of Olsen Road the substrate is dominated by fines with abundant organic matter.

The sediment samples upstream of Olsen Road show the percent of fines to range from about 9 to 39 percent, whereas the percent fines in the samples downstream of Olsen Road range from about 16 to 68 percent. With respect to the fractions coarser than the fines (clay and silt), the percentages vary as shown on Table 4-1. The sediment within the site itself is dominated by fine sand with the amount ranging from about 52 to 88 percent. The sample with the least sand (52.2 percent) and least fines (38.4 percent) was sample IS66SD08, which was collected in the small pond in the northern part of the site. The samples containing the most fines were the three samples collected the farthest downstream (IS66SD13, IS66SD14, and IS66SD15), all with percent fines greater than about 57 percent.

4.5 Nature and Extent of Contamination

To streamline the nature and extent evaluation and focus it on areas of potential concern to human and ecological receptors, the following discussion is based on analytical results; constituents of potential concern

(COPCs) identified for hypothetical residential exposures to surface and subsurface soil, groundwater, sediment, and ash from the HHRA (Section 6); and COPCs identified for surface soil, groundwater, sediment, and ash in the SERA (Section 7). COPCs were identified by comparison of site analytical data to screening criteria considered protective of human receptors (Section 6.2.4) and ecological receptors (Section 7.5). Table 4-2 shows a summary of the COPCs identified for each medium. Those COPCs that exceed their respective screening criteria are discussed in the sections below.

Site-specific background samples also were considered in the evaluation of nature and extent of contamination (Table 4-3). These background samples were chosen from the SI and RI data set, based on their locations topographically upgradient of the site and outside the limits of visible waste material and fill material (Figure 3-1). These background samples were used to better differentiate between site-related and possible anthropogenic/non-site-related conditions.

Although the lateral extent of buried fill material was not fully delineated during the RI (specifically, in the vicinity of the two downgradient monitoring wells as described in Section 4.3), the nature and extent of contamination in site media have been adequately characterized to develop human health and ecological risk assessments for the site.

4.5.1 Surface Soil

COPCs were identified for the SVOCs, pesticides, dioxins/furans, explosives, and metals constituents detected in surface soil (Table 4-2). Due to their topographically upgradient locations, IS66DP01, IS66DP10, IS66DP24, IS66DP26, IS66DP29 and IS66DP30 (Figure 3-1) were considered site-specific background sampling locations for surface soil. A summary of the detected constituents in surface soil is presented in Table 4-4. Raw analytical data are included in Appendix F. The following sections present a discussion of surface soil COPCs.

SVOCs

Of the 27 SVOCs detected in surface soil samples, 12 SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, pyrene, and atrazine) were retained by the HHRA and SERA as COPCs. Screening criteria for these COPCs were exceeded at 27 of 44 sample locations. The highest concentrations for each of the SVOC COPCs were found in the sample collected from IS66SO15, which is located in the southern portion of the site within the area of fill material. SVOC COPCs appear to be randomly distributed throughout the site, including site-specific background locations. In general, the highest concentrations of these constituents are located in the central portion of the site, within the limit of fill material. Figure 4-3 shows the distribution of the SVOC COPCs that exceed HHRA and/or SERA screening criteria in surface soil.

Pesticides and PCBs

No PCBs were detected in the surface soil. Of the 20 pesticides detected in surface soil, only dieldrin was retained by the HHRA as a COPC. No pesticides in the surface soil were identified as COPCs by the SERA. Dieldrin only exceeded screening criteria at two sample locations: IS66SO15 in the southern portion of the site within the limit of buried fill material, and IS66DP41, south of the site across Olsen Road. Figure 4-4 shows the distribution of the dieldrin exceedences.

Dioxins and Furans

Although 25 dioxin and furan compounds were detected in surface soil, a total dioxin equivalent concentration (TEQ) approach was used to determine COPCs for the HHRA (Section 6.3.3.2) and SERA (Section 7.2.3.2). Based on this TEQ approach, screening criteria were exceeded at two surface soil sample locations (IS66DP32, located upgradient and outside the eastern site boundary, and IS66DP39, located upgradient and outside the western site boundary). Figure 4-5 shows the locations of these exceedences.

Explosives

Of the two explosives constituents (perchlorate and nitroglycerin) detected in surface soil, only nitroglycerin was retained by the HHRA as a COPC. No explosives were identified as COPCs in surface soil by the SERA. Nitroglycerin

only exceeded screening criteria at one sample location, IS66DP31, located upgradient of the site to the west (Figure 4-6).

Metals

Of the 23 metals plus cyanide detected in surface soil, 8 metals (aluminum, arsenic, chromium, cobalt, iron, manganese, mercury, and vanadium) and cyanide were retained by the HHRA and SERA as COPCs for surface soil. Screening criteria for these COPCs were exceeded at all sample locations, including background sample locations; only mercury and cyanide did not exceed COPCs in the background samples. COPCs appear to be randomly distributed throughout the site, and the highest concentrations of these constituents generally are located in the central portion of the site, within the limit of buried fill material. Figure 4-7 shows the distribution of all the metals COPCs that exceed HHRA and/or SERA screening criteria in surface soil.

4.5.2 Combined Surface and Subsurface Soil

The HHRA assumes that, for potential future uses of the site, the subsurface soil will be excavated and placed on the ground surface. Therefore, future exposure to soil includes exposure to combined surface and subsurface soil. No COPCs were retained for subsurface soil in the SERA.

COPCs were identified for SVOCs, pesticides, dioxins/furans, explosives, and metals constituents detected in the combined surface and subsurface soil at the site (Table 4-2). Due to their topographically upgradient locations, IS66DP01, IS66DP10, IS66DP24, IS66DP26, IS66DP29 and IS66DP30 (Figure 3-1) were considered site-specific background sampling locations. A summary of the detected constituents in surface soil and subsurface soil are presented Tables 4-4 and 4-5, respectively. Raw analytical data are included in Appendix F. The following sections present a discussion of COPCs in combined surface and subsurface soil.

SVOCs

Eleven SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, indeno(1,2,3-cd)pyrene, naphthalene, and pyrene) were retained by the HHRA as COPCs for combined surface and subsurface soil. Screening criteria for these COPCs were exceeded at 29 of 44 sample locations. The highest concentrations of the COPCs except naphthalene were detected in the sample collected from IS66DP07, located outside the southern site boundary adjacent to Olsen Road. The highest concentration of naphthalene was detected in the sample collected from IS66DP41, located south of the site across Olsen Road. COPCs appear to be randomly distributed throughout the site; however, the highest concentrations of these constituents generally are located in the central portion of the site, within the limit of fill material. Figure 4-8 shows the distribution of the SVOC COPCs that exceed HHRA screening criteria in combined surface and subsurface soil.

Pesticides and PCBs

No PCBs were detected in combined surface and subsurface soil. Of the 16 pesticides detected in combined surface and subsurface soil, three pesticides (dieldrin, heptachlor epoxide and 4,4'-dichlorodiphenyldichloroethane [DDD]) were retained by the HHRA as COPCs. Dieldrin exceeded screening criteria at sample location IS66DP04, located in the central portion of the site within the limit of fill material. Heptachlor epoxide and 4,4'-DDD exceeded screening criteria at sample location ISD66SO15, located along the southern limit of fill material at the site. Figure 4-9 shows the distribution of the pesticides in the combined surface and subsurface soil that exceeded screening criteria.

Dioxins and Furans

Although 25 dioxin and furan compounds were detected in combined surface and subsurface soil, a TEQ approach was used to determine COPCs for the HHRA (Section 6.3.3.2). Based on this TEQ approach, screening criteria were exceeded at 3 locations: IS66DP32, located upgradient of the site outside the eastern site boundary; IS66DP32, located upgradient and outside the eastern site boundary; and IS66DP39, located upgradient and outside the western site boundary. Figure 4-10 shows the locations of these exceedences.

Explosives

Of the two explosives constituents (perchlorate and nitroglycerin) detected in the combined surface and subsurface soil, only nitroglycerin was retained by the HHRA as a COPC. Nitroglycerin only exceeded screening criteria at one sample location, IS66DP31, located upgradient of the site to the west (Figure 4-11).

Metals

Nine of the metals detected in the combined surface and subsurface soil were retained by the HHRA as COPCs (aluminum, arsenic, chromium, cobalt, iron, lead, manganese, mercury and vanadium). Screening criteria for these COPCs were exceeded at all sample locations, including background sample locations. Only lead and mercury did not exceed screening criteria in the background samples; lead exceeded screening criteria in one sample location (IS66DP05, located in the eastern portion of the buried fill material) and mercury exceeded screening criteria in one sample location (IS66SO20, located in the eastern portion of the buried fill material). Other COPCs appear to be randomly distributed throughout the site, and the highest concentrations of these constituents generally are located in the central portion of the site, within the limit of buried fill material. Figure 4-12 shows the distribution of the metals COPCs that exceed HHRA screening criteria for combined surface and subsurface soil at the site.

4.5.3 Groundwater

COPCs were identified for SVOCs, pesticides, and metals (total and dissolved) constituents detected in groundwater (Table 4-2). Monitoring well IS66MW01, which is situated both topographically and hydrogeologically upgradient of the site boundary, was considered to be suitable for use as a site-specific background sampling location for groundwater (Figure 3-3). Perchlorate was detected at an elevated concentration (3,600 ug/L, compared to HHRA screening criteria of 2.6 ug/L) in the upgradient monitoring well IS66MW01. Perchlorate concentrations did not exceed screening criteria in any of the site monitoring well groundwater samples; therefore, this constituent was not retained as a COPC, is not considered site-related, and is not discussed further below. A summary of the detected constituents in groundwater is presented Table 4-6. Raw analytical data are included in Appendix F. The following sections present a discussion of groundwater COPCs.

SVOCs

Of the 4 SVOCs detected in groundwater, only naphthalene was retained by the HHRA as a COPC. No SVOCs were retained by the SERA as COPCs. Naphthalene only exceeded screening criteria at one location (IS66MW03), in the central portion of the site (Figure 4-13).

Pesticides and PCBs

No PCBs were detected in the groundwater samples. Of the 6 pesticides detected in groundwater, only heptachlor was retained by the HHRA as a COPC. No pesticides or PCBs were identified as COPCs by the SERA for groundwater. Heptachlor only exceeded screening criteria at one monitoring well, IS66MW04, located downgradient of the site across Olsen Road (Figure 4-14).

Metals

- Of the detected metals in groundwater, four total metals (arsenic, cobalt, iron, and manganese) were retained by the HHRA as COPCs and three dissolved metals (barium, iron, and manganese) were retained by the SERA as COPCs. The highest concentrations of arsenic, barium, and iron were found in monitoring well IS66MW03, located within the site boundary. The highest concentrations of cobalt were found in monitoring well IS66MW04 and the highest concentrations of manganese were found in monitoring well IS66MW05, both located downgradient of the site. Figure 4-15 shows the distribution of the metals COPCs that exceed HHRA and/or SERA screening criteria in groundwater.

4.5.4 Sediment

COPCs were identified for SVOCs, pesticides/PCBs, and metals constituents detected in sediment (Table 4-2). Sampling location IS66SWSD01, which is situated topographically upgradient of the site boundary, was considered a site-specific background sampling location for sediment (Figure 3-4). A summary of the detected constituents in

sediment is presented in Table 4-7. Raw analytical data are included in Appendix F. The following sections present a discussion of sediment COPCs.

SVOCs

Of the 27 SVOCs detected in sediment samples, 13 SVOCs (anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, phenanthrene and pyrene) were retained by the HHRA and SERA as COPCs. Screening criteria for these COPCs were exceeded at 11 of 15 sample locations. The highest concentrations for each of the SVOC COPCs were found in the samples collected from sampling locations IS66SWSD05 (the most downgradient sediment sample within the site boundary) and IS66SD12 (located downgradient of Site 66). No SVOC COPCs exceeding screening criteria were identified at IS66SD06, IS66SD07 or in the site-specific background location, IS66SWSD01. Figure 4-16 shows the distribution of the SVOC COPCs that exceed HHRA and/or SERA screening criteria in sediment.

Pesticides and PCBs

Of the 14 pesticide/PCB constituents detected in sediment, one PCB (Aroclor 1254) and four pesticides (4,4'-DDT, 4,4'-DDE, and 4,4'-DDD) were retained by the SERA as COPCs. No pesticides or PCBs in sediment were identified as COPCs by the HHRA. The highest concentration of 4,4'-DDD was found in the site-specific background sediment sample (IS66SWSD01). The highest concentrations of the other COPCs were found in sample locations IS66SD08, a ponded area within the site boundary, and IS66SD14, located downgradient of Site 66, near Site 11. Figure 4-17 shows the distribution of the pesticide and PCB COPCs that exceeded SERA screening criteria in sediment.

Metals

- Of the 23 metals plus cyanide detected in sediment, 6 metals (arsenic, chromium, cobalt, lead, mercury and silver) and cyanide were identified by the HHRA and SERA as COPCs. Screening criteria for these COPCs were exceeded at all sample locations except for the site-specific background sample location (IS6SWSD01). The highest concentrations of arsenic, chromium, cobalt, cyanide, and lead were found in samples collected from the central portion of Site 66; the highest concentrations of mercury and silver were found in the most downgradient samples collected near Site 11. Figure 4-18 shows the distribution of the metals COPCs that exceed HHRA and/or SERA screening criteria in sediment.

4.5.5 Ash

- For ash, only metals were identified as COPCs by the HHRA and SERA (Table 4-2). A summary of the detected constituents in ash is presented in Table 4-8. Raw analytical data are included in Appendix F.
- Of the 23 metals detected in the ash samples, 10 metals (aluminum, arsenic, chromium, cobalt, iron, manganese, mercury, selenium, thallium, and vanadium) were retained by the HHRA and SERA as COPCs. COPCs appear to be randomly distributed throughout the ash piles on site. Figure 4-19 shows the distribution of all the metals COPCs that exceed HHRA and/or SERA screening criteria in the ash samples.

TABLE 4-1
Sediment Grain Size Analysis
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Wet Chemistry																	
Total organic carbon (TOC) (mg/kg)	16,000	3,300	16,000	51,000	2,400	34,000	18,000	18,000	63,000	130,000	56,000	11,800 J	98,600 J	94,100 J	146,000 J	145,000 J	26,500 J
Grain Size																	
Gravel (%)	0	0	0.3	0.8	0	0	1.3	0	0	0.9	1.4	NA	NA	NA	NA	NA	NA
Coarse Sand (%)	0.2	0.4	0.6	2.2	0.4	0.9	1.2	0.1	0.1	0.9	3	NA	NA	NA	NA	NA	NA
Medium Sand (%)	7.5	4	14.8	6.4	2.4	2.1	9.7	2.5	1.1	6.1	6.8	NA	NA	NA	NA	NA	NA
Fine Sand (%)	78.4	72.2	75.7	52.2	88	58.2	66.8	81.5	36.6	35.5	20.5	NA	NA	NA	NA	NA	NA
Fines (%)	13.9	23.4	8.6	38.4	9.2	38.8	21	15.9	62.2	56.6	68.3	NA	NA	NA	NA	NA	NA

Sample IDs containing "P" are duplicate samples
NA - not analyzed
mg/kg - milligrams per kilogram
J - Analyte present, value may or may not be accurate or precise

TABLE 4-2
Summary of Human Health and Ecological COPCs
Site 66 Remedial Investigation Report
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Medium	Contaminant Group	HHRA COPCs	SERA COPCs
Surface Soil (0 to 0.5 foot bgs)	SVOCs	Benzo(a)anthracene	High molecular weight PAHs [1]
		Benzo(a)pyrene	Atrazine
		Benzo(b)fluoranthene	
		Benzo(k)fluoranthene	
		Chrysene	
		Dibenz(a,h)anthracene	
		Dibenzofuran	
		Fluoranthene	
		Indeno(1,2,3-cd)pyrene	
		Naphthalene	
		Pyrene	
	Pesticides/PCBs	Dieldrin	--
	Dioxins/Furans	2,3,7,8-TCDD TEQ [2]	--
	Explosives	Nitroglycerin	--
	Metals	Aluminum	Chromium
		Arsenic	Cyanide
		Chromium	Vanadium
		Cobalt	Mercury
		Iron	
		Manganese	
		Mercury	
		Vanadium	
Combined Surface and Subsurface Soil (0 to 17 feet bgs)	SVOCs	Benzo(a)anthracene	Not evaluated (incomplete pathway)
		Benzo(a)pyrene	
		Benzo(b)fluoranthene	
		Benzo(k)fluoranthene	
		Chrysene	
		Dibenz(a,h)anthracene	
		Dibenzofuran	
		Fluoranthene	
		Indeno(1,2,3-cd)pyrene	
		Naphthalene	
		Pyrene	
	Pesticides/PCBs	4,4'-DDD	
		Dieldrin	
		Heptachlor epoxide	
	Dioxins/Furans	2,3,7,8-TCDD TEQ	
	Explosives	Nitroglycerin	
	Metals	Aluminum	
		Arsenic	
		Chromium	
		Cobalt	
		Iron	
		Lead	
		Manganese	
		Mercury	
		Vanadium	

TABLE 4-2
Summary of Human Health and Ecological COPCs
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Medium	Contaminant Group	HHRA COPCs	SERA COPCs
Sediment	SVOCs	Benzo(a)pyrene	Anthracene
		Dibenz(a,h)anthracene	Benzo(a)anthracene
			Benzo(a)pyrene
			Benzo(b)fluoranthene
			Benzo(g,h,i)perylene
			Benzo(k)fluoranthene
			Chrysene
			Dibenz(a,h)anthracene
			Fluoranthene
			Fluorene
			Indeno(1,2,3-cd)pyrene
			Phenanthrene
			Pyrene
	Pesticides/PCBs	--	4,4'-DDT
			4,4'-DDE
			4,4'-DDD
			Dieldrin
			Arochlor-1254
	Metals	Arsenic	Cyanide
		Chromium	Lead
		Cobalt	Mercury
			Silver
Groundwater	SVOCs	Naphthalene	--
	Pesticides/PCBs	Heptachlor	--
	Metals	Arsenic	Barium
		Cobalt	Iron
		Iron	Manganese
		Manganese	
Ash	Metals	Aluminum	Aluminum
		Arsenic	Arsenic
		Chromium	Chromium
		Cobalt	Iron
		Iron	Manganese
		Manganese	Mercury
		Vanadium	Selenium
			Thallium
			Vanadium

Notes:

[1] High molecular weight PAHs include the following compounds: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene, and pyrene

[2] 2,3,7,8-TCDD TEQ concentration calculated using methodology and toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds, USEPA, 2010

HHRA - baseline human health risk assessment

SERA - screening ecological risk assessment

COPC - constituent of potential concern

SVOC - semivolatile organic compound

PCB - polychlorinated biphenyl

-- No COPCs identified for this contaminant group

TABLE 4-3
Summary of Site-Specific Background Sampling Locations
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID	Sample Date	Medium	Depth (feet bgs)	Analyses									
					VOCs	SVOCs	Pesticides/PCBs	Dioxins/Furans	Total Metals	Dissolved Metals	Cyanide	Explosives	Hardness	TOC & pH
Surface Soil														
IS66DP01	IS66SS010001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X
IS66DP10	IS66SS100001	4/11/2007	Surface Soil	0-0.5	X	X	X		X		X	X		X
IS66DP24	IS66SS240001	10/1/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X		
IS66DP26	IS66SS260001	9/24/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X		
IS66DP29	IS66SS290001	9/24/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X		
IS66DP30	IS66SS300001	9/22/2010	Surface Soil	0-0.5	X	X	X	X	X		X	X		
Subsurface Soil														
IS66DP01	IS66SB010710	4/11/2007	Subsurface Soil	7-10	X	X	X		X		X	X		X
IS66DP10	IS66SB101214	4/11/2007	Subsurface Soil	12-14	X	X	X		X		X	X		X
IS66DP24	IS66SB240708	10/1/2010	Subsurface Soil	7-8	X	X	X	X	X		X	X		
IS66DP26	IS66SB260708	9/24/2010	Subsurface Soil	7-8	X	X	X	X	X		X	X		
IS66DP29	IS66SB291617	9/24/2010	Subsurface Soil	16-17	X	X	X	X	X		X	X		
IS66DP30	IS66SB300910	9/22/2010	Subsurface Soil	9-10	X	X	X	X	X		X	X		
Sediment														
IS66SWSD01	IS66SD01	4/12/2007	Sediment	0-0.5	X	X	X		X		X	X		X
Groundwater														
IS66MW01	IS66GW010910	9/29/2010	Groundwater	na	X	X	X	X	X	X	X	X	X	X

Site-specific background samples were selected based on their locations topographically upgradient of the site and outside the limits of visible waste material and buried fill material

bgs - below ground surface
VOCs - volatile organic compounds
SVOCs - semivolatile organic compounds
PCBs - polychlorinated biphenyls
TOC - total organic carbon
na - not applicable

TABLE 4-4
Detected Constituents in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																		
Volatile Organic Compounds (UG/KG)																		
2-Butanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	14 UJ	14 UJ	15 UJ	12 J	18 UJ	15 UL	15 UL	12 U
Acetone	12 U	10 U	10 U	13 U	10 U	7 B	15 B	10 U	10 U	7 B	45 J	54 J	67 J	380 J	55 J	15 B	19 B	76 J
Carbon disulfide	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	1.2 B	1.2 B	1.3 B	1.7 B	2.2 B	1.6 B	1.7 B	1.6 B
Chloroform	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	3 J	4.6 J	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U
Methyl acetate	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	3.3 UJ	3.3 UJ	3.7 J	3.6 U	4.2 UJ	3.6 UL	3.6 UL	3 U
Styrene	12 U	10 U	10 U	13 U	10 U	10 U	16	10 U	10 U	11 U	2.8 UJ	2.8 UJ	5.6 J	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U
Tetrachloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	8.6 J	6.9 J	6.3 J	7.6 J	10 J	11 J	5.4 J	5.8 J
Toluene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	7.1 J	3 U	3.5 UJ	3 UL	3 UL	2.5 U
Semivolatile Organic Compounds (UG/KG)																		
2,4,5-Trichlorophenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	56 U	58 U	55 U	3.9 J	63 U	54 U	54 U	4.5 J
2,4,6-Trichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	13 J	58 U	55 U	16 J	15 J	54 U	10 J	14 J
2,4-Dichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 UJ	12 UJ	11 UJ	14 J	14 J	11 U	11 U	7 J
2-Methylnaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	3.2 L	3.9 L	3.9 L	4.6 L	7.8 L	11 U	11 U	11 UL
Acenaphthene	430 U	130 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	2.9 J	13 J	23	37	110	34 L	11 UL	7 L
Acenaphthylene	220 J	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 UL	11 UL	1.6 L
Anthracene	110 J	360 J	110 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	3.5 J	12 J	37	56	120	44	11 U	12 J
Atrazine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	1.2 J	12 U	1.3 J	1.9 J	2.5 J
Benzo(a)anthracene	530	1,700	370 J	400 U	420 U	390 U	400 U	390	410 U	420 U	26	53	140	250 B	390	210	150 J	79
Benzo(a)pyrene	670	1,700	340 J	400 U	420 U	390 U	400 U	310 J	410 U	420 U	22 J	45 J	120	240	330	160 J	110 J	72
Benzo(b)fluoranthene	680	1,900	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	32 J	61 J	160	290	480	230 J	170 J	100
Benzo(g,h,i)perylene	510	1,100	230 J	400 U	420 U	390 U	400 U	160 J	410 U	420 U	19 J	31	96	180	200	97 J	11 UJ	42
Benzo(k)fluoranthene	670	1,600	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	12 J	18 J	52	110	160	91 J	38 J	29
bis(2-Ethylhexyl)phthalate	630 B	270 B	120 B	400 U	420 U	390 U	400 U	27,000	410 U	420 U	58 K	46 K	83 B	440 B	60 B	270 B	220 B	82 B
Carbazole	430 U	300 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U
Chrysene	710	1,800	410	400 U	420 U	390 U	400 U	420	410 U	420 U	16 J	34	92	170	260	160	73 J	54
Dibenz(a,h)anthracene	170 J	400 J	86 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	4.9 J	9.1 J	32	53	71	32 J	18 J	16 J
Dibenzofuran	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U
Dimethyl phthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	2.3 J	2 J	2.4 J	3.9 B	47 B	2 J	11 U	2.7 J
Di-n-butylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U
Fluoranthene	1,000	3,200	590	400 U	420 U	390 U	400 U	780	410 U	420 U	43 J	100 J	300	470	840	380 J	11 U	130 K
Fluorene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	7.6 J	16 J	29	73	22 L	11 UL	5.8 L
Hexachlorocyclopentadiene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 UL	11 UL	4.4 L
Indeno(1,2,3-cd)pyrene	570	1,300	260 J	400 U	420 U	390 U	400 U	200 J	410 U	420 U	16 J	29	94	170	210	150	61 J	46
Naphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	5.8 B	11 U	5.9 B	45 L	3.4 B	4.3 B	11 UL
Phenanthrene	340 J	1,400	270 J	400 U	420 U	390 U	400 U	250 J	410 U	420 U	23 J	71 J	210	330	640	240	11 U	65
Pyrene	1,200	2,800	570	400 U	420 U	390 U	400 U	720	410 U	420 U	42 J	86 J	220	420	590	260	11 UJ	79

TABLE 4-4
Detected Constituents in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																		
Pesticide/Polychlorinated Biphenyls (UG/KG)																		
4,4'-DDD	45	5.4 B	7.7	3 B	30	1.8 B	4 U	3.7 U	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	0.66 J	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
4,4'-DDE	52	7.7 J	4.4	4 U	1.9 J	3.9 U	4 U	10	4.1 U	4.2 U	1.3 J	1.6 J	6.2 J	1.5 J	1.4 J	3.3 L	0.84 L	0.37 L
4,4'-DDT	68	18 J	8.2	4 U	6.8 J	3.9 U	4 U	19	1.4 J	4.2 U	1.8 J	2.1 J	3.5 J	1.9 J	1.3 J	1.9 L	1.8 UL	1.3 L
Aldrin	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
alpha-BHC	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	2.1 J	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
alpha-Chlordane	1.5 J	2.1 U	2.1 U	1.3 J	23 J	0.89 J	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
beta-BHC	1.1 J	1.8 J	0.31 J	2.1 U	0.26 J	2 U	2 U	1.1 J	0.65 J	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
delta-BHC	0.64 J	2.1 U	2.1 U	2.1 U	0.53 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
Dieldrin	2.3 J	0.95 J	4.1 U	4.7 J	4.2 U	3.9 U	4 U	1.6 J	4.1 U	4.2 U	1.8 UJ	0.88 J	1.3 J	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
Endosulfan I	2.2 U	0.72 J	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1.8 J	1.3 J	0.9 UL	1 L	0.92 UL
Endosulfan II	1.1 J	4.1 U	4.1 U	4 U	4.2 U	3.9 U	4 U	1.3 J	11 J	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
Endosulfan sulfate	1.3 J	2.2 J	4.1 U	4 U	4.2 U	3.9 U	8.3 J	3.7 U	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
Endrin	4.3 U	4.1 U	4.1 U	4 U	4.2 U	3.9 U	4 U	0.8 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
Endrin aldehyde	2 J	9.2 J	1.2 J	4 U	4.2 U	1.1 J	4 U	2.2 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
Endrin ketone	5.4	17	3.9 J	4 U	4.2 U	3.9 U	4 U	4.1 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL
gamma-BHC (Lindane)	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
gamma-Chlordane	2 J	6.9 J	0.41 J	0.46 J	2.5 J	0.28 J	2 U	0.99 J	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
Heptachlor	1.1 J	0.95 J	2.1 U	2.1 U	0.84 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
Heptachlor epoxide	0.95 J	2.1 U	2.1 U	2.1 U	0.62 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL
Methoxychlor	10 J	13 J	17 J	21 U	22 U	8.1 J	20 U	19 U	21 U	22 U	9.6 UJ	9.6 UJ	9.8 UJ	10 UJ	11 UJ	9 UL	9.2 UL	9.2 UL
Dioxin/Furans (PG/G)																		
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4 J	0.581 J	2.84	1.71 J	1.7 J	3.61	4.12	1.85 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.6	8.63	20.6	24.5	12.5	85.3	35.8	37.7 K
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.269 J	2.74 U	3.66 U	2.74 U	0.375 J	0.208 J
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.66 J	0.244 J	1.02 J	0.426 J	0.593 J	1.38 J	1.74 J	0.43 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.22 J	3.23 U	0.254 J	0.363 J	0.297 J	1.7 J	0.767 J	0.429 X
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.211 X	3.23 U	0.401 J	2.74 U	0.262 X	0.592 X	0.696 J	0.155 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.52 J	3.23 U	0.698 J	0.641 X	0.529 J	2.57 J	1.46 J	0.703 J
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	2.69 U	2.74 U	3.66 U	2.74 U	2.32 U	2.69 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.289 X	3.23 U	0.535 X	0.565 J	0.576 X	2 J	1.53 J	0.787 J
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.378 J	2.74 U	3.66 U	0.722 J	0.655 X	2.69 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	2.69 U	2.74 U	3.66 U	0.599 X	0.454 X	0.124 X
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.282 X	3.23 U	0.587 J	0.232 J	0.386 X	0.662 X	0.764 J	0.133 X
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.612 J	2.74 U	3.66 U	0.88 J	0.92 J	2.69 U
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.09 U	1.29 U	1.08 U	1.1 U	1.46 U	1.1 U	0.928 U	1.08 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.703 X	1.29 U	0.78 J	1.1 U	1.46 U	1 J	0.947	1.08 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.44 J	1.3 J	6.68	5.45 J	4.6 J	7.71	9.53	4.6 J
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	802	700	1,960 J	1,790 J	491	3,610 J	1,820 J	3,530 K
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4 J	0.232 J	4.58	3.67	1.7 J	5.81	6.94	4.92
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	18.5	55.1	54.6	33.9	234	90.7	87
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1 J	0.244 J	5.71	1.83 J	2.43 J	6.73	9.37	2.42 J
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.21	1.35 J	7.56	5.78	5.71	36.7	19.2	8.41
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.71 J	0.624 J	6.76	1.69 J	2.6 J	12.5	12.5	0.511 J
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.898 J	3.23 U	2.69 U	0.494 J	3.66 U	5.87	5.12	0.824 J
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.67	1.29 U	3.51	0.715 J	1.46 U	9.5	9.41	0.171 J
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.482 J	1.29 U	0.711 J	1.1 U	1.46 U	0.409 J	1.66	1.08 U
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67	0.327	1.45	1.02	0.555	3.85	2.49	1.85
Explosives (UG/KG)																		
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 UJ	4,000 U	4,000 U	340 U	350 U	410 U	430 U	480 U	380 U	380 U	420 U
Perchlorate	17 J	4.1 J	2.9 J	3.9 J	5.3 J	1.4 J	18 J	3 J	14 J	1.7 J	0.82 J	0.71 J	0.86 J	0.61 J	1.5 J	2 J	2.3 J	2.5 J

TABLE 4-4
Detected Constituents in Surface Soil
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																		
Total Metals (MG/KG)																		
Aluminum	5,710	7,520	6,470	8,290	15,100	10,500	9,390	4,760	5,170	13,000	7,280	5,840	2,720	9,280	5,770	8,540	7,370	11,400
Antimony	1.1 B	1.4 B	0.83 B	0.48 UJ	0.51 UJ	0.53 B	0.48 B	1.5 B	0.51 UJ	0.51 UJ	0.36 U	0.38 U	0.45 U	0.15 J	0.5 U	0.4 U	0.43 U	0.42 R
Arsenic	17.9	10.1	10.6	0.64 U	6	3.1	2.6	34.9	2.1 J	3.1	3 J	1.7 J	1.1 B	1.8	2.1	3.1	2.2	2.3
Barium	41.9 J	108	51.9	33.5 J	64.4	40.8 J	66.2	92.3	43.1 J	57	36.5	31.4	11.6	39.4	33.4	30.8	32.7	43.4
Beryllium	0.29 B	0.38 B	0.39 B	0.57 B	0.51 B	0.41 B	0.63 J	0.94 J	0.34 B	0.46 B	0.63	0.27 J	0.08 B	0.28 J	0.26 J	0.38 J	0.44	0.46
Cadmium	0.23 B	0.095 U	0.092 U	0.091 U	0.097 U	0.092 U	0.088 U	0.087 U	0.098 U	0.098 U	0.22 U	0.23 U	0.27 U	0.29 U	0.02 B	0.07 B	0.06 B	0.03 B
Calcium	766 J	2,360	1,370	402 J	293 J	249 J	445 J	15,900	2,990	94 B	94.3	85	50.2	162	129	129	214	216 K
Chromium	15.7	19.4	13.3	22.8	16.7	14.8	14	11	12.9	16.1	22.2 J	7.6 J	4.4	12.2	6.8	14.6	8.8	13.4
Cobalt	3.6 J	5.8 J	3.9 J	1.6 J	4.7 J	5.3 J	7.3 J	3.9 J	4.7 J	4.2 J	9.7 J	4.8 J	0.94	4	3.2	5.4	5.1	5.1
Copper	28.1	26.8	14.1	22.9	10.8	9.7	9.8	20.6	11.3	7.3	9.9	8	9.9	17.7	28	36.6	29.7	18.7
Cyanide	0.082 J	0.16 J	0.093 J	0.074 U	0.077 U	0.072 U	0.072 U	0.18 J	0.077 U	0.076 U	0.48 U	0.48 U	0.44 U	0.44 U	0.48 U	0.44 U	0.44 U	0.44 U
Iron	11,000	22,300	13,900	35,500	29,000	19,500	18,000	17,300	11,400	16,600	16,100 J	5,800 J	2,540	7,850	4,730	11,100	5,920	13,100
Lead	73.6	160	112	12.1	13.5	12.3	11.6	41.8	14.1	10.6	24.3	19.3	15.6	24.6	30.8	40.3	37.8	20.9
Magnesium	584 J	743 J	685 J	762 J	882 J	816 J	987 J	2,310	875 J	912 J	466	421	179	678	400	593	543	782 K
Manganese	134	405	112	34.7	56	111	380	207	142	69.9	232 J	70.6 J	11.3	72.4	37.1	112	120	82.2
Mercury	0.21 B	0.3 B	1.1 J	0.051 UJ	0.076 B	0.052 UJ	0.055 UJ	0.25 B	0.083 B	0.068 B	0.05	0.05	0.03	0.04	0.06	0.06	0.08	0.04
Nickel	7.9 J	90.4	6.9 J	5.5 J	7.3 J	7.2 J	9.7	27.7	8.9 J	6.8 J	7.1	6.2	2.5 J	6.2	6.1	6.7	7.9	7.3
Potassium	308 J	446 J	357 J	708 J	605 J	600 J	562 J	590 J	560 J	509 J	400	347	316	652	371	502	551	837 K
Selenium	0.66 U	0.64 U	0.62 U	0.62 U	0.65 U	0.62 U	0.59 U	0.59 U	0.66 U	0.66 U	0.42	0.3 J	0.17 J	0.3 J	0.46 J	0.45	0.37 J	0.36 J
Silver	0.29 U	0.28 U	0.28 U	0.27 U	0.29 U	0.28 U	0.27 U	0.26 U	0.29 U	0.29 U	0.05 J	0.05 J	0.04 J	0.04 J	0.05 J	0.07 J	0.06 J	0.04 J
Sodium	110 B	74.2 B	80.9 B	69.2 B	101 B	89.5 B	105 B	210 B	110 B	85.5 B	38.5 J	21.3 B	39 J	37.2 J	29.4 J	32.7 B	50.2 B	37.9 B
Thallium	0.71 U	0.69 U	0.67 U	0.66 U	0.7 U	0.66 U	0.64 U	0.82 B	0.71 U	0.71 U	0.09 J	0.09 J	0.06 J	0.13 J	0.1 J	0.12 J	0.12 J	0.14 J
Vanadium	32.5	31	25.8	26.7	30.9	26.8	24.2	75.9	19.3	29.9	47.1	41.9	19.8	36.7	29	39.3	32.9	28.9
Zinc	129	120	83.6	33.4	28	26.5	35.8	47.3	47.2	25.1	19.2	16.9	6	23.9	18.9	24	21.6	29.2
Wet Chemistry																		
pH	5.98	5.88	5.76	4.63	4.78	4.84	4.95	8.19	7.53	4.45	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	23,300	30,300	34,700	11,800	8,570	37,400	12,200	120,000	30,400	7,490	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

Shading indicates detections

NA - Not analyzed

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

UG/KG - Micrograms per kilogram

TABLE 4-4
Detected Constituents in Surface Soil
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Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12
Sample ID	IS66SS290001	IS66SS300001	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07
Chemical Name																	
Volatile Organic Compounds (UG/KG)																	
2-Butanone	15 UL	14 UL	29 J	12 U	14 U	14 U	12 UJ	14 U	18 UJ	14 U	NA	15 UL	15 U	15 UJ	18 U	32 U	12 U
Acetone	16 B	18 L	210 J	5.7 B	14 U	8 B	12 B	13 B	62 J	10 B	NA	34 J	15 U	15 B	18 U	25 B	12 U
Carbon disulfide	1.7 B	1.3 B	1.8 B	2.5 U	2.8 U	1.6 B	1.6 B	2.8 U	2 B	0.9 J	NA	2.1 B	1.8 B	1.4 B	1.3 B	32 U	12 U
Chloroform	3 UL	2.8 UL	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U
Methyl acetate	3.6 UL	3.3 UL	3.6 UJ	3 U	3.3 U	3.3 U	3 UJ	3.3 U	4.2 UJ	3.3 U	NA	3.6 UL	3.6 U	3.6 UJ	4.2 U	32 U	12 U
Styrene	3 UL	2.8 UL	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	1.2 J	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U
Tetrachloroethene	7.1 J	3.1 J	14 J	5.1 J	5 J	3.6 J	5.8 J	3.2 J	6.9 J	7 J	NA	7.8 J	5.4 J	7.3 J	6 J	32 U	12 U
Toluene	3 UL	2.8 UL	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U
Semivolatile Organic Compounds (UG/KG)																	
2,4,5-Trichlorophenol	55 U	54 U	52 U	54 U	3.4 J	51 U	59 U	55 U	61 U	2.7 J	50 U	NA	57 U	59 U	77 U	1,800 U	1,200 U
2,4,6-Trichlorophenol	55 U	6.6 J	10 J	54 U	12 J	51 U	59 U	55 U	61 U	11 J	50 U	NA	57 U	59 U	77 U	720 U	490 U
2,4-Dichlorophenol	11 U	11 U	10 U	11 U	10 U	10 U	12 U	11 U	12 U	5.6 J	9.9 U	NA	11 U	12 UJ	15 UJ	720 U	490 U
2-Methylnaphthalene	11 U	11 U	10 U	11 UL	10 UL	10 U	12 U	11 UL	12 U	10 U	9.9 U	NA	11 U	12 UL	15 UL	720 U	130 J
Acenaphthene	38 L	21 J	4 L	11 UL	10 UL	10 UL	12 UL	11 UL	12 UL	10 UL	9.9 U	NA	11 UL	2.8 J	3.1 J	720 U	1,100
Acenaphthylene	11 UL	11 U	10 UL	11 UL	10 UL	10 U	7.6 J	11 UL	4.2 L	10 UL	9.9 U	NA	11 UL	12 U	4.1 J	720 U	120 J
Anthracene	60	25	9 J	11 U	2.1 J	10 U	11 J	14 L	3.2 J	1.3 J	1.4 J	NA	11 U	3.9 J	21 J	720 U	2,500
Atrazine	11 U	11 U	10 U	11 U	3.8 B	10 U	12 U	2.6 B	12 U	1.6 J	9.9 U	NA	11 U	12 U	15 U	720 U	490 U
Benzo(a)anthracene	220	99	36	11 U	10 B	10 U	100	46 L	27	5.6 J	10 J	NA	5 J	31	220	720 U	9,800
Benzo(a)pyrene	170 J	95 J	35	11 U	4.2 B	10 U	120	36 B	29	10 U	9.6 J	NA	11 U	26	94	720 U	11,000
Benzo(b)fluoranthene	240 J	150 J	53	11 U	3.9 B	10 U	180	51	42	6.8 J	19 J	NA	6.3 J	37	180	720 U	8,900
Benzo(g,h,i)perylene	99 J	69 J	17 J	11 U	10 U	10 U	84	24 B	22 J	2.2 J	8 J	NA	11 U	15 J	45	720 U	9,500
Benzo(k)fluoranthene	90 J	49 J	14 J	11 U	3.4 B	10 U	50	17 B	13 J	10 U	7.2 J	NA	11 U	10 J	46	720 U	11,000
bis(2-Ethylhexyl)phthalate	76 B	1,200 B	57 B	70 B	120 B	540 K	290 B	89 B	120 B	170 B	190 B	NA	110 B	59 B	82 B	720 U	490 U
Carbazole	270 U	270 U	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	1,900
Chrysene	180	83	25	11 U	4.1 B	10 U	98	31 L	20 J	2 J	12 J	NA	11 U	15 J	130	720 U	10,000
Dibenz(a,h)anthracene	31 J	20 J	3.9 J	11 U	10 U	10 U	22 J	8.2 B	7 J	2.4 J	9.9 U	NA	11 U	9.5 J	23 J	720 U	1,700
Dibenzofuran	270 U	270 U	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	420 J
Dimethyl phthalate	5.9 J	2.4 B	10 U	11 U	2.7 B	10 U	2 J	3.4 B	12 U	2 J	1.7 B	NA	11 U	12 U	3.1 J	720 U	490 U
Di-n-butylphthalate	270 U	270 U	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U
Fluoranthene	420 J	210	68	11 U	3.8 J	2.9 L	140 L	94 L	39	2.2 J	23	NA	11 U	42	370	720 U	19,000
Fluorene	26 L	9.2 J	10 UL	11 UL	10 UL	10 UL	12 UL	11 UL	12 UL	10 UL	9.9 U	NA	11 UL	12 U	15 U	720 U	720
Hexachlorocyclopentadiene	11 UL	11 U	10 UL	11 U	10 U	10 U	12 U	11 U	12 UL	3.9 L	9.9 U	NA	11 UL	12 U	15 U	720 U	490 U
Indeno(1,2,3-cd)pyrene	160	62	18 J	11 U	10 U	10 U	68	22 B	20 J	2 J	6.6 J	NA	11 U	17 J	47	720 U	9,600
Naphthalene	9.3 B	5.8 B	10 U	11 U	10 U	10 UL	12 UL	11 UL	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	360 J
Phenanthrene	270	140	33	11 U	2.6 J	10 U	55	59 L	16 J	2 J	12 J	NA	11 U	19 J	96	720 U	11,000
Pyrene	290	210	42	11 U	4.5 J	2.7 J	180	82 L	31	10 U	22	NA	11 U	44	350	720 U	16,000

TABLE 4-4
Detected Constituents in Surface Soil
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Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12
Sample ID	IS66SS290001	IS66SS300001	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07
Chemical Name																	
Pesticide/Polychlorinated Biphenyls (UG/KG)																	
4,4'-DDD	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	2.7 J	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	1.1 J	640	1.7 B	6.7 B
4,4'-DDE	1.8 UL	0.26 J	0.43 L	1.8 UJ	1.7 UJ	0.65 J	4.3 J	0.84 L	9.2 L	1.7 UL	0.22 J	NA	1.9 UL	0.97 J	230	2.2 J	9.6
4,4'-DDT	1.8 UL	0.87 J	0.84 L	1.8 UJ	1.7 UJ	1.6 UJ	4.8 J	0.99 L	2.2 L	1.7 UL	1.6 UJ	NA	1.9 UL	2.2 J	460	7.2 U	35
Aldrin	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U
alpha-BHC	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	3.2
alpha-Chlordane	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	1 J	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	2.1 J	2.5 U
beta-BHC	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.2 J	4.5 J
delta-BHC	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U
Dieldrin	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	0.73 J	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	71 J	7.2 U	2.2 J
Endosulfan I	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	5.1 J	3.7 U	0.88 J
Endosulfan II	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	1.9 J
Endosulfan sulfate	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	4 J
Endrin	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	1.2 J
Endrin aldehyde	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	13
Endrin ketone	1.8 UL	1.7 UJ	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	23
gamma-BHC (Lindane)	0.92 UL	0.44 J	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U
gamma-Chlordane	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.76 J	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	9.6
Heptachlor	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U
Heptachlor epoxide	0.92 UL	0.88 UJ	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U
Methoxychlor	9.2 UL	8.8 UJ	8.1 UL	9.3 UJ	9 UJ	8.5 UJ	9.8 UJ	9.3 UL	11 UL	9 UL	8.5 UJ	NA	9.6 UL	10 UJ	14 UJ	37 U	60 J
Dioxin/Furans (PG/G)																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.99	3.27	2.17 J	0.0938 B	0.296 B	1.16 J	11.3	1.61 J	4.57	0.142 J	9.55 J	NA	0.159 X	5.87	1.1 X	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	36.7	42	21.5	65.1 J	21.5 J	24.8	56	22.8	66.7	35.5	120 J	NA	76.8	57.2	55.3	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.142 J	0.351 J	0.149 X	2.71 U	2.51 U	2.15 U	0.759 J	2.77 U	0.332 J	2.41 U	0.704 J	NA	2.68 U	0.304 X	2.61 U	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	1.25 J	0.601 J	1.01 J	2.71 U	0.127 J	0.436 J	1.02 J	0.649 J	1.17 J	2.41 U	1.44 J	NA	2.68 U	0.801 X	0.178 X	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.769 J	0.484 X	0.367 J	0.233 J	2.51 U	0.265 X	0.813 J	0.308 J	0.827 J	2.41 U	1.63 J	NA	0.406 J	0.573 X	0.221 X	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	0.42 X	0.276 X	0.386 J	2.71 U	2.51 U	0.216 J	0.751 J	0.26 X	0.499 J	2.41 U	0.649 J	NA	2.68 U	0.304 X	2.61 U	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	1.15 X	0.982 J	0.64 J	0.691 J	0.312 J	0.489 J	1.78 J	0.464 X	1.63 J	0.18 X	2.92 J	NA	0.694 J	1.46 J	0.857 X	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	2.66 U	2.56 U	2.7 U	2.71 U	2.51 U	2.15 U	2.62 U	2.77 U	2.71 U	2.41 U	2.47 UJ	NA	2.68 U	3.23 U	2.61 U	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.972 J	0.799 X	0.987 J	0.889 J	0.384 J	0.631 J	1.84 J	0.695 J	1.61 J	2.41 U	3.89 J	NA	1.4 J	1.36 J	0.533 X	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	0.529 J	0.129 X	0.419 J	2.71 U	2.51 U	0.147 X	0.286 J	2.77 U	0.402 J	2.41 U	0.382 J	NA	2.68 U	3.23 U	2.61 U	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.358 X	0.201 J	0.22 X	2.71 U	2.51 U	0.171 J	0.462 J	0.227 J	0.39 J	2.41 U	0.882 J	NA	2.68 U	0.341 X	0.15 X	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	0.33 X	0.32 X	0.39 X	2.71 U	2.51 U	0.191 X	0.917 J	0.34 J	0.46 J	2.41 U	0.619 J	NA	2.68 U	0.451 J	2.61 U	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	0.741 J	0.234 X	0.459 J	2.71 U	2.51 U	0.266 J	0.393 X	0.341 J	0.439 J	2.41 U	0.347 X	NA	2.68 U	0.239 X	2.61 U	NA	NA
2,3,7,8-TCDD (dioxin)	1.06 U	1.02 U	1.08 U	1.08 U	1 U	0.861 U	1.05 U	1.11 U	1.08 U	0.962 U	0.139 X	NA	1.07 U	1.29 U	1.04 U	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	0.813 J	1.02 U	0.834 J	1.08 U	1 U	0.518 J	1.05 U	0.584 J	0.661 X	0.962 UJ	0.438 J	NA	1.07 U	0.56 J	1.04 U	NA	NA
Octachlorodibenzofuran	6.72	7.03	3.98 B	0.639 J	0.7 J	2.07 J	41	3.06 J	10.2	4.81 U	20.8	NA	0.532 B	17	4.07 J	NA	NA
Octachlorodibenzo-p-dioxin	2,230 J	3,460 J	1,170 K	12,500 J	4,340 J	4,310 K	2,350 K	2,360 J	4,410 K	12,400 K	3,350 J	NA	16,900 K	3,590 J	2,690 J	NA	NA
Total heptachlorodibenzofuran	5.1	6.7	3.62	2.71 U	2.51 U	2.05 J	36.2	2.44 J	10.3	0.142 J	27.2	NA	2.68 U	17	3.2	NA	NA
Total heptachlorodibenzo-p-dioxin	86.3	92.2	55.2	132	43.2	53.4	123	51.6	153	68.2	399	NA	198	139	289	NA	NA
Total hexachlorodibenzofuran	4.98	3.4	3.73	2.71 U	0.127 J	1.83 J	20.6	2.73 J	7.87	2.41 U	14.5	NA	2.68 U	7.4	0.666 J	NA	NA
Total hexachlorodibenzo-p-dioxin	14.6	9.11	10.2	10.2	2.51 J	5.54	17.3	5.69	17.5	0.487 J	38.5	NA	17.6	15.3	23.3	NA	NA
Total pentachlorodibenzofuran	8.4	1.81 J	5.66	2.71 U	0.312 J	2.62	15.4	3.58	7.06	2.41 U	6.11	NA	2.68 U	2.12 J	0.319 J	NA	NA
Total pentachlorodibenzo-p-dioxin	3.97	1.02 J	3.3	0.582 J	2.51 U	1.16 J	1.3 J	1.97 J	3.24	2.41 U	4.14	NA	0.814 J	2.28 J	1.16 J	NA	NA
Total tetrachlorodibenzofuran	4.82	1.32	5.27	1.08 U	1 U	2.12	6.2	2.06	3.3	0.962 U	4.27	NA	1.07 U	1.41	1.04 U	NA	NA
Total tetrachlorodibenzo-p-dioxin	0.784 J	1.02 U	0.425 J	1.08 U	1 U	0.295 J	0.362 J	0.407 J	0.549 J	0.962 U	0.272 J	NA	0.23 J	1.29 U	1.04 U	NA	NA
Toxic Equivalents (Total TEQ)	2.24	2.12	1.42	4.58	1.6	2.08	2.7	1.61	3.26	4.09	4.61	NA	6.09	2.68	1.7	NA	NA
Explosives (UG/KG)																	
Nitroglycerin	390 U	430 U	1,900	370 U	330 U	400 U	460 U	350 U	460 U	380 U	380 U	NA	420 U	410 U	640 U	4,000 U	4,000 U
Perchlorate	3.7 J	66	2.6 J	4.3 J	2.7 J	0.46 J	0.47 U	3.2 J	0.44 U	0.57 J	0.7 J	NA	1.3 J	0.47 U	0.52 U	11 J	1.5 J

TABLE 4-4
Detected Constituents in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12
Sample ID	IS66SS290001	IS66SS300001	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07
Chemical Name																	
Total Metals (MG/KG)																	
Aluminum	6,570	9,370	7,520	14,300	11,200	8,840	13,600	6,290	10,100	10,200	5,550	NA	15,200	12,400	17,600	6,100	4,550
Antimony	0.11 J	0.41 U	0.11 J	0.32 U	0.29 U	0.37 U	0.09 J	0.36 UJ	0.51 U	0.43 U	0.43 U	NA	0.4 U	0.42 U	0.46 U	1.6 B	3.2 B
Arsenic	2.1	5.5	1.7	2.7	2.4	3.1	14.4	1.2	8.1	1.9	1.8	NA	3.3	3	4.2	1.4 J	5
Barium	32.7	46.3	39.5	51.2	49.8	46.3	142	36	66.1	51.9	23.4	NA	47	44.1	82.3	180	126
Beryllium	0.3 J	0.51	0.35 J	0.51	0.48	0.56	1.2	0.26 J	0.62	0.46	0.27 J	NA	0.59	0.48	0.66	2.9	0.28 B
Cadmium	0.09 B	0.04 J	0.27 U	0.19 U	0.17 U	0.22 U	1.1	0.02 B	0.12 B	0.07 B	0.26 U	NA	0.12 B	0.25 U	0.05 B	0.4 B	0.5 B
Calcium	120	286	116	102	88.1	211	2,720	220	289	95.1	218	NA	62.4	298	1,380	3,220	4,440
Chromium	9.4	13.7	8.9	17	14.4	13.8	28.1	7.5	12.3	13.2	10.2	NA	23	16.8	23.1	10.1	11.9
Cobalt	7.1	8.6	3.9	6.9	6.3	11	8.5	5	15.1	5.5	2.9	NA	6	9.6	10.6	17.9 J	3.7 J
Copper	39.5	34.8	14.8	8.4	7.2	20.7	22.2	7.8	14.2	5.1	8.2	NA	13.7	7.4	11.4	23	31.4
Cyanide	0.44 U	0.4 U	0.4 U	0.44 U	0.44 U	0.4 U	0.44 U	0.44 U	0.48 U	0.4 U	0.4 U	NA	0.48 U	0.48 U	0.64 U	0.13 U	0.12 J
Iron	6,890	11,600	6,990	14,800	13,300	10,700	16,000	4,960	10,100	10,300	8,740	NA	17,000	11,100	16,500	5,550	10,900
Lead	41.6	29.5	23.4	8.3	8.1	29.6	35.1	12.9	15.4	7.9	18.1	NA	11.4	18.3	18.1	20.8	267
Magnesium	514	722	552	817	641	634	2,170	477 J	931	864	428	NA	1,670	877	1,350	1,060 J	894 J
Manganese	447	274	64.1	54.8	49.4	232	155	209	150	71.5	77.1	NA	42.6	174	322	110	305
Mercury	0.01 J	0.06	0.06	0.02 J	0.02 J	0.06	0.05	0.04	0.05	0.02 J	0.03	NA	0.03 J	0.06	0.04	0.15 B	0.5 J
Nickel	5.9	7.3	6.9	10.8	8.5	7.4	20.8	5.9	10	8.8	5	NA	11.2	9.4	11.7	31.9	10.8 J
Potassium	484	650	447	1,100	789	529	1,130	468 J	710	640	492	NA	1,200	736	1,110	373 J	345 J
Selenium	0.32 J	0.4 J	0.29 J	0.35	0.32	0.56	0.63	0.26 J	0.38 J	0.19 J	0.26 J	NA	0.39 J	1.1	0.51	1.1 U	0.76 U
Silver	0.05 J	0.04 J	0.05 J	0.01 J	0.01 J	0.07 J	0.08	0.04 J	0.08 J	0.02 J	0.07 J	NA	0.01 J	0.07 J	0.04 J	0.5 U	0.36 J
Sodium	33.1 B	28.3 J	31.3 B	36.2 J	22.2 B	23.8 B	204	34.9 J	59.4 J	34.2 B	19.8 B	NA	44.4 B	59.5 J	51 J	243 B	114 B
Thallium	0.1 J	0.12 J	0.1 J	0.17	0.12	0.11 J	0.32	0.1 J	0.13 J	0.12 J	0.08 J	NA	0.15 J	0.18	0.22	1.2 U	0.82 U
Vanadium	24.7	26.4	25.4	26.8	21.4	33.7	38.2	15.8	23.7	18.9	19.7	NA	31.1	32.7	34.2	19.9 J	27.5
Zinc	18.7	25.8	19.8	31	26.3	23.7	63.5	18.7	49.2	28.8	24.1	NA	38	28.9	45.3	114	244
Wet Chemistry																	
pH	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.53	6.99
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70,400	71,200

Notes:

Shading indicates detections

NA - Not analyzed

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

UG/KG - Micrograms per kilogram

TABLE 4-4
Detected Constituents in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name															
Volatile Organic Compounds (UG/KG)															
2-Butanone	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	69 R	16 UL	15 UL	14 UL	16 UL	16 UL
Acetone	7 B	25 U	48 B	22 B	24 B	7 B	10 U	11 U	20 B	380 R	16 UL	15 UL	10 L	17 L	14 L
Carbon disulfide	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	1.6 B	1.5 B	1.3 B	1.7 B	1.6 B
Chloroform	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Methyl acetate	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	3.9 UL	3.6 UL	3.3 UL	3.9 UL	3.9 UL
Styrene	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Tetrachloroethene	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	4.8 J	3.1 J	5 J	5.1 J	4.6 J
Toluene	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Semivolatile Organic Compounds (UG/KG)															
2,4,5-Trichlorophenol	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	58 U	51 U	54 U	52 U	52 U
2,4,6-Trichlorophenol	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	58 U	5.5 J	54 U	52 U	52 U
2,4-Dichlorophenol	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
2-Methylnaphthalene	460 U	670 U	710 J	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Acenaphthene	460 U	670 U	8,500 J	26,000 J	190 J	520 U	410 U	110 J	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Acenaphthylene	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	340 J	12 U	10 U	11 U	10 U	10 U
Anthracene	460 U	670 U	21,000 J	56,000 J	500 J	520 U	410 U	170 J	540 U	530 J	1.6 J	10 U	11 U	3.4 J	10 U
Atrazine	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Benzo(a)anthracene	100 J	670 U	69,000 J	170,000 J	1,800	530	220 J	320 J	350 J	3,100	11 J	6.4 J	4.8 J	32	12 J
Benzo(a)pyrene	460 U	670 U	58,000 J	180,000 J	2,000	540	200 J	1,400 J	440 J	4,400	11 J	7.4 J	6.2 J	29	9.4 J
Benzo(b)fluoranthene	110 J	670 U	130,000 J	180,000 J	1,800	660 J	320 J	260 J	620 J	7,200 J	24	15 J	11 J	68	18 J
Benzo(g,h,i)perylene	460 U	670 U	2,500 J	92,000 J	1,100	210 J	94 J	390 J	270 J	2,000	8.4 J	2.5 J	11 UJ	19 J	5.6 J
Benzo(k)fluoranthene	460 U	670 U	130,000 J	150,000 J	2,000	570	310 J	240 J	710	5,100	6.5 J	5.1 J	11 UJ	22	5.8 J
bis(2-Ethylhexyl)phthalate	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	210 B	530 B	290 B	100 B	86 B
Carbazole	460 U	670 U	18,000 J	45,000 J	350 J	520 U	410 U	140 J	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Chrysene	110 J	670 U	70,000 J	180,000 J	1,900	600	260 J	250 J	550	3,100	12 J	8.8 J	6 J	33	12 J
Dibenz(a,h)anthracene	460 U	670 U	9,000 J	44,000 J	580	110 J	410 U	400 U	540 U	950	12 U	10 UJ	11 UJ	6.3 J	10 U
Dibenzofuran	460 U	670 U	3,000 J	9,200 J	540 U	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Dimethyl phthalate	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	2.7 B	2 B	1.7 B	1.6 B	1.9 B
Di-n-butylphthalate	460 U	670 U	540 J	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Fluoranthene	240 J	670 U	130,000 J	350,000 J	3,300	840	330 J	570	740	1,700	20 J	12 J	10 J	42	19 J
Fluorene	460 U	670 U	4,200 J	14,000 J	130 J	520 U	410 U	140 J	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Hexachlorocyclopentadiene	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	460 U	670 U	58,000 J	120,000 J	1,500	360 J	120 J	560	320 J	2,700	8 J	6.5 J	4.4 J	19 J	5.2 J
Naphthalene	460 U	670 U	2,300 J	6,100 J	540 U	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Phenanthrene	160 J	670 U	72,000 J	210,000 J	1,800	290 J	88 J	440 J	270 J	800 U	10 J	5.3 J	4.9 J	16 J	7 J
Pyrene	190 J	670 U	100,000 J	280,000 J	2,800	860	410 J	950 J	670	3,200	20 J	17 J	12 J	54	23

TABLE 4-4
Detected Constituents in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name															
Pesticide/Polychlorinated Biphenyls (UG/KG)															
4,4'-DDD	1 B	6.7 U	8.5 J	14 J	3.5 B	5.2 U	1.6 B	4.3 B	4.7 B	30	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
4,4'-DDE	7.9	6.7 U	250 J	210 J	11	10	5.5 J	7.4	23	58	1.9 UJ	1.6 UJ	1.7 UJ	1.2 J	1.8 UJ
4,4'-DDT	8 J	6.7 U	230 J	260 J	21	18	30 J	40	60	16 J	1.9 UJ	1.6 UJ	0.6 J	2.1 J	1.8 UJ
Aldrin	2.4 U	3.5 U	5.2 J	12 J	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
alpha-BHC	2.4 U	3.5 U	3 U	3 U	0.77 J	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
alpha-Chlordane	0.78 J	3.5 U	3 U	3 U	1.5 J	2.7 U	0.63 J	0.49 J	0.78 J	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
beta-BHC	1.8 J	3.5 U	9.6 J	3 U	2.1 J	3.1 J	2.1 U	1.4 J	2 J	2.5 J	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
delta-BHC	2.4 U	3.5 U	3 U	3 U	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Dieldrin	0.97 J	6.7 U	5.9 J	40 J	1.8 J	1.2 J	2.4 J	2.8 J	1.2 J	6.3 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endosulfan I	2.4 U	3.5 U	3.8 J	15 J	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.42 J	0.9 UJ
Endosulfan II	4.6 U	6.7 U	23 J	5.9 U	5.4 U	5.2 U	4.1 U	8.3 J	5.4 U	3.9 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endosulfan sulfate	4.6 U	6.7 U	38 J	9.8 J	5.4 U	5.2 U	4.1 U	4 U	5.4 U	6.8 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin	4.6 U	6.7 U	5.9 U	5.9 U	5.4 U	5.2 U	4.1 U	4 U	5.4 U	8 U	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin aldehyde	1.3 J	6.7 U	52 J	62 J	6.9	5.2 U	4.1 U	4 U	5.4 U	2 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin ketone	1.1 J	6.7 U	78 J	96 J	7.6	3.4 J	1.8 J	4.7 J	2.3 J	16	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
gamma-BHC (Lindane)	2.4 U	3.5 U	3 U	3 U	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.35 J	0.9 UJ	0.93 UJ	0.9 UJ
gamma-Chlordane	2.4 U	3.5 U	12 J	3 U	0.93 J	1.2 J	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Heptachlor	2.4 U	3.5 U	3 U	3 U	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Heptachlor epoxide	2.4 U	3.5 U	3.3 J	5.3 J	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Methoxychlor	24 U	35 U	230 J	30 U	13 J	27 U	27	23 J	28 U	51 J	9.9 UJ	8.4 UJ	9 UJ	9.3 UJ	9 UJ
Dioxin/Furans (PG/G)															
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.17 J	2.52 J	1.62 J	1.93 J	2.06 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33	38.2	37.1	43.7	91.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.41 U	2.8 U	2.41 U	2.52 U	0.136 X
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.774 J	1.02 J	0.646 J	0.61 J	0.96 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.402 J	0.507 X	0.322 X	0.25 X	0.629 X
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.258 X	0.352 J	0.231 X	0.203 J	0.313 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.691 J	0.986 J	0.617 J	0.709 J	1.24 J
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.41 U	0.0983 X	2.41 U	0.0667 J	0.114 X
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.795 X	1.15 X	0.796 X	0.551 X	1.47 J
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.256 X	0.413 J	0.277 J	2.52 U	0.297 X
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.195 J	0.28 J	0.164 X	0.151 X	0.356 J
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.378 J	0.612 J	0.113 J	0.311 J	0.221 X
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.401 X	0.444 X	0.269 X	0.315 J	0.39 X
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.963 U	1.12 U	0.965 U	1.01 U	1.13 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.357 X	0.453 J	0.965 U	1.01 U	1.13 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.66 J	4.22 J	2.96 J	3.55 J	3.08 J
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,870 J	3,370 J	4,920 J	4,600 J	9,360 J
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.93	5.22	2.8	4.68	1.97 J
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	83.7	97.1	93.3	98.5	213
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.4	5.29	2.15 J	3.54	4.28
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.5	14	10.8	3.96	21.1
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.62	3.91	2.83	2.55	4.15
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.6	3.63	2.29 J	0.483 J	4.26
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.88	5.25	3.58	1.9	6.46
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.16	1.08 J	0.733 J	0.356 J	1.48
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.2	2.36	2.39	2.35	4.72
Explosives (UG/KG)															
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	430 U	410 U	390 U	460 U	420 U
Perchlorate	4.2 J	4.1 J	2.4 J	4.6 J	3.2 U	3.5 U	2.6 U	2.4 U	1.2 J	1.8 J	0.98 J	0.77 J	0.78 J	2.8 J	2.3 J

TABLE 4-4
Detected Constituents in Surface Soil
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NSF-IH, Indian Head, Maryland

Station ID	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name															
Total Metals (MG/KG)															
Aluminum	5,060	5,560	7,030	6,800	6,200	5,660	4,700	4,000	6,290	9,790	10,900	10,800	10,800	10,700	13,600
Antimony	0.41 UJ	0.78 UJ	3.5 B	2.6 B	0.97 B	1.9 B	0.69 B	0.48 UJ	1.4 B	2.5 B	0.4 U	0.4 U	0.32 U	0.36 U	0.42 U
Arsenic	2.3 J	108	30.5	33.1	9.8	22.2	6.6	6.1	5.5	3.5 J	2.9	2.4	2.8	5.6	2.6
Barium	62.5	64.4 J	200	206	111	93.6	50.7	43.5 J	73.8	98.1	60.2	55.7	33.6	58.5	64
Beryllium	0.29 B	1.6 J	1 J	1.1 J	0.32 B	0.35 B	0.35 B	0.27 B	0.29 B	0.56 B	0.46	0.42	0.33	0.47	0.49
Cadmium	0.055 U	0.15 U	0.21 B	0.23 B	0.59 B	0.3 B	0.1 U	0.091 U	0.12 B	0.24 B	0.17 B	0.03 B	0.07 B	0.15 B	0.23 J
Calcium	412 J	1,950	2,930	3,050	6,510	4,410	2,130 J	4,750 J	5,100	6,150	2,260 J	814 J	669	2,280	2,090
Chromium	8.2	15.5	18.9	17.8	11.9	10.9	11	8.6	13.9	14	13.7	12	13.4	14.6	18.6
Cobalt	4 J	10.3 J	5.6 J	5.3 J	4.5 J	5 J	9.8 J	3.6 J	3.1 J	9.5 J	5.8 J	3.7 J	4	6.3	5.7
Copper	29	33.3	56.9	59.6	19.7	32.4	9.7	10.1	27.8	41.5	11	10.3	8.4	12	12.1
Cyanide	0.084 U	0.2 J	0.28 J	0.2 J	0.098 U	0.1 J	0.075 U	0.083 J	0.25 J	0.57 J	0.48 U	0.44 U	0.4 U	0.44 U	0.44 U
Iron	10,100	31,600	23,400	22,500	13,700	10,500	12,700	9,740	12,900	18,500	13,900	14,800	13,700	14,600	17,700
Lead	42.6	12.1	305	225	188	121	27.4	28.4	182	38.7	18.6 J	38 J	14.1	17	13.7
Magnesium	398 J	237 B	690 J	732 J	708 J	726 J	424 J	549 J	897 J	1,700 J	883	786	705	969	1,080
Manganese	152	74.8	521	448	368	518	345	263	350	381	217 J	97.2 J	44.3	193	388
Mercury	0.14 B	0.45 B	1.3 J	1.1 J	0.56 J	0.33 B	0.41 J	0.53 J	22.1 J	1.9 J	0.09 J	0.05 J	0.05	0.07	0.08
Nickel	5.4 J	28.1	24	25.3	7.7 J	9.2 J	6.5 J	6.4 J	10.7 J	15 J	10.2	8.4	8.1	8.6	10.5
Potassium	359 J	290 J	456 J	462 J	835 J	434 J	324 J	298 J	651 J	1,140 J	991	998	815	928	1,120
Selenium	0.8 U	1.7 J	3.4	2.6	0.96 U	0.85 U	0.68 U	0.61 U	0.83 U	1.3 U	0.42	0.26 J	0.31 J	0.41	0.4 J
Silver	0.14 U	0.45 U	0.48 J	0.42 U	0.19 J	0.38 U	0.34 J	0.49 J	0.55 J	0.58 U	0.05 J	0.04 J	0.03 J	0.06 J	0.03 J
Sodium	113 B	90 B	165 B	177 B	112 B	149 B	88.3 B	86.2 B	109 B	172 B	36.2 J	27 J	33.5 J	33.8 J	32.8 J
Thallium	1.4 U	1.1 U	1 U	1 U	1.6 U	0.92 U	0.73 U	0.66 U	0.89 U	1.4 U	0.12 J	0.1 J	0.13 J	0.11 J	0.15 J
Vanadium	36.5	115	87	89	27.8	33.9	26.4	24.6	32.4	40	29.6	27	28.2	26.4	31.7
Zinc	16.5	36.9	203	177	373	373	35.1	37.4	149	211	35.5	27.6	24	41.9	38.7
Wet Chemistry															
pH	4.37	6.22	5.8	6.05	5.79	5.96	7.62	7.54	6.86	6.11	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	93,700	202 U	173,000	145,000	82,700	76,100	706 J	25,500 J	47,000	148,000	NA	NA	NA	NA	NA

Notes:

Shading indicates detections

NA - Not analyzed

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

UG/KG - Micrograms per kilogram

TABLE 4-5
Detected Constituents in Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																			
Volatile Organic Compounds (UG/KG)																			
1,1-Dichloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	3 L	3 U
1,1-Dichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	1.4 J	2.5 U	1.1 J	2.5 UL	2.8 L	3 U
2-Butanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	14 U	15 U	12 U	12 UJ	12 UJ	12 UL	12 UL	15 U
Acetone	12 U	12 U	18 UJ	99 B	22 U	19 U	73 B	15 U	15 B	17 B	26 B	9.2 B	11 B	12 U	11 B	9 B	12 UL	8.5 B	8.7 B
Ethylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U
Isopropylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U
Tetrachloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	6.7 J	2.1 J	4.8 J	4.6 J	5.6 J	9.8 J	10 J	7 J
Toluene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	13	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U
Xylene, total	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	8.2 U	9 U	7.5 U	7.5 U	7.2 UJ	7.4 UL	7.5 UL	9 U
Semivolatile Organic Compounds (UG/KG)																			
2,4,5-Trichlorophenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	63 U	61 U	61 U	2.9 J	59 U	55 U	58 U	52 U
2,4,6-Trichlorophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	14 J	16 J	13 J	59 U	8.8 J	9.2 J	10 J
2,4-Dichlorophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 UJ	14 J	14 J	12 J	12 U	11 U	12 U	5.5 J
2,4-Dinitrotoluene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U
2-Methylnaphthalene	420 U	410 U	520 U	210 J	650 U	550 U	420 U	210 J	420 U	420 U	410 U	12 UL	3.3 L	12 UL	2.8 L	12 UL	11 U	12 U	10 U
3- and 4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63 U	61 U	61 U	46 U	16 J	55 U	58 U	52 U
Acenaphthene	420 U	150 J	520 U	830	650 U	550 U	420 U	1,700	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL
Acenaphthylene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	170 J	420 U	420 U	410 U	12 U	3.7 J	4 J	3.4 J	12 U	11 UL	12 UL	10 UL
Acetophenone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	110 J	420 U	420 U	410 U	310 UL	310 UJ	300 UL	230 U	290 U	270 U	290 U	260 UL
Anthracene	420 U	440	520 U	180 J	650 U	110 J	420 U	4,700 J	420 U	420 U	410 U	12 U	12 U	2 J	1.4 J	12 U	11 U	12 U	1.8 J
Atrazine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	1.5 J	3.6 J	2.2 J	1.5 J	11 U	12 U	2 J
Benzo(a)anthracene	420 U	1,000	270 J	820	650 U	280 J	420 U	15,000	170 J	420 U	410 U	7.3 J	7.6 J	8.5 J	6.5 B	5.4 B	6.1 J	5.2 J	8.6 J
Benzo(a)pyrene	420 U	850	320 J	600 J	650 U	200 J	420 U	15,000	110 J	420 U	410 U	12 U	12 U	4.3 J	9.3 U	12 U	5.6 J	5.2 J	7.9 J
Benzo(b)fluoranthene	420 U	920	470 J	640	650 U	240 J	420 U	15,000	160 J	420 U	410 U	8.4 J	7.4 J	8.1 J	6.3 J	12 U	9.9 J	9.5 J	12 B
Benzo(g,h,i)perylene	420 U	340 J	230 J	350 J	650 U	550 U	420 U	11,000 J	420 U	420 U	410 U	5.9 J	12 U	12 U	2.4 J	12 U	11 UJ	12 UJ	2.8 J
Benzo(k)fluoranthene	420 U	920	310 J	570 J	650 U	180 J	420 U	13,000	120 J	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UJ	12 UJ	10 U
bis(2-Ethylhexyl)phthalate	420 U	410 U	520 U	170 B	650 U	550 U	420 U	510 U	420 U	98 B	410 U	50 K	78 B	150 K	96 B	190 B	89 B	1,900 B	550 B
Carbazole	420 U	360 J	220 J	610 U	650 U	550 U	420 U	2,900	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U
Chrysene	420 U	1,200	350 J	850	650 U	290 J	420 U	15,000	190 J	420 U	410 U	12 U	12 U	3.9 J	2.2 J	12 U	11 UJ	12 UJ	2 J
Dibenz(a,h)anthracene	420 U	230 J	520 U	150 J	650 U	550 U	420 U	2,600 J	420 U	420 U	410 U	3.9 J	12 U	12 U	9.3 U	12 U	11 UJ	12 UJ	2.4 J
Dibenzofuran	420 U	170 J	520 U	410 J	650 U	550 U	420 U	710	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U
Dimethyl phthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	2.3 J	2.9 J	2.8 B	2.5 B	11 U	12 U	2.2 J
Di-n-octylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 UJ	58 UJ	52 U
Fluoranthene	420 U	2,500	770	1,600	200 J	720	120 J	27,000	340 J	420 U	410 U	12 U	12 U	3.9 J	2.4 J	12 U	11 U	12 U	7.1 K
Fluorene	420 U	280 J	120 J	610 U	650 U	550 U	420 U	1,200	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL
Hexachlorobenzene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U
Hexachlorocyclopentadiene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL
Indeno(1,2,3-cd)pyrene	420 U	540	290 J	390 J	650 U	130 J	420 U	11,000 J	420 U	420 U	410 U	5.3 J	12 U	12 U	2.2 J	12 U	11 UJ	12 UJ	3.2 J
Naphthalene	420 U	110 J	140 J	610 U	650 U	550 U	420 U	630	420 U	420 U	410 U	12 U	12 U	12 U	9.3 UL	12 UL	11 U	12 U	10 U
Phenanthrene	420 U	1,900	510 J	1,400	650 U	500 J	230 J	17,000	100 J	420 U	410 U	12 U	12 U	3.1 J	2 J	12 U	11 U	12 U	3.4 J
Phenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 U	58 U	52 U
Pyrene	420 U	1,900	580	1,600	150 J	590	420 U	25,000	300 J	420 U	410 U	12 U	12 U	4.6 J	3.1 J	12 U	11 UJ	12 UJ	6.4 J
Pesticide/Polychlorinated Biphenyls (UG/KG)																			
4,4'-DDD	14	18	33	83,000	580 J	50 J	9.6	14 J	1.6 J	4.2 U	57	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
4,4'-DDE	4.2 U	13	5.4	280 J	6.2 J	5.5 U	4.2 U	14	2.6 J	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
4,4'-DDT	4.2 U	24	5.6 B	620	10	2 B	4.2 U	40 J	10	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
alpha-BHC	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	4 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
alpha-Chlordane	2.2 U	2.1 U	2.7 U	160 U	3.9	1.9 J	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
beta-BHC	2.2 U	2.1 U	0.82 J	160 U	3.3 U	2.8 U	2.2 U	8.5 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
Dieldrin	4.2 U	4.1 U	2 J	310 U	6.5 U	5.5 U	4.2 U	2 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
Endosulfan I	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	1.3 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
Endosulfan II	4.2 U	4.1 U	1.2 J	310 U	6.5 U	5.5 U	4.2 U	1.2 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
Endosulfan sulfate	4.2 U	4.1 U	5.2 U	310 U	6.5 U	5.5 U	4.2 U	7.7 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
Endrin	4.2 U	0.91 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	5.1 U	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
Endrin aldehyde	4.2 U	1.8 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	19 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL
Endrin ketone	4.2 U	2.4 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	29 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL

TABLE 4-5
Detected Constituents in Subsurface Soil
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																			
gamma-Chlordane	2.2 U	0.57 J	2.7 U	240 J	0.99 J	0.62 J	2.2 U	14 J	0.5 J	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
Heptachlor epoxide	2.2 U	2.1 U	0.74 J	210 J	2.8 J	2.8 U	2.2 U	0.83 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL
Methoxychlor	22 U	21 U	27 U	1,600 U	33 U	28 U	22 U	77 J	8.3 J	22 U	21 U	11 UJ	10 UJ	10 UL	8.7 U	9.2 UJ	9.6 UL	9.8 UL	8.9 UL
Dioxin/Furans (PG/G)																			
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.137 J	0.232 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27	17.5	111	22.2	30.3	8.81	148	18.3
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	0.0983 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	0.13 J	0.494 J	0.163 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.09 J	0.541 J	1.52 J	0.43 J	3.05 U	0.197 J	2.17 J	0.229 X
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.24 X	0.599 J	4.72	0.749 J	1.32 J	0.352 X	3.51 X	0.414 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	0.854 J	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	1.11 U	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.51 U	5.82 U	5.54 U	4.49 U	6.1 U	0.512 X	0.841 J	0.606 B
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	248	189	3,960 J	1,250 J	651	386	5,040 J	2,630 K
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.137 J	0.312 J
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	48.9	35.8	573	86	120	40.2	362	50.6
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.394 J	0.252 J
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.3	8.35	328	28	45.8	12.2	64.1	8.24
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.0896 J	2.57 U
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.93 J	2.15 J	120	3.09	14	2.37 U	5.25	0.297 J
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	1.11 U	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.91	1.46	118	0.438 J	37.5	0.947 U	1.5	0.165 J
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.577	0.346	3.78	0.715	0.63	0.272	3.61	1.06
Explosives (UG/KG)																			
Perchlorate	2.6 U	0.85 J	2.8 U	2.8 J	3.1 U	3.9 U	2.6 U	1.2 J	1 J	1.7 J	0.9 J	0.53 U	0.5 U	0.48 U	0.42 U	0.49 U	0.32 J	0.47 U	1.1 J
Total Metals (MG/KG)																			
Aluminum	6,490	7,200	8,780	9,990	6,830	4,930	8,630	10,900	7,090	8,510	9,340	17,600	15,400	13,700	5,860	16,100	12,600	17,200	6,520
Antimony	0.38 UJ	0.37 UJ	0.48 B	0.56 UJ	0.57 UJ	0.5 UJ	0.38 UJ	0.43 UJ	0.38 UJ	0.39 UJ	0.38 UJ	0.82 U	0.36 U	0.84 U	0.34 U	0.28 J	0.4 U	0.41 U	0.42 R
Arsenic	6.5	1.2 J	17.1	6.6	53.2 J	36.6 J	2.3 J	2.7 J	6.1	3	1.1 J	7.2 J	2 J	3.6	3.5	0.76 B	6.2	1.7	1.6
Barium	63.4	47.7 J	131	87.8	85.3	126	66	46.3 J	34.5 J	66.8	48 J	63.9	72.7	67.9	45.2	103	50.7	61.9	20.9
Beryllium	0.79 J	0.98 J	2.3	0.48 B	1.5 J	0.91 J	0.43 B	0.67 B	0.38 B	0.6 B	0.55 B	1.3	0.98	0.77	0.31 J	0.9 J	0.59	0.63	0.22 J
Cadmium	0.05 U	0.072 B	0.55 B	0.074 U	0.21 B	1.6 J	0.051 U	0.057 U	0.051 U	0.051 U	0.05 U	0.48 J	0.22 U	0.18 B	0.2 U	0.57 U	0.05 B	0.1 B	0.25 U
Calcium	311 J	3,710	22,600	2,550	2,000	965 J	858 J	255 J	597 J	1,630	35.3 B	205	246	284	58.5	532	46.5	153	103
Chromium	11.8	17.4	26.2	13.3	16.8	14.4	11	19.1	13.3	16	13.6	26.2	20.6	19.3	11.2	24	18.9	18.5	9.5
Cobalt	5.9 J	4 J	8 J	13.7 J	7.1 J	10.6 J	6 J	12.8 J	4.4 J	6.4 J	5.2 J	9.6	9.3	11.7	2.8	16.6	7	4.8	2.1
Copper	17.2	21.5	40.4	10.6	31	31.5	9.9	12.7	11.1	18.4	12	14.8	11.7	10.3	4.4	14	9.5	12.9	4.9
Cyanide	0.074 U	0.075 U	0.097 U	0.21 J	0.12 U	0.1 U	0.077 U	0.093 U	0.078 U	0.08 U	0.076 U	0.48 U	0.52 U	0.48 U	0.4 U	0.44 U	0.48 U	0.48 U	0.44 U
Iron	60,000	32,200	28,500	12,500	24,200 J	16,000 J	11,600	28,600	20,200	19,100	13,000	30,500 J	18,700 J	26,100	6,110	31,000	8,290	17,800	6,120
Lead	10.8	31.5	186	37.5	242 J	1,420 J	16	10.3	18.7	11.5	11.3	15.4 J	9.5 J	17.2	5.8	12.3	8.7	10.8	6.1
Magnesium	981 J	668 J	1,350 J	856 J	1,250 J	695 J	689 J	1,210 J	838 J	2,120	1,010 J	1,420	1,180	824	666	2,230	1,170	1,160	566 K
Manganese	64.8	71.9	272	106	79	73.8	139	278	78.4	93.1	24.6	50.5	57.3	105	17.2	53.2	24.4	28.4	24.4
Mercury	0.099 B	0.075 B	0.63	0.11 B	0.32 B	0.41 B	0.1 B	0.11 B	0.082 B	0.086 B	0.066 B	0.03 J	0.03 J	0.02 J	0.01 J	0.02 J	0.03 J	0.006 J	0.02 J
Nickel	10.9	5.3 J	25.4	9.5 J	42.2 J	28.9 J	5.8 J	11.3 J	7.2 J	14.7	7.5 J	15.5	13.6	11.4	3.8	22.7	8	9.5	5.5
Potassium	714 J	552 J	913 J	722 J	552 J	370 J	547 J	680 J	641 J	1,010 J	778 J	1,300	1,300	818	649	1,370	1,080	1,140	720 K
Selenium	0.73 U	0.71 U	3	1.1 U	1.6 J	0.96 U	0.74 U	0.82 U	0.74 U	0.75 U	0.73 U	0.58	0.4	0.5	0.28 J	0.65	0.28 J	0.35 J	0.09 J
Silver	0.13 U	0.12 U	0.15 U	0.18 U	0.19 U	0.17 U	0.13 U	0.14 U	0.13 U	0.13 U	0.12 U	0.03 J	0.02 J	0.04 J	0.02 J	0.01 J	0.03 J	0.05 J	0.02 J
Sodium	127 B	83.3 B	293 B	201 B	294 B	243 B	170 B	136 B	155 B	104 B	143 B	90.9	86.2	68 J	71.9	248	109	78.7 J	58.8 J
Thallium	1.2 U	1.2 U	1.5 U	1.8 U	1.9 U	1.6 U	1.3 U	1.4 U	1.3 U	1.3 U	1.2 U	0.22	0.18	0.2	0.07 J	0.2	0.14 J	0.22	0.08 J
Vanadium	19	62.2	156	31.5	166 J	73.4 J	21.7	26.2	25.4	22	23	40.2 J	22.8 J	27.5	17.6	30.9	32.4	29.5	15.5
Zinc	35.3	36.2	391	61.5	201 J	429 J	30.7	35	28.8	47.6	27.4	52.4	46.5	44.8	13.1	59.1	31.4	37.8	14
Wet Chemistry																			
pH (ph)	5.13	8.12	8.52	8.3	6.67	6.17	7.58	4.97	6.06	6.76	5.18	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	5,260	9,850	73,100	134,000	139,000	163,000	37,000	11,800	16,400	6,660	5,710	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-5
Detected Constituents in Subsurface Soil
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10
Chemical Name																			

Notes:

Shading indicates detections

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

UG/KG - Micrograms per kilogram

TABLE 4-5
Detected Constituents in Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB291617	IS66SB300910	IS66SB311415	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name															
Volatile Organic Compounds (UG/KG)															
1,1-Dichloroethane	2.5 UL	2.5 UL	2.5 UJ	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1-Dichloroethene	2.5 UL	2.5 UL	2.5 UJ	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
2-Butanone	12 UL	12 UL	12 UJ	12 U	12 U	14 UJ	12 U	12 U	12 UJ	12 U	NA	15 U	14 UJ	15 UJ	22 J
Acetone	12 UL	24 L	12 UJ	12 U	12 U	8.8 B	47 B	12 U	17 B	12 U	NA	6.5 J	14 UJ	6.6 B	95 J
Ethylbenzene	2.5 UL	2.5 UL	2.5 UJ	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	9.3
Isopropylbenzene	2.5 UL	2.5 UL	2.5 UJ	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	22
Tetrachloroethene	6.1 J	2.9 J	5.9 J	6.4 J	4.4 J	6.1 J	6.6 J	7.4 J	4.6 J	4.5 J	NA	10 J	5.2 J	5.1 J	9.6 J
Toluene	2.5 UL	2.5 UL	2.5 UJ	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Xylene, total	7.5 UL	7.5 UL	7.5 UJ	7.5 U	7.5 U	8.2 UJ	7.5 U	7.5 U	7.4 UJ	7.5 U	NA	9 U	8.2 UJ	9 UJ	50
Semivolatile Organic Compounds (UG/KG)															
2,4,5-Trichlorophenol	58 U	56 U	62 U	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	13 J	57 U
2,4,6-Trichlorophenol	58 U	56 U	62 U	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	7.9 J	57 U
2,4-Dichlorophenol	12 U	11 U	12 U	12 U	10 UJ	12 U	2.6 J	12 UJ	11 U	11 U	11 U	NA	11 U	8.3 J	11 UJ
2,4-Dinitrotoluene	12 U	11 U	12 U	12 U	10 U	12 U	8.2 J	12 U	11 U	11 U	11 U	NA	11 U	13 U	11 U
2-Methylnaphthalene	12 U	11 U	12 U	12 UL	10 UL	12 U	11 U	12 UL	11 U	11 U	11 U	NA	11 U	13 UL	100 L
3- and 4-Methylphenol	58 U	56 U	62 U	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	66 U	14 J
Acenaphthene	12 UL	11 U	12 UL	12 UL	10 UL	12 UL	5.6 L	12 UL	11 UL	11 UL	11 U	NA	11 UL	3.6 J	18 J
Acenaphthylene	12 UL	11 U	12 UL	12 UL	10 UL	12 U	6.6 J	12 UL	11 UL	11 UL	11 U	NA	11 U	6.2 J	3.9 J
Acetophenone	290 U	280 U	300 U	290 UL	260 UL	290 UL	280 UL	280 UL	270 U	280 U	280 U	NA	270 UL	330 UL	280 UL
Anthracene	12 U	1.4 J	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	4.7 J	5 J
Atrazine	12 U	11 U	12 U	12 U	10 U	12 U	1.9 J	12 U	11 U	11 U	11 U	NA	11 U	4.8 J	11 U
Benzo(a)anthracene	12 U	5.6 J	8.1 J	12 U	10 U	12 U	11 U	12 U	4.7 J	4.7 J	11 U	NA	11 U	7.5 J	30
Benzo(a)pyrene	12 UJ	5.9 J	12 U	12 U	6.1 B	12 U	11 U	6.5 B	11 U	11 U	11 U	NA	11 U	12 J	28
Benzo(b)fluoranthene	12 UJ	9 J	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	6 J	45
Benzo(g,h,i)perylene	12 UJ	11 U	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	5.3 J	20 J
Benzo(k)fluoranthene	12 UJ	11 U	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	4.4 J	13 J
bis(2-Ethylhexyl)phthalate	100 B	1,100 B	90 B	150 B	76 B	650 K	38 B	200 B	51 B	100 B	250 B	NA	530 K	140 B	190 B
Carbazole	290 U	280 U	300 U	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Chrysene	12 U	5.4 J	12 U	12 U	10 U	12 U	2 J	12 U	11 U	11 U	11 U	NA	11 U	13 U	23 J
Dibenz(a,h)anthracene	12 UJ	11 U	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	11 J	11 J
Dibenzofuran	290 U	280 U	300 U	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Dimethyl phthalate	12 U	1.8 B	12 U	12 U	2 B	12 U	3.1 J	2.5 B	11 U	11 U	2.1 B	NA	11 U	5.4 J	11 U
Di-n-octylphthalate	58 U	56 U	62 U	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	96 J	57 U
Fluoranthene	12 U	11 J	12 U	12 U	10 U	12 UL	2.4 L	12 U	11 U	11 U	11 U	NA	11 UL	6.5 J	59
Fluorene	12 UL	11 U	12 UL	12 UL	10 UL	12 UL	11 UL	12 UL	11 UL	11 UL	11 U	NA	11 UL	13 U	9.2 J
Hexachlorobenzene	12 U	11 U	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	3.5 J	11 U
Hexachlorocyclopentadiene	12 UL	11 U	12 UL	12 U	10 U	12 U	11 U	12 U	11 UL	11 UL	11 U	NA	11 U	5.3 J	11 U
Indeno(1,2,3-cd)pyrene	12 U	4.2 J	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	10 J	21 J
Naphthalene	12 U	11 U	12 U	12 U	10 U	12 UL	11 UL	12 U	11 U	11 U	11 U	NA	11 UL	13 U	1,300
Phenanthrene	12 U	7.5 J	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	7.7 J	NA	11 U	6.9 J	27
Phenol	58 UJ	56 U	62 U	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	8.6 J	57 U
Pyrene	12 U	12 J	12 U	12 U	10 U	12 U	11 U	12 U	11 U	11 U	3.4 J	NA	11 U	8.5 J	54
Pesticide/Polychlorinated Biphenyls (UG/KG)															
4,4'-DDD	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	0.68 J	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	120
4,4'-DDE	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	180
4,4'-DDT	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	5.7 J
alpha-BHC	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
alpha-Chlordane	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
beta-BHC	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Dieldrin	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	27 J
Endosulfan I	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.5 J
Endosulfan II	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endosulfan sulfate	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin aldehyde	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin ketone	1.8 UL	1.8 UJ	2 UL	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ

TABLE 4-5
Detected Constituents in Subsurface Soil
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NSF-IH, Indian Head, Maryland

Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB291617	IS66SB300910	IS66SB311415	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name															
gamma-Chlordane	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Heptachlor epoxide	0.93 UL	0.93 UJ	1 UL	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Methoxychlor	9.3 UL	9.3 UJ	10 UL	9.6 UJ	9.4 UJ	10 UJ	10 UJ	10 UJ	9 UL	10 UL	9.6 UJ	NA	8.9 UJ	11 UJ	11 UJ
Dioxin/Furans (PG/G)															
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.92 U	2.66 U	2.85 U	2.74 U	3.06 U	3.21 U	0.188 J	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	1.67 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	37.7	10.5	12	12.8 J	19 J	7.44	65	56.5 K	17.2	4.85	73.6	NA	4.58	4.03	29.5
1,2,3,4,7,8-Hexachlorodibenzofuran	2.92 U	2.66 U	2.85 U	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	0.24 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.285 J	0.145 X	2.85 U	2.74 U	3.06 U	3.21 U	0.503 J	2.78 U	3.03 U	2.67 U	0.584 J	NA	2.72 U	3.02 U	0.325 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.883 X	0.294 X	2.85 U	0.218 J	0.319 J	3.21 U	0.888 J	0.567 X	0.366 J	2.67 U	1.12 J	NA	2.72 U	3.02 U	0.618 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	2.04 J	0.44 J	1.95 J	0.566 J	0.623 J	3.21 U	0.938 X	1.3 J	1.27 J	2.67 U	1.63 J	NA	2.72 U	0.136 X	0.487 X
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.304 X	2.66 U	2.85 U	2.74 U	3.06 U	3.21 U	0.328 J	2.78 U	3.03 U	2.67 U	0.15 X	NA	2.72 U	3.02 U	0.182 X
2,3,7,8-TCDD (dioxin)	0.766 J	1.06 UJ	1.14 U	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	1.07 U	0.354 X	NA	1.09 U	1.21 U	1.31 U
2,3,7,8-Tetrachlorodibenzofuran	1.17 U	1.06 UJ	1.14 U	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	1.07 U	1.1 U	NA	1.09 U	1.21 U	0.381 J
Octachlorodibenzofuran	0.506 J	5.32 U	5.7 U	5.48 U	6.13 U	6.43 U	0.371 B	0.261 X	6.05 U	5.34 U	5.51 U	NA	5.44 U	6.05 U	5.23 J
Octachlorodibenzo-p-dioxin	2,220 J	1,340 J	616 K	632 J	1,200 J	543 K	13,300 K	2,590 J	471 K	275 K	3,470 J	NA	286 K	189	1,760 J
Total heptachlorodibenzofuran	2.92 U	2.66 U	2.85 U	2.74 U	3.06 U	3.21 U	0.188 J	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	5.29
Total heptachlorodibenzo-p-dioxin	228	26.8	58.5	49.2	69.7	41.2	142	228	79.4	31.3	400	NA	20	13.8	67.8
Total hexachlorodibenzofuran	2.92 U	2.66 U	0.166 J	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	0.0917 J	NA	2.72 U	3.02 U	1.41 J
Total hexachlorodibenzo-p-dioxin	70.7	4.87	28.9	11.6	17.2	14.8	16	107	27.8	15.2	144	NA	5.34	4.44	7.91
Total pentachlorodibenzofuran	2.92 U	2.66 U	2.85 U	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	2.91 J
Total pentachlorodibenzo-p-dioxin	15.1	0.375 J	2.69 J	0.526 J	0.949 J	2.48 J	0.558 J	24	4.54	4.16	32.6	NA	2.72 U	0.738 J	0.885 J
Total tetrachlorodibenzofuran	1.17 U	1.06 U	1.14 U	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	0.505 J	1.1 U	NA	1.09 U	0.178 J	0.883 J
Total tetrachlorodibenzo-p-dioxin	22.4	1.06 U	3.97	1.1 U	1.23 U	3.53	1.24 U	17.4	4.32	8.82	26.1	NA	1.09 U	0.283 J	1.31 U
Toxic Equivalents (Total TEQ)	2.43	0.595	0.5	0.396	0.644	0.237	5.2	1.53	0.477	0.131	2.61	NA	0.132	0.111	1.23
Explosives (UG/KG)															
Perchlorate	0.47 U	230	0.86 J	2.6 J	5.7 J	1 J	0.46 U	0.48 U	0.44 U	0.47 U	1.1 J	NA	0.29 J	0.49 U	0.51 U
Total Metals (MG/KG)															
Aluminum	11,600	13,100	15,800	9,360	9,270	11,500	14,600	14,600	11,300	13,200	11,400	NA	5,860	10,100	10,700
Antimony	0.17 J	0.45 U	0.87 U	2.1 U	0.39 U	0.79 U	0.43 U	0.52 R	0.48 U	0.89 U	0.43 U	NA	0.34 U	0.39 U	0.33 U
Arsenic	0.48 B	3.3	1.5	14	9.2	1 B	5.6	1.8	0.28 B	1.2	5.8	NA	0.88 B	0.52 B	5
Barium	88.9	52.2	166	34.9	36.1	82.4	40	130	87.6	101	104	NA	40.5	35.2	98.3
Beryllium	0.82	0.68	1.2	1.2	0.66	0.79	0.41 J	1.1	0.58	0.88	1	NA	0.5	0.41	0.66
Cadmium	0.42 U	0.27 U	0.52 U	1.2 U	0.23 U	0.47 U	0.26 U	0.31 U	0.06 B	0.54 U	0.05 B	NA	0.2 U	0.23 U	0.23 J
Calcium	459	119	523	36.6	39.8	467	168	438	320	633	684	NA	310	118	2,210
Chromium	19.4	21.9	21.2	56 J	21.6 J	17.8	19.6	21.3	16.7	21.5	20.2	NA	8.5	14	13.6
Cobalt	10.5	7.7	16.3	4.2	4.8	12.4	4	8.5	9.3	7.1	16.4	NA	7.3	5.1	8.7
Copper	13.4	13	13.9	25.8	11.6	9.6	7.7	12.8	10.8	12	15.1	NA	4.4	5.8	22.4
Cyanide	0.44 U	0.48 U	0.48 U	0.48 U	0.44 U	0.48 U	0.44 U	0.44 UL	0.44 U	0.44 U	0.44 U	NA	0.4 U	0.52 U	0.52 U
Iron	27,700	11,100	21,800	73,400 J	19,200 J	20,100	20,500	23,800	10,500	22,600	15,300	NA	16,700	14,000	11,000
Lead	9.3	11.1	8.6	18.8 J	10 J	7.8	7.8	11	5.3	9.2	5.7	NA	4.3	5.6	38.2
Magnesium	2,070	1,460	2,790	867	971	1,940	1,020	1,510 J	1,560	2,050	1,860	NA	946	1,200	766
Manganese	91.4	59.3	81.3	41.4	64.3	131	70.7	43.7	43.7	65.9	37.1	NA	224	28.6	171
Mercury	0.01 J	0.02 J	0.004 J	0.018 U	0.017 U	0.02 J	0.009 J	0.019 U	0.008 J	0.07	0.01 J	NA	0.01 J	0.023 U	0.04 J
Nickel	22.1	10.2	30.6	6 J	7.2	18.8	9.1	17	17.1	21.1	31.6	NA	10.4	10.6	12.3
Potassium	957	1,220	904	764	827	928	1,060	934 J	1,080	1,190	575	NA	706	895	657
Selenium	0.27 J	0.35 J	0.38 J	1.3	0.54	0.24 J	0.35 J	0.5 J	0.18 J	0.33 J	0.47	NA	0.12 J	0.27 J	0.58
Silver	0.02 J	0.03 J	0.03 J	0.02 J	0.02 J	0.03 J	0.01 J	0.03 J	0.02 J	0.03 J	0.03 J	NA	0.02 J	0.02 J	0.09
Sodium	69.4 J	48.1 J	166	55.2 J	45.8 J	76 B	97.3 B	114	136	158	112	NA	39.7 B	133	50 J
Thallium	0.12 J	0.14 J	0.16 J	0.12 J	0.1 J	0.13 J	0.15 J	0.19 J	0.14 J	0.14 J	0.13 J	NA	0.06 J	0.12 J	0.23
Vanadium	25.7	29.6	28.8	46.9	37	22	24.4	29	15.7	26.9	18.9	NA	10.6	19.8	30.3
Zinc	50.7	37.5	63	31.3	23.8	42.9	23	51.3	50	46.3	73.3	NA	27.6	24.9	78.6
Wet Chemistry															
pH (ph)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-5
Detected Constituents in Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP29	IS66DP30	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB291617	IS66SB300910	IS66SB311415	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/24/10	09/22/10	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name															

Notes:

Shading indicates detections

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

UG/KG - Micrograms per kilogram

TABLE 4-6
Detected Constituents in Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
Volatile Organic Compounds (UG/L)																	
Toluene	1 B	1 B	2 B	1 B	1 B	2 B	2 B	2 B	9 B	2 B	1 B	0.5 U	0.5 UJ	5.1	5.5	0.5 U	0.5 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.42 J	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Semivolatile Organic Compounds (UG/L)																	
Acenaphthene	10 U	10 U	10 U	10 U	10 U	11 U	3 J	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 UL	0.1 UL	0.28	0.24	0.098 U	0.1 U
Di-n-butylphthalate	2 J	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	1.7	0.98	0.098 U	0.1 U
Pesticide/Polychlorinated Biphenyls (UG/L)																	
4,4'-DDD	0.1 U	0.026 B	0.1 U	0.1 U	9.5	0.056 B	0.022 B	0.11 U	0.1 U	0.049 B	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.027 J	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.047 J	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
delta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.03 J	0.026 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.021 J	0.026 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.036 J	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
Dioxin/Furans (NG/L)																	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.55E-04 X	0.00105 X	0.00228 B	0.00184 B	0.00132 B	0.0255 U
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0044 B	0.0084 B	0.142	0.142	0.0198 B	0.00383 B
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.00614 J	0.0255 U	0.00437 J	0.0255 U
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.87E-06	1.30E-05	6.54E-05	6.10E-05	1.91E-05	1.15E-06
Explosives (UG/L)																	
HMX	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	3.6	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Perchlorate	NA	0.13 J	0.17 J	0.58	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 J	NA	3,600	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
Total Metals (UG/L)																	
Aluminum	15,300	304	320	1,460	34,300	12,800	2,860	11,500 J	252	493	31,800	54.9 J	99.8 B	1,010	691	277 J	76.1 J
Antimony	6 B	3.2 B	3.4 B	9.9 B	2.1 U	5.1 B	6 B	2.2 B	2.1 U	2.1 U	3.2 B	0.5 U	0.11 J	0.2 J	0.18 J	0.11 J	0.5 U
Arsenic	16.6	6.6 J	6.6 J	19	100	41.8	4.9 J	2.8 U	2.8 U	15.3	22.2	1.5 B	1.7 J	12.8	11.7 B	3.1 B	1.4 B
Barium	1,910	77.5 J	79.2 J	128 J	848	238	171 J	124 J	347	137 J	290	72.2	60.3	164	160	144	102
Beryllium	5.8	0.2 U	0.2 U	0.3 B	5	3 J	0.36 B	0.94 B	0.2 U	0.2 U	2.9 B	0.45 B	0.07 B	0.16 J	0.11 J	0.18 J	0.09 J
Cadmium	0.4 U	0.4 U	0.4 U	0.4 U	0.46 B	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.09 B	0.05 B	0.24 J	0.03 J	0.26 J	0.13 J
Calcium	13,600	33,100	33,200	51,700	87,500	5,360	48,400	1,100 J	7,290	70,100	3,870 J	1,120	2,520	42,100	40,000	13,200	12,300
Chromium	29.2	0.85 B	0.78 B	2.2 B	52.5	20.5	4.5 B	17.1 J	1 B	1.3 B	67.7	3.3 B	3.7 B	3.8 B	2 B	4.2 B	4 B
Cobalt	69.2	0.9 U	0.9 U	4.1 J	30.6 J	53.7	0.9 U	53.4	35.8 J	4.2 J	36.2 J	14.9	0.33 J	1.4	1.2	46.1	25.8
Copper	55.8	4 B	4.5 B	8.4 J	34.1	31.7	5.1 B	20.4 J	1.1 B	2.2 B	54.2	0.94 B	10 U	3.1 B	2.2 B	2.9 B	1.1 B
Cyanide	NA	1.2 U	2.3 J	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NA	5.7 J	6 J	8 U	7.4 B	8 U	8 U
Iron	64,800	11,100	11,200	2,270	242,000	22,200	26,200	25,100 J	28,600	42,100	66,900	472	14,400	21,200	20,100	1,820	2,920
Lead	61.7	6 B	6.4 B	49	106	59.9	6.8 B	13.7 J	1.3 B	6.5 B	46.6	4 U	4 U	4.2 B	3.7 B	4.8 B	2.9 B
Magnesium	20,100	3,380 J	3,410 J	5,450	18,100	6,190	12,300	5,410	4,390 J	10,900	5,230	2,000	1,360	9,850	9,530	12,800	8,920
Manganese	1,540	678	686	137	2,020	778	1,850	1,580	5,630	2,490	741	118	289	732	711	784	876
Mercury	0.1 U	0.1 U	0.1 U	0.19 J	0.13 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.13 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	83.1	1.3 B	2.2 B	10.5 J	31.6 J	41.4	3.7 B	25.9 J	13.8 J	2.5 B	44.5	11.1 J	4 U	1.8 J	0.78 B	50.7	21 J
Potassium	2,290 J	1,330 J	1,380 J	6,360	11,100	2,710 J	5,830	1,560 J	630 J	2,310 J	2,740 J	1,040	544 J	6,490	6,240	1,250	875 J
Sodium	38,400	10,500	10,600	4,750 J	22,500	43,800	47,700	26,700	20,800	28,000	6,940	21,100	11,700	125,000	123,000	71,400	35,400
Vanadium	79.2	1.5 B	1.6 B	34 J	199	159	9.1 J	24.9 J	0.61 B	1.9 B	98.8	2.3 J	2.3 J	9.9	7.1	3.3 B	2.4 B
Zinc	235	12.1 B	12.5 B	188	960	77.9	21.7 B	63.2 J	13.2 B	22.7	153	23.4 J	1.1 B	4.1 B	5.1 B	45.8	21 J

TABLE 4-6
Detected Constituents in Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
Dissolved Metals (UG/L)																	
Aluminum, Dissolved	11.7 U	11.7 U	11.7 U	11.7 U	11.7 U	11.7 U	18.4 B	11.7 U	11.7 U	11.7 U	NA	41.8 J	100 U	92.7 J	115 J	93.5 J	21.5 J
Antimony, Dissolved	1.5 U	1.5 U	1.5 U	7.4 B	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	NA	0.5 U	0.5 U	0.19 J	0.16 J	0.11 J	0.12 J
Arsenic, Dissolved	2.7 U	9.4 J	7.4 J	16	97.8	2.7 U	2.7 U	2.7 U	2.7 U	14.9	NA	2.8 B	1.8 B	11.3 B	11.2 B	3.4 B	3.2 B
Barium, Dissolved	148 J	90.6 J	83.5 J	110 J	280	63.3 J	145 J	23 J	346	130 J	NA	72.4	59.1	152	155	137	101
Beryllium, Dissolved	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.44 B	0.2 U	0.2 U	0.2 U	0.23 J	0.1 J
Cadmium, Dissolved	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.08 B	0.2 U	0.2 U	0.04 J	0.24 J	0.19 J
Calcium, Dissolved	5,090	31,500	33,000	52,400	80,100	3,750 J	48,600	1,130 J	7,580	71,200	NA	1,350	2,490	39,700	40,500	19,800	12,200
Cobalt, Dissolved	28.5 J	0.58 B	0.66 B	3.5 B	3.7 B	26.8 J	0.76 B	31.9 J	37.8 J	5.8 J	NA	15	0.21 J	0.94 J	0.94 J	40	25.1
Iron, Dissolved	8,770	20,300 J	15,200 J	870	108,000	3,340	24,200	8,300	26,400	43,000	NA	382	14,400	19,300	19,900	2,260	2,640
Lead, Dissolved	1.3 U	1.3 U	1.3 U	2.4 B	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	NA	1.3 J	1.2 J	1.9 B	2.6 B	1.8 B	2.7 B
Magnesium, Dissolved	8,590	3,550 J	3,590 J	5,630	16,600	5,110	12,600	3,250 J	4,520 J	11,300	NA	2,030	1,370	9,440	9,670	12,800	8,870
Manganese, Dissolved	759	921	809	131	937	652	1,820	1,090	6,050	2,490	NA	119	287	702	725	826	856
Nickel, Dissolved	28.2 J	0.82 B	0.94 B	7.5 J	0.75 B	7 J	0.74 B	8.8 J	13.7 J	2.7 B	NA	11.2 J	4 U	0.52 B	4 U	44.6	20.2 J
Potassium, Dissolved	492 J	1,390 J	1,370 J	6,350	8,730	1,550 J	5,540	517 J	585 J	2,220 J	NA	1,070	513 J	6,150	6,280	1,610	838 B
Silver, Dissolved	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.84 J	0.5 U	NA	4 U	4 U	4 U	4 U	4 U	4 U
Sodium, Dissolved	36,200	10,900	10,900	4,780 J	23,800	43,900	47,400	25,400	20,800	27,900	NA	21,300	11,700	122,000	121,000	75,900	35,200
Vanadium, Dissolved	0.3 U	0.55 B	0.48 B	18.1 J	3.8 B	0.73 B	2.3 B	0.3 U	0.3 U	1.2 B	NA	1.4 J	1.6 J	3.4 B	2.4 B	2.8 B	2.4 B
Zinc, Dissolved	43.6 B	6 B	9.1 B	74.3 B	2.1 B	5.6 B	2.5 B	10.9 B	4.9 B	15.8 B	NA	24.8 J	2.1 B	1.4 B	1.5 B	40.3	22.9 J
Wet Chemistry																	
Hardness (mg/l)	NA	123	99.6	145	341	31.9	170	19.6	47.6	240	NA	8.1 J	12	140	140	91	67

Notes:

Shading indicates detections

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

NA - Not analyzed

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/L - Milligrams per liter

NG/L - Nanograms per liter

UG/L - Micrograms per liter

TABLE 4-7
Detected Constituents in Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Volatile Organic Compounds (UG/KG)																	
2-Butanone	15 UJ	18 UJ	25 J	24 U	15 U	20 U	21 J	18 U	20 J	49 UJ	21 UJ	13 U	24 J	55 U	21 U	12 U	13 U
Acetone	30 B	34 B	110 J	24 UJ	15 UJ	35 B	100 J	30 B	64 J	49 UJ	21 UJ	13 U	79 B	59 B	23 B	9 B	11 B
Tetrachloroethene	3.3 J	4 J	6 J	10 J	5.8 J	9.2 J	11 J	8.2 J	14 J	17 J	11 J	13 U	42 U	55 U	21 U	12 U	13 U
Toluene	3 U	3.5 U	4 U	4.8 U	3 U	24	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Semivolatile Organic Compounds (UG/KG)																	
2,4,5-Trichlorophenol	72 U	66 U	67 U	110 U	7.4 J	87 U	5.8 J	69 U	99 U	140 U	88 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2,4,6-Trichlorophenol	72 U	66 U	67 U	24 J	23 J	87 U	22 J	16 J	27 J	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dichlorophenol	14 U	13 U	13 U	23 J	18 J	17 U	18 J	15 J	22 J	28 UJ	18 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Methylnaphthalene	14 UL	13 UL	13 UL	6.2 L	8.1 L	17 UL	5.8 L	9.9 L	6.6 L	28 UL	18 UL	430 U	1,200 U	1,200 U	830 U	510 U	500 U
3- and 4-Methylphenol	20 J	66 U	18 J	110 U	63 U	87 U	65 U	69 U	99 U	140 J	51 J	NA	NA	NA	NA	NA	NA
Acenaphthene	14 U	13 U	13 U	14 J	47	31 J	24 J	100	23 J	5.5 J	20 J	430 U	1,200 U	1,200 U	830 U	510 U	100 J
Acenaphthylene	14 U	13 U	2.4 J	9 J	9 J	10 J	21 J	13 J	13 J	23 J	11 J	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Anthracene	14 U	13 U	3.7 J	23 J	120	93	49	170	50	30 J	39	430 U	1,200 U	1,200 U	830 U	120 J	260 J
Atrazine	14 U	13 U	13 U	4.3 J	4.2 J	17 U	3.8 J	4.4 J	7.3 J	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Benzo(a)anthracene	8.6 B	16 B	25 B	130 B	530 B	580 B	530 B	780	350 B	420	240	430 U	1,200 U	1,200 U	240 J	410 J	710
Benzo(a)pyrene	4.9 J	13 J	24 J	160	420	470	500	770	330	370	190	430 U	1,200 U	1,200 U	210 J	390 J	490 J
Benzo(b)fluoranthene	6.5 J	15 J	33	280	710	820	810	1,300	440	700	340	430 U	1,200 U	1,200 U	330 J	450 J	590
Benzo(g,h,i)perylene	14 U	5.6 J	18 J	130	240	350	260	430	230	230	130	430 U	1,200 U	1,200 U	830 U	230 J	310 J
Benzo(k)fluoranthene	14 U	4.9 J	11 J	88	210	240	210	340	150	180	74	430 U	1,200 U	1,200 U	240 J	360 J	640
bis(2-Chloroethyl)ether	14 U	13 U	13 U	22 U	2.2 J	17 U	13 U	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Carbazole	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	170 J
Chrysene	5.1 J	8.2 J	22 J	150	470	490	460	680	250	330	170	430 U	1,200 U	1,200 U	300 J	440 J	730
Dibenz(a,h)anthracene	14 U	13 U	4.7 J	50	86	110	140	210	75	88	34 J	430 U	1,200 U	1,200 U	830 U	510 U	120 J
Dimethyl phthalate	2.2 B	13 U	2.3 B	4.6 B	6.1 B	17 U	6.3 B	14 U	8.6 B	5.5 J	2.5 J	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Fluoranthene	7.5 J	20 J	36	240	1,000	1,100	730	1,400	590	560	450	430 U	260 J	1,200 U	360 J	770	1,500
Fluorene	14 U	13 U	13 U	20 J	98	41	24 J	77	20 J	28 U	22 J	430 U	1,200 U	1,200 U	830 U	510 U	110 J
Hexachlorobenzene	14 U	13 U	13 U	22 U	2.4 J	17 U	2.6 J	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachlorocyclopentadiene	14 U	13 U	13 UL	22 U	6.6 J	17 U	6.6 J	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Indeno(1,2,3-cd)pyrene	14 U	5.4 J	16 J	140	250	300	250	420	220	210	110	430 U	1,200 U	1,200 U	830 U	280 J	390 J
Naphthalene	14 UL	13 UL	13 UL	22 UL	20 B	5.9 B	7.6 B	63 L	20 UL	28 U	5.1 B	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Phenanthrene	2.9 J	7.4 J	18 J	140	680	390	200	780	210	110	260	430 U	1,200 U	1,200 U	830 U	360 J	940
Phenol	72 U	66 U	67 U	110 U	8.8 J	87 U	65 U	69 U	99 U	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Pyrene	7.7 J	14 J	38	270	780	890	660	1,100	500	600	470	430 U	1,200 U	1,200 U	330 J	630	1,100
Pesticide/Polychlorinated Biphenyls (UG/KG)																	
4,4'-DDD	1.9 J	2.2 U	6.7 J	57 J	2.4 J	29 J	44 J	52	42 J	23 J	6.4 J	66	38 J	47	4.4 J	13	40
4,4'-DDE	1.4 J	2.2 U	2.8 J	29 J	1.5 J	9.3 J	4.7 J	7.5	13 J	22 J	12 J	8.1	22	21	8.4	4 J	4.2 J
4,4'-DDT	2.4 U	2.2 U	2.3 J	9.2 J	2.1 UJ	6.1 J	2.7 J	3.2 J	4 J	39 J	5.4 J	3.1 B	12 U	12 B	12 J	3.1 B	2.7 B
alpha-Chlordane	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	1.2 J	5.3 J	4 J	1.8 J	0.82 J	1.6 J
Aroclor-1254	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	830	14 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1260	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	43 U	120 U	120 U	160	51 U	50 U
beta-BHC	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	1.2 J
Dieldrin	2.4 U	2.2 U	1.6 J	8.3 J	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endosulfan I	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	3.2 J	2.6 UJ	2.3 J	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Endrin	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	2.1 J	5 U
Endrin aldehyde	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	3.4 J	8.3 U	2.5 J	5 U
Endrin ketone	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	2.6 J	8.3 U	4.1 J	1.2 J
gamma-Chlordane	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	0.67 J	2.3 J	1.6 J	1.6 J	5	0.65 J
Methoxychlor	12 U	11 U	11 UJ	17 UJ	11 UJ	16 UJ	12 UJ	12 U	16 UJ	12 J	14 UJ	22 U	61 U	35 J	43 U	17 J	26 U
Dioxin/Furans (PG/G)																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.963 J	0.896 J	0.753 J	3.35 J	0.883 X	3.14 J	1.72 J	4.92	2.98 J	3.9 J	24.1	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	11.3	9.79	6.99	38.9	12.6	22.7	18.4	69.6	40.4	16.6	75.1	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	0.309 X	0.169 X	0.394 X	4.98 U	4.15 U	1.19 X	NA	NA	NA	NA	NA	NA

TABLE 4-7
Detected Constituents in Sediment
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Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.151 J	3.02 U	3.22 U	0.493 X	0.0728 X	4.38 U	0.182 J	0.113 X	4.98 U	0.289 J	5.74 J	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	3.25 U	3.02 U	3.22 U	0.461 J	3.34 U	4.38 U	3.67 U	3.47 U	0.213 X	0.175 J	1.02 X	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	3.25 U	3.02 U	3.22 U	0.649 J	0.0682 X	4.38 U	0.342 J	3.47 U	4.98 U	4.15 U	2.27 J	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.32 J	0.263 J	3.22 U	1.05 J	0.299 J	0.495 X	0.685 J	1.3 J	0.944 J	0.356 X	3.1 J	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.353 J	0.303 X	3.22 U	0.919 J	0.261 J	0.308 J	0.517 J	0.248 X	0.599 X	0.343 J	3.88 J	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	3.67 U	3.47 U	4.98 U	4.15 U	1.93 X	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	0.165 J	3.47 U	0.0986 X	4.15 U	1.07 J	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	3.25 U	3.02 U	3.22 U	0.304 X	3.34 U	4.38 U	0.346 X	3.47 U	4.98 U	4.15 U	2.2 J	NA	NA	NA	NA	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	0.222 X	3.47 U	4.98 U	4.15 U	1.96 X	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD (dioxin)	1.3 U	1.21 U	1.29 U	2.32 U	1.34 U	1.75 U	0.0644 X	1.39 U	1.99 U	1.66 U	0.492 X	NA	NA	NA	NA	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	1.3 U	1.21 U	1.29 U	2.32 U	0.313 J	0.584 J	0.402 J	1.39 U	1.99 U	0.497 J	3.46	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	3.68 J	3.31 J	2.67 J	14.3	5.21 J	14.2	5.64 J	33	9.44 J	4.87 J	31.1	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-dioxin	560	576	334 J	1,790	454	835	495	1,050	1,490	1,000	1,650	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzofuran	2.87 J	2.55 J	2.17 J	12.9	2.75 J	12.2	5.87	29.2	9.9	9.14	50.2	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzo-p-dioxin	30.1	28.7	18.3	105	33.8	53.3	43.2	253	119	42.6	160	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzofuran	0.817 J	1.1 J	0.433 J	5.35 J	0.32 J	3.54 J	9.59	3.97	2.93 J	1.97 J	26.5	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzo-p-dioxin	7.14	5.05	2.7 J	15.1	6.7	6.47	7.3	12.8	8.67	5.67	30.4	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzofuran	0.617 J	0.372 J	0.324 J	3.83 J	3.34 U	0.536 J	16.8	0.435 J	0.799 J	1 J	18.7	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzo-p-dioxin	1.03 J	0.57 J	3.22 U	1.07 J	0.85 J	1.16 J	1.23 J	0.591 J	0.333 J	4.15 U	4.84 J	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzofuran	1.3 U	1.21 U	1.29 U	2.32 U	0.56 J	0.428 J	1.64	0.363 J	0.397 J	0.718 J	33.9	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzo-p-dioxin	1.3 U	0.572 J	1.29 U	2.32 U	0.549 J	0.437 J	0.39 J	1.39 U	0.424 J	1.66 U	3.32 J	NA	NA	NA	NA	NA	NA
Toxic Equivalents (Total TEQ)	0.374	0.337	0.178	1.35	0.374	0.655	0.897	1.24	1.16	0.672	5.88	NA	NA	NA	NA	NA	NA
Explosives (UG/KG)																	
Nitroglycerin	530 U	1,400	540 UL	790 U	520 U	710 U	520 U	510 U	670 U	1,000 U	560 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U
Perchlorate	0.53 U	0.51 U	0.53 U	0.72 U	0.53 U	0.57 U	0.54 U	0.54 U	0.65 U	0.62 U	1.3 U	2.9 J	5.9 R	6.3 R	7.7 J	3 R	3.1 R
Total Metals (MG/KG)																	
Aluminum	4,590 J	2,840 J	3,160	9,690	1,450	9,240	3,400	2,790	10,600	12,000	10,100	928	14,300	16,500	9,170	2,190	3,030
Antimony	0.6 U	0.48 U	0.43 UL	0.71 U	0.4 U	0.19 J	0.15 J	0.18 J	0.35 J	1.8	4.7	0.66 B	2.2 B	3.3 B	3 B	1.2 B	0.86 B
Arsenic	1.1 B	1.1 B	3.5	5.2	0.54 B	8.8	2.9	3.3	5.6	8.4	6.4	1.2 J	6.2 J	8.2	8.9	13.8	3.5
Barium	30.7	23.6	34	92.2	10	83.7	28.3	41.4	89.4	138	103	16.2 J	154	170	93.6 J	34.2 J	36.6 J
Beryllium	0.28 J	0.23 J	0.3 J	0.81	0.14 B	0.81	0.32 J	0.3 J	0.84	0.63 J	0.68	0.18 B	1.5 B	1.5 B	0.71 B	0.38 B	0.36 B
Cadmium	0.82 J	0.64 J	0.2 J	0.96 J	0.12 B	0.8 J	0.24 J	0.29 J	0.81 J	4.7	0.32 J	0.097 U	1.1 B	1.1 B	0.45 B	0.11 U	0.12 U
Calcium	454	458	239 K	730	159 B	1,260	435	856	1,320	4,530	1,470	285 J	3,690	3,580 J	2,980	1,180 J	577 J
Chromium	7.4	5.3	5.9	15.4	4	14.6	8.6	6.7	16.2	26.7	16.8	2.6	26.8	30.2	13.2	8.2	7.9
Cobalt	6.7	6.7	9.3	24.5	2.7	21	5.8	6.4	12.5	10.4	9.2	3.1 J	40.9	28.9 J	19 J	15.3	5.5 J
Copper	10.7	9	7.8	33.1	5.6	25.8	12.3	8.4	26.2	134	28.2	3.5 J	67.8	73	30.2 J	13.2	12.9
Cyanide	0.56 U	0.52 U	0.56 U	0.88 U	0.51 J	0.72 U	0.35 J	0.56 U	0.76 U	1.2 U	0.72 U	0.08 U	0.21 U	0.22 U	0.15 U	0.092 U	0.093 U
Iron	4,730	4,100	8,680	14,900	3,220	23,100	15,600	10,800	19,900	21,100	15,200	3,460	21,300	25,400	11,300	13,700	13,700
Lead	13.6	10.4	10.5	29.9	7	36	21.8	17.4	63.2	262	57.2	3.6	67.5	78.9	39.8	70.9	21.6
Magnesium	440	302	256 K	852	155	763	300	323	1,060	1,690	1,090	180 J	1,310 J	1,470 J	1,090 J	868 J	372 J
Manganese	80	77.9	118	244	27.2	461	71.2	379	110	593	233	119	247	292	229	122	126
Mercury	0.02 J	0.04	0.02 J	0.06 J	0.01 J	0.08	0.04 J	0.03 J	0.15	0.35	1.8	0.057 U	0.18 B	0.16 B	1.3	0.072 B	0.076 U
Nickel	5.3	4.4	4.7	15.5	2.2 J	16.6	9.4	6.8	17.6	26.3	12	2 J	31.6	30	20.6	14.2	7.7 J
Potassium	508 J	264 J	275 K	803	180	840	360	279	777	839	780	66.1 J	878 J	977 J	679 J	164 J	219 J
Selenium	0.16 J	0.08 J	0.1 J	0.36 J	0.04 J	0.51 J	0.24 J	0.19 J	0.62	0.77 J	0.56	0.66 UJ	1.8 UJ	2 UJ	1.3 UJ	0.77 UJ	0.81 UJ
Silver	0.03 J	0.02 J	0.03 J	0.11 J	0.03 J	0.15	0.05 J	0.05 J	0.3	17	0.33	0.29 U	0.81 U	0.87 U	0.68 B	0.34 U	0.36 U
Sodium	115 B	85.8 B	101 B	230 B	50.7 B	320 B	94.1 B	53.7 B	305 B	789	331	105 B	408 B	526 B	294 B	166 B	174 B
Thallium	0.06 J	0.03 J	0.04 J	0.14 J	0.02 J	0.22	0.12 J	0.07 J	0.23	0.2 J	0.19	0.71 U	2 U	2.1 U	1.4 U	0.83 U	0.87 U
Vanadium	11.2	7.8	12.6	39.3	5.8	37.8	18.4	16.2	39.4	34.6	28.8	9.6 J	61.5	68	25.7	26.2	20.6
Zinc	53.7	47.4	30.3	89.3	13.7	88.3	35.4	39.8	127	414	131	10.4	216	228	186	55.1	47.9
Wet Chemistry																	
pH (ph)	7.9	7.6	6.7	6.6	7.3	7	7	8.1	6.6	6.6	6.8	7.01	6.39	6.6	6.53	6.96	6.61
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,800 J	98,600 J	94,100 J	146,000 J	145,000 J	26,500 J
Total organic carbon (TOC) (ug/g)	16,000	3,300	16,000	51,000	2,400	34,000	18,000	18,000	63,000	130,000	56,000	NA	NA	NA	NA	NA	NA

TABLE 4-7
Detected Constituents in Sediment
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Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Grain Size (PCT)																	
Coarse Sand (%)	0.2	0.4	0.6	2.2	0.4	0.9	1.2	0.1	0.1	0.9	3	NA	NA	NA	NA	NA	NA
Fine Sand (%)	78.4	72.2	75.7	52.2	88	58.2	66.8	81.5	36.6	35.5	20.5	NA	NA	NA	NA	NA	NA
Fines (%)	13.9	23.4	8.6	38.4	9.2	38.8	21	15.9	62.2	56.6	68.3	NA	NA	NA	NA	NA	NA
Gravel (%)	0	0	0.3	0.8	0	0	1.3	0	0	0.9	1.4	NA	NA	NA	NA	NA	NA
Medium Sand (%)	7.5	4	14.8	6.4	2.4	2.1	9.7	2.5	1.1	6.1	6.8	NA	NA	NA	NA	NA	NA
Sand (%)	86.1	76.6	91.1	60.8	90.8	61.2	77.7	84.1	37.8	42.5	30.3	NA	NA	NA	NA	NA	NA
GRAINSIZE (PCT/P)																	
GS03 Sieve 3" (75 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS05 Sieve 2" (50 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS06 Sieve 1.5" (37.5 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS07 Sieve 1" (25.0 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS08 Sieve 0.75" (19.0 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS10 Sieve 0.375" (9.5 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
Sieve No. 004 (4.75 mm)	100	100	99.7	99.2	100	100	98.7	100	100	99.1	98.6	NA	NA	NA	NA	NA	NA
Sieve No. 010 (2.00 mm)	99.8	99.6	99.1	97	99.6	99.1	97.5	99.9	99.9	98.2	95.6	NA	NA	NA	NA	NA	NA
Sieve No. 020 (850 um)	99	98.5	96.1	96.5	99.3	98.7	95.4	99.5	99.6	96.7	94	NA	NA	NA	NA	NA	NA
Sieve No. 040 (425 um)	92.3	95.6	84.3	90.6	97.2	97	87.8	97.4	98.8	92.1	88.8	NA	NA	NA	NA	NA	NA
Sieve No. 060 (250 um)	66.4	81.3	58.8	78	84.7	93.3	77.4	86.7	97.3	86.2	83.1	NA	NA	NA	NA	NA	NA
Sieve No. 080 (180 um)	42.7	65.2	32.2	60.7	46.7	73.2	59.1	58.6	89.9	82	79.7	NA	NA	NA	NA	NA	NA
Sieve No. 100 (150 um)	34.5	54.7	23.4	55.2	33.7	64.8	51.1	47.5	86.4	77.9	77.4	NA	NA	NA	NA	NA	NA
Sieve No. 200 (75 um)	13.9	23.4	8.6	38.4	9.2	38.8	21	15.9	62.2	56.6	68.3	NA	NA	NA	NA	NA	NA

Notes:

Shading indicates detections

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PCT - Percent

PG/G - Picograms per gram

UG/G - Micrograms per gram

UG/KG - Micrograms per kilogram

mm - millimeter

um - micrometer

TABLE 4-8
Detected Constituents in Ash
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66ASH01	IS66ASH02		IS66ASH03	IS66ASH04		IS66ASH05	IS66ASH06	IS66ASH07	IS66ASH08	IS66ASH09
Sample ID	IS66AH01	IS66AH02	IS66AH02P	IS66AH03	IS66AH04	IS66AH04P	IS66AH05	IS66AH06	IS66AH07	IS66AH08	IS66AH09
Sample Date	04/10/07	04/10/07	04/10/07	04/10/07	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10
Chemical Name											
Dioxin/Furans (PG/G)											
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.841 J	6.36	3.11
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	4.16	73.3	17.2
1,2,3,4,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.429 X	0.816 J	3.04
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	3.18 U	5.04 U	0.287 X
1,2,3,6,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.178 X	5.04 U	1.15 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.184 X	2.01 J	0.564 X
1,2,3,7,8,9-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.0398 X	5.04 U	0.193 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.164 X	0.621 X	0.624 X
1,2,3,7,8-Pentachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.911 J	1.61 J	9.41
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.0639 X	5.04 U	0.319 J
2,3,4,6,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.128 J	5.04 U	0.463 X
2,3,4,7,8-Pentachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.476 J	0.625 X	3.78
2,3,7,8-TCDD (dioxin)	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	1.27 U	2.01 U	0.196 X
2,3,7,8-Tetrachlorodibenzofuran	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	2.18	2.45	16.8
Octachlorodibenzofuran	15,585 U	18,849 U	16,473 U	20,081 U	NA	NA	NA	NA	1.82 X	8.62 J	8.14
Octachlorodibenzo-p-dioxin	175 J	113 J	167 J	84.1 J	NA	NA	NA	NA	89.2	654	265 J
Total heptachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.9 J	16.8	7.44
Total heptachlorodibenzo-p-dioxin	13	16	17	12	NA	NA	NA	NA	9.81	129	55.7
Total hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.13 J	4.65 J	10.7
Total hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.11 J	10.5	6.7
Total pentachlorodibenzofuran	20	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	6.12	9.64	71.9
Total pentachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.436 J	5.04 U	2.06 J
Total tetrachlorodibenzofuran	29	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	18.2	18.3	155
Total tetrachlorodibenzo-p-dioxin	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	0.841 J	1.74 J	5.26
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	0.642	1.82	4.52
Total Metals (MG/KG)											
Aluminum	NA	NA	NA	NA	6,240	5,970	8,420	6,890	10,000	11,100	5,960
Antimony	NA	NA	NA	NA	1.1 U	1.2 U	1.2 U	0.65 U	0.34 L	0.9 U	0.37 J
Arsenic	NA	NA	NA	NA	96.5	86.9	24.9	49	123	49.4	37.7
Barium	NA	NA	NA	NA	68.7	69.6	120	108	86.3	201	108
Beryllium	NA	NA	NA	NA	1.9	1.8	1.4	1.4	3	2.4	1.7
Cadmium	NA	NA	NA	NA	0.45 J	0.38 J	0.49 J	0.21 J	0.29 J	0.42 J	0.22 J
Calcium	NA	NA	NA	NA	3,300	3,770	4,540	1,190	1,740	5,310	1,970
Chromium	NA	NA	NA	NA	19.9	20.3	19.8	14.8	28.8	20.6	16.1
Cobalt	NA	NA	NA	NA	17	17.2	9.4	10.4	17.2	11	7.4
Copper	NA	NA	NA	NA	36	34.8	38.8	43.6	42.3	40.2	38.6
Iron	NA	NA	NA	NA	42,900	45,000	35,100	23,000	51,300	42,500	28,600
Lead	NA	NA	NA	NA	17.4	17.1	49	26	25.2 J	39.3	36.9
Magnesium	NA	NA	NA	NA	366	389	960	356	279	922	418
Manganese	NA	NA	NA	NA	130	139	378	232	98.3 L	150	455
Mercury	NA	NA	NA	NA	0.32	0.29	0.23	0.66	0.67 L	0.24	0.28
Nickel	NA	NA	NA	NA	35.9	35.8	36.6	23.7	37.2	38.4	36.1
Potassium	NA	NA	NA	NA	391	417	615	626	396	1,090	539
Selenium	NA	NA	NA	NA	1.8	1.6	3	3.1	6.1	2.3	8.1
Silver	NA	NA	NA	NA	0.08 J	0.08 J	0.14	0.08 J	0.11 J	0.1 J	0.09 J
Sodium	NA	NA	NA	NA	57.2 J	66.4 J	120 J	112 J	58.3 J	384	399
Thallium	NA	NA	NA	NA	1.5	1.2	0.99	0.7	1.9	1.4	0.76
Vanadium	NA	NA	NA	NA	86.6	80.8	76.4	50.5	86.9	80.3	150
Zinc	NA	NA	NA	NA	53.8	55.1	59	26.5	40.6 J	53.8	30

Notes:

Shading indicates detections

J - Analyte present, value may or may not be accurate or precise

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

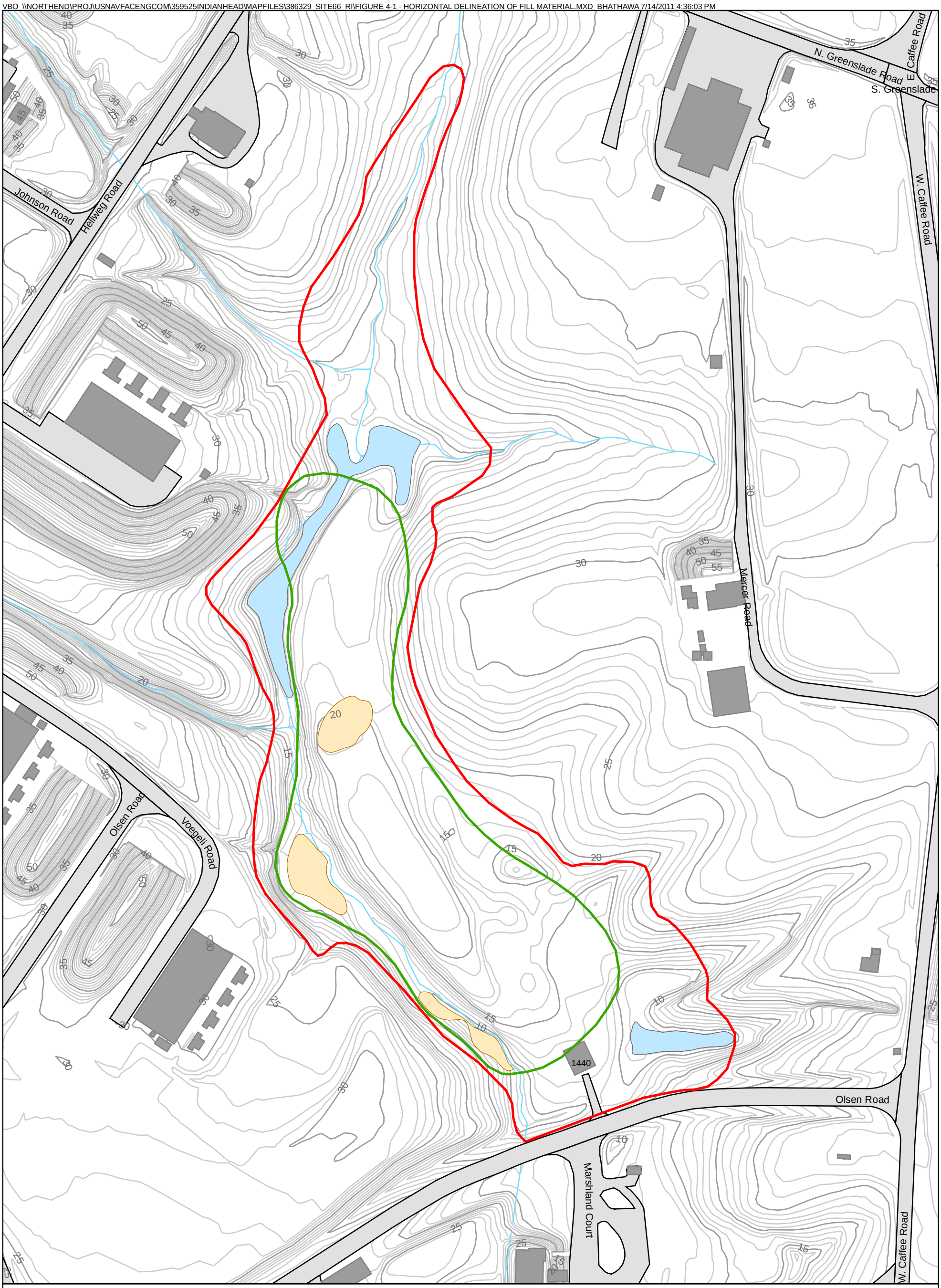
U - The material was analyzed for, but not detected

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-1 - HORIZONTAL DELINEATION OF FILL MATERIAL.MXD BHATHAWA 7/14/2011 4:36:03 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Approximate Limit of Fill Material
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 62.5 125
Feet

Figure 4-1
Horizontal Delineation of Fill Material
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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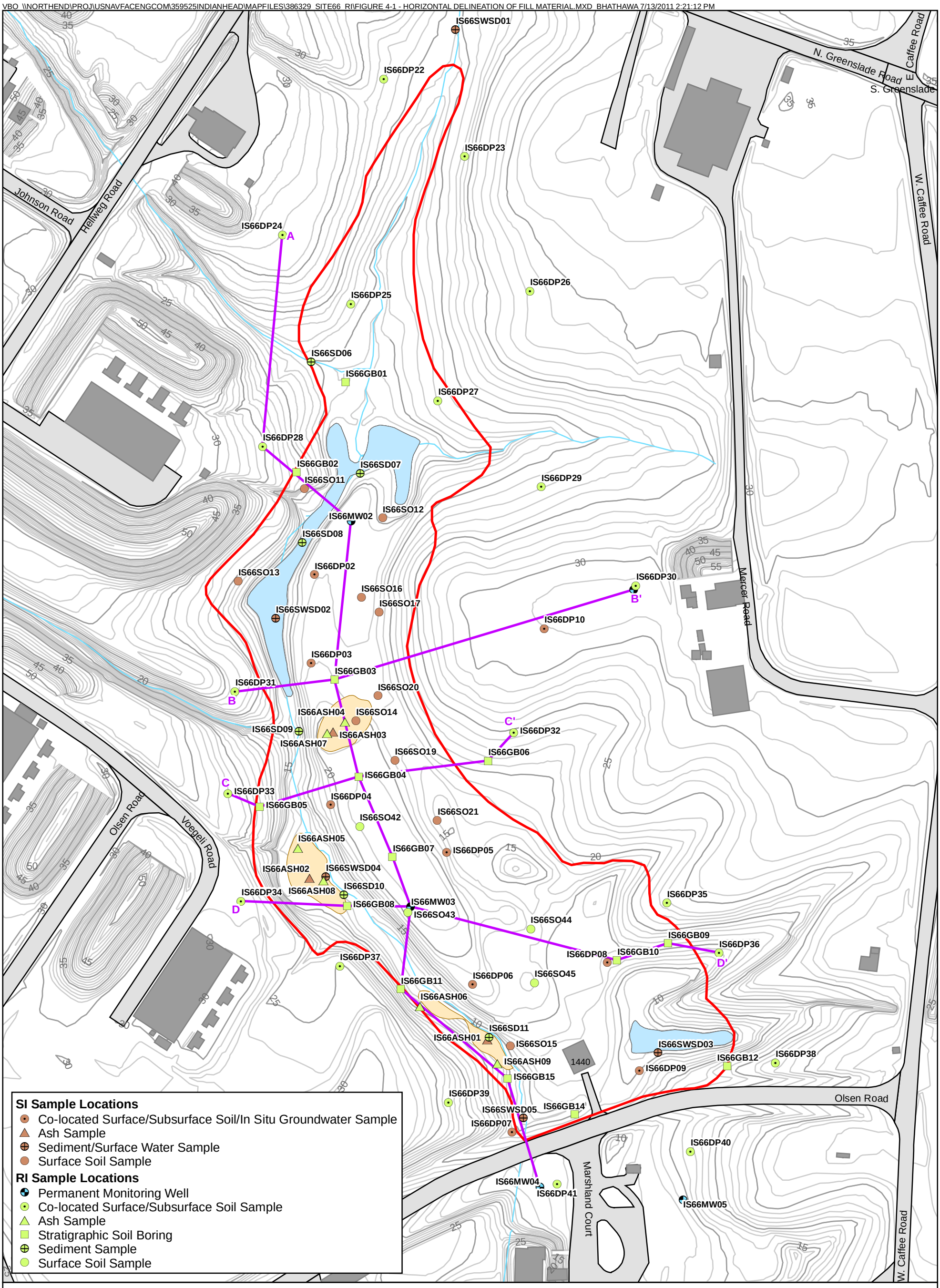
VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-1 - HORIZONTAL DELINEATION OF FILL MATERIAL.MXD BHATHAWA 7/13/2011 2:21:12 PM



Legend

- Site Boundary (Approx. Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- Cross-Section
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 62.5 125
Feet

Figure 4-2
Subsurface Cross-Section Lines
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

CH2MHILL

f07_317395.dgn

A

A'

DP24

DP28

GB02

B - B'

D - D'

GB03

GB04

GB07

MW03

MW02

GB11

MW04

GB15

SEDIMENTS AND EMPLACED SILTS, SANDS, AND CLAYS

FILL WITH ASH CONCRETE, WOOD, RUBBLE & ORGANICS

25
20
15
10
5
0
-5

90 180 270 360 450 540 630 720 810 900 990 1080 1170 1260 1350

LEGEND

- SEDIMENTS AND EMPLACED SILTS, SANDS, AND CLAYS
- FILL WITH ASH, CONCRETE, WOOD, RUBBLE AND ORGANICS
- SILT/SILT AND SAND/CLAY AND SAND
- CLAY
- SAND
- PEAT

5 VERTICAL
0 HORIZONTAL 90

SCALE (FEET)
VERTICAL EXAG.: 18X

Figure 4-2a
Subsurface Cross-Section A-A'
Draft Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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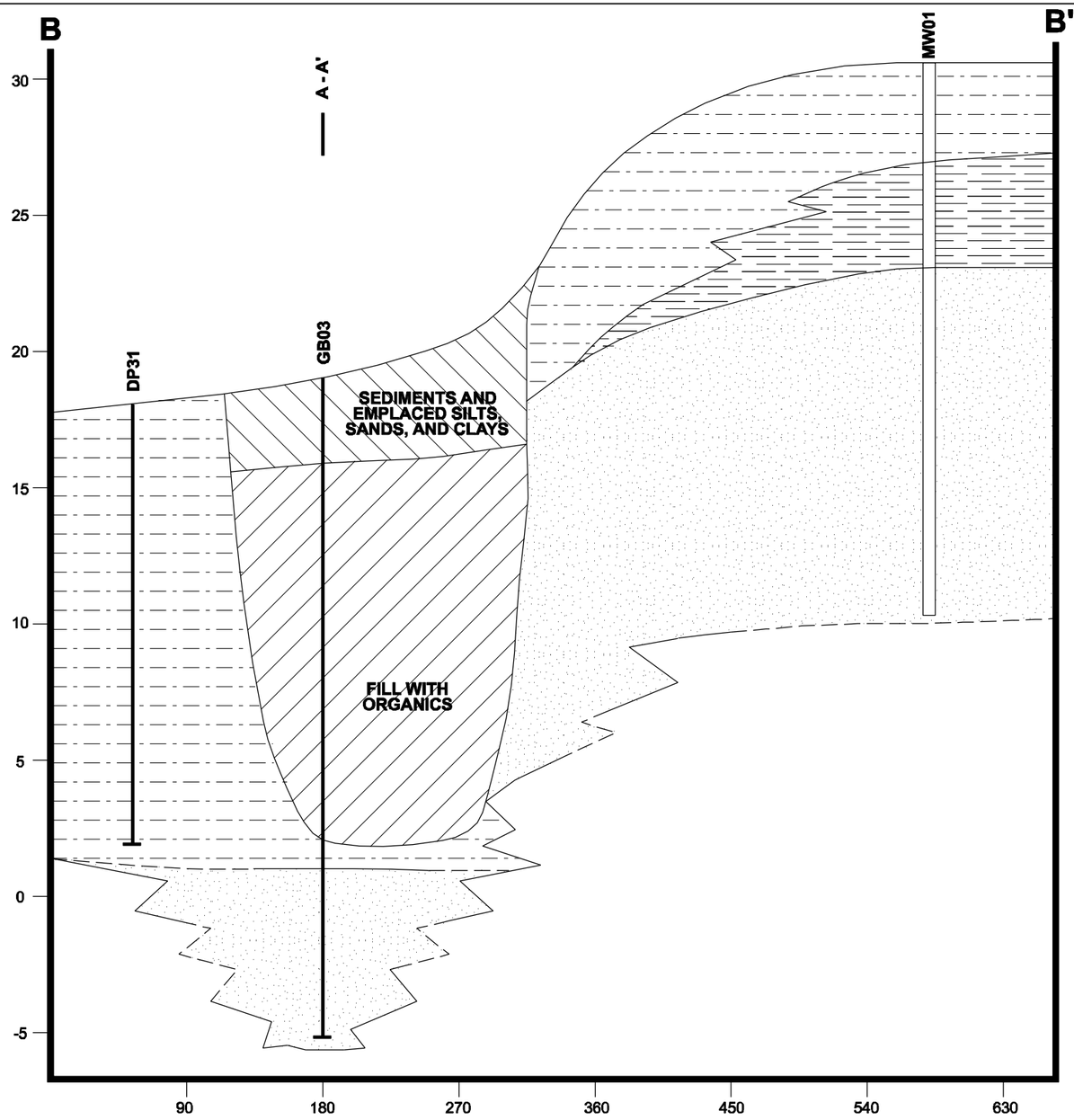
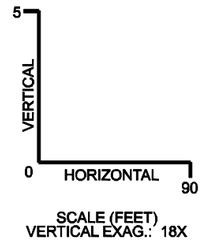


LEGEND

- SEDIMENTS AND EMPLACED SILTS, SANDS, AND CLAYS
- FILL WITH ASH, CONCRETE, WOOD, RUBBLE AND ORGANICS
- SILT/SILT AND SAND/CLAY AND SAND
- CLAY
- SAND
- PEAT



SCALE (FEET)
VERTICAL EXAG.: 18X

Figure 4-2b
Subsurface Cross-Section B-B'
Draft Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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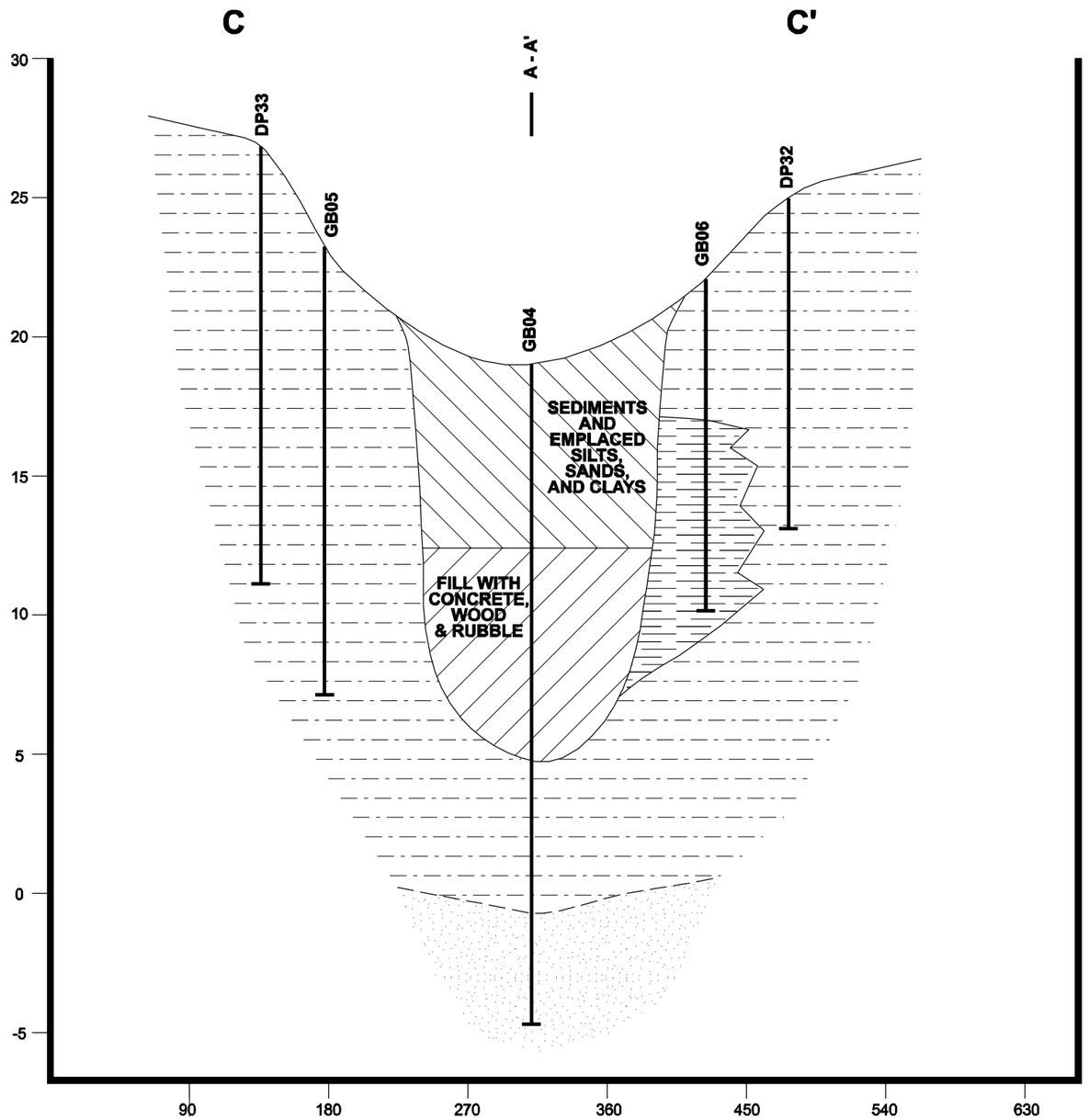
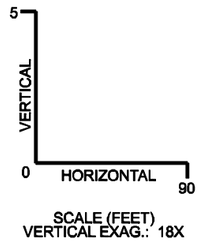


LEGEND

- SEDIMENTS AND EMPLACED SILTS, SANDS, AND CLAYS
- FILL WITH ASH, CONCRETE, WOOD, RUBBLE AND ORGANICS
- SILT/SILT AND SAND/CLAY AND SAND
- CLAY
- SAND
- PEAT



SCALE (FEET)
VERTICAL EXAG.: 18X

Figure 4-2c
Subsurface Cross-Section C - C'
Draft Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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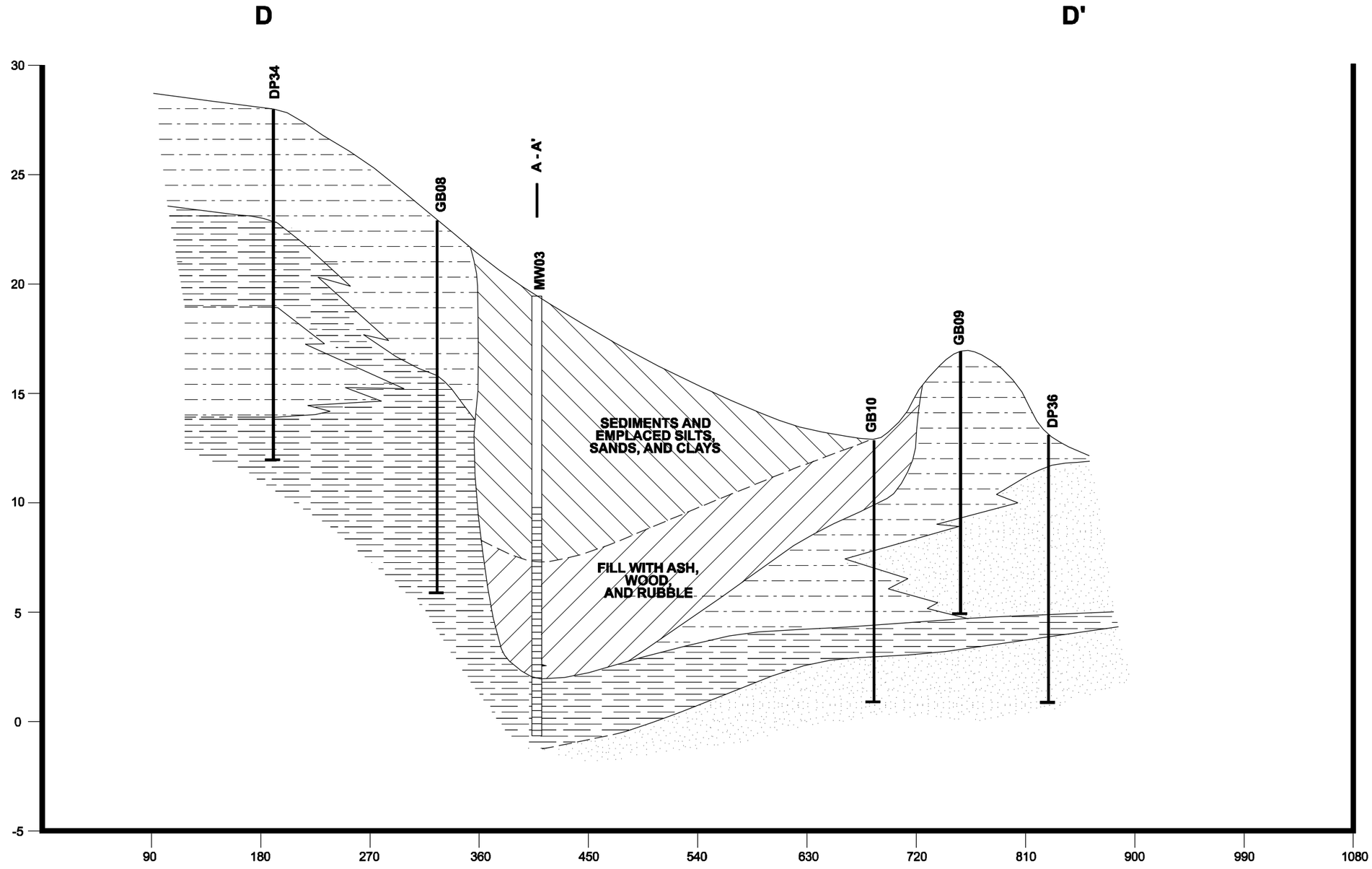
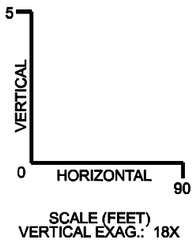


LEGEND

- SEDIMENTS AND EMPLACED SILTS, SANDS, AND CLAYS
- FILL WITH ASH, CONCRETE, WOOD, RUBBLE AND ORGANICS
- SILT/SILT AND SAND/CLAY AND SAND
- CLAY
- SAND
- PEAT



SCALE (FEET)
VERTICAL EXAG.: 18X

Figure 4-2d
Subsurface Cross-Section D - D'
Draft Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-3 - SVOC COPCS IN SURFACE SOIL.MXD BHATHAWA 7/14/2011 4:39:17 PM

IS66DP25	
SVOCs (ug/kg)	
Benzo(a)anthracene	390
Benzo(a)pyrene	330
Benzo(b)fluoranthene	480
Dibenz(a,h)anthracene	71
Indeno(1,2,3-cd)pyrene	210

IS66DP22	
SVOCs (ug/kg)	
Benzo(a)pyrene	45

IS66DP01		
SVOCs (ug/kg)		
Benzo(a)anthracene	530	
Benzo(a)pyrene	670	
Benzo(b)fluoranthene	680	
Dibenz(a,h)anthracene	170	J
Indeno(1,2,3-cd)pyrene	570	

IS66DP26		
SVOCs (ug/kg)		
Benzo(a)anthracene	210	
Benzo(a)pyrene	160	J
Benzo(b)fluoranthene	230	J
Dibenz(a,h)anthracene	32	J
Indeno(1,2,3-cd)pyrene	150	

IS66DP24		
SVOCs (ug/kg)		
Benzo(a)pyrene	240	
Benzo(b)fluoranthene	290	
Dibenz(a,h)anthracene	53	
Indeno(1,2,3-cd)pyrene	170	

IS66DP23		
SVOCs (ug/kg)		
Benzo(a)pyrene	120	
Benzo(b)fluoranthene	160	
Dibenz(a,h)anthracene	32	

IS66DP29		
SVOCs (ug/kg)		
Benzo(a)anthracene	220	
Benzo(a)pyrene	170	J
Benzo(b)fluoranthene	240	J
Dibenz(a,h)anthracene	31	J
Indeno(1,2,3-cd)pyrene	160	

IS66DP27		
SVOCs (ug/kg)		
Benzo(a)anthracene	150	J
Benzo(a)pyrene	110	J
Benzo(b)fluoranthene	170	J
Dibenz(a,h)anthracene	18	J
Atrazine	1.9	J

IS66SO17		
SVOCs (ug/kg)		
Benzo(a)anthracene	530	
Benzo(a)pyrene	540	
Benzo(b)fluoranthene	660	J
Dibenz(a,h)anthracene	110	J
Indeno(1,2,3-cd)pyrene	360	J

IS66DP28		
SVOCs (ug/kg)		
Benzo(a)pyrene	72	
Dibenz(a,h)anthracene	16	J
Atrazine	2.5	J

IS66DP30		
SVOCs (ug/kg)		
Benzo(a)pyrene	95	J
Benzo(b)fluoranthene	150	J
Dibenz(a,h)anthracene	20	J

IS66SO12	
SVOCs (ug/kg)	
Benzo(a)anthracene	9800
Benzo(a)pyrene	11000
Benzo(b)fluoranthene	8900
Benzo(k)fluoranthene	11000
Dibenz(a,h)anthracene	1700
Indeno(1,2,3-cd)pyrene	9600
Sum HMW PAHs	87500

IS66SO19		
SVOCs (ug/kg)		
Benzo(a)anthracene	320	J
Benzo(a)pyrene	1400	J
Benzo(b)fluoranthene	320	J
Indeno(1,2,3-cd)pyrene	560	

IS66DP02		
SVOCs (ug/kg)		
Benzo(a)anthracene	1700	
Benzo(a)pyrene	1700	
Benzo(b)fluoranthene	1900	
Benzo(k)fluoranthene	1600	
Dibenz(a,h)anthracene	400	J
Indeno(1,2,3-cd)pyrene	1300	

IS66SO21		
SVOCs (ug/kg)		
Benzo(a)anthracene	3100	
Benzo(a)pyrene	4400	
Benzo(b)fluoranthene	7200	J
Benzo(k)fluoranthene	5100	
Dibenz(a,h)anthracene	950	
Indeno(1,2,3-cd)pyrene	2700	
Sum HMW PAHs	31750	

IS66DP31		
SVOCs (ug/kg)		
Benzo(a)pyrene	35	

IS66DP03		
SVOCs (ug/kg)		
Benzo(a)anthracene	370	J
Benzo(a)pyrene	340	J
Benzo(b)fluoranthene	380	J
Dibenz(a,h)anthracene	86	J
Indeno(1,2,3-cd)pyrene	260	J

IS66SO44		
SVOCs (ug/kg)		
Benzo(a)pyrene	29	

IS66DP34		
SVOCs (ug/kg)		
Benzo(a)pyrene	120	
Benzo(b)fluoranthene	180	
Dibenz(a,h)anthracene	22	J

IS66DP36		
SVOCs (ug/kg)		
Benzo(a)pyrene	29	

IS66DP08		
SVOCs (ug/kg)		
Benzo(a)anthracene	390	
Benzo(a)pyrene	310	J
Benzo(b)fluoranthene	360	J
Indeno(1,2,3-cd)pyrene	200	J

IS66SO16	
SVOCs (ug/kg)	
Benzo(a)anthracene	1800
Benzo(a)pyrene	2000
Benzo(b)fluoranthene	1800
Benzo(k)fluoranthene	2000
Dibenz(a,h)anthracene	580
Indeno(1,2,3-cd)pyrene	1500

IS66DP40	
SVOCs (ug/kg)	
Benzo(a)pyrene	26

IS66DP37		
SVOCs (ug/kg)		
Atrazine	1.6	J

IS66SO15		
SVOCs (ug/kg)		
Benzo(a)anthracene	170000	J
Benzo(a)pyrene	180000	J
Benzo(b)fluoranthene	180000	J
Benzo(k)fluoranthene	150000	J
Chrysene	180000	J
Dibenz(a,h)anthracene	44000	J
Indeno(1,2,3-cd)pyrene	120000	J
Pyrene	280000	J
Sum HMW PAHs	1396000	
Dibenzofuran	9200	J
Fluoranthene	350000	J
Naphthalene	6100	J

IS66SO20		
SVOCs (ug/kg)		
Benzo(a)anthracene	350	J
Benzo(a)pyrene	440	J
Benzo(b)fluoranthene	620	J
Indeno(1,2,3-cd)pyrene	320	J

IS66DP41		
SVOCs (ug/kg)		
Benzo(a)anthracene	220	
Benzo(a)pyrene	94	
Benzo(b)fluoranthene	180	
Dibenz(a,h)anthracene	23	J

IS66SO11 IS66SO13 IS66DP10 IS66DP32 IS66SO14 IS66DP33 IS66DP04 IS66SO42 IS66DP05 IS66SO43 IS66DP35 IS66DP06 IS66SO45 IS66DP09 IS66DP38 IS66DP39 IS66DP07

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

Note:
HMW PAHs - High Molecular Weight Polycyclic Aromatic Hydrocarbons

N W E S

0 90 180 Feet

Figure 4-3
SVOCs COPCs in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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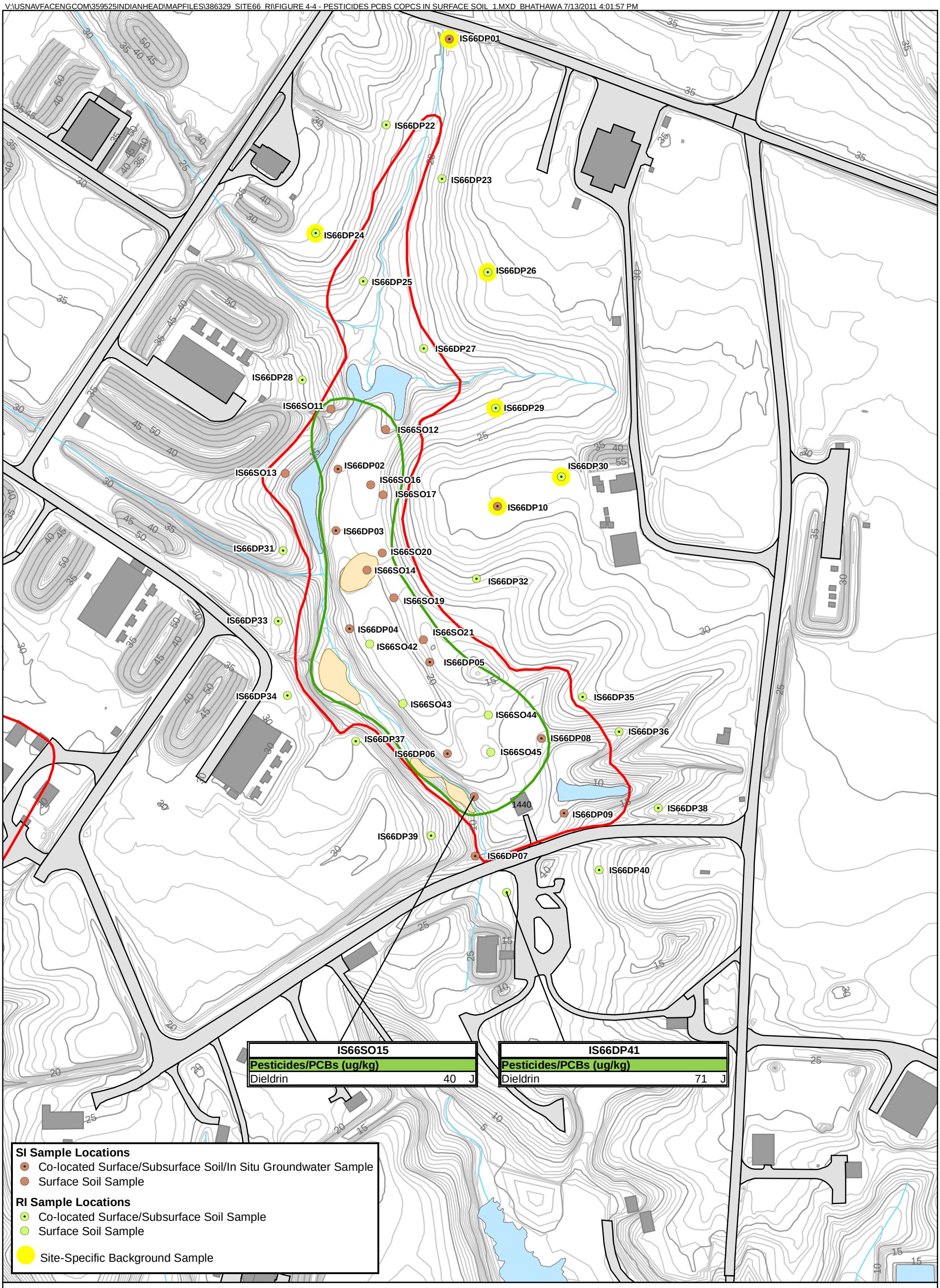
V:\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-4 - PESTICIDES PCBS COPCS IN SURFACE SOIL_1.MXD BHATHAWA 7/13/2011 4:01:57 PM



Legend

- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180
Feet

Figure 4-4
Pesticides and PCBs COPCs in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-5 - EXPLOSIVES COPCS IN SURFACE SOIL.MXD BHATHAWA 7/13/2011 4:06:13 PM

IS66DP01
IS66DP22
IS66DP23
IS66DP24
IS66DP26
IS66DP25
IS66DP27
IS66DP28
IS66SO11
IS66DP29
IS66SO12
IS66SO13
IS66DP02
IS66DP30
IS66SO16
IS66SO17
IS66DP10
IS66DP03
IS66SO20
IS66SO14
IS66DP32
IS66SO19
IS66DP33
IS66DP04
IS66SO21
IS66SO42
IS66DP05
IS66DP34
IS66DP35
IS66SO43
IS66SO44
IS66DP37
IS66DP08
IS66DP36
IS66DP06
IS66SO45
IS66SO15
1440
IS66DP09
IS66DP38
IS66DP39
IS66DP07
IS66DP40
DP41

IS66DP32	
Dioxins/Furans (mg/kg)	
2,3,7,8-TCDD TEQ	4.60E-06

IS66DP39	
Dioxins/Furans (mg/kg)	
2,3,7,8-TCDD TEQ	6.10E-06

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

Note:
2,3,7,8-TCDD TEQ concentration calculated using methodology and toxicity factors from USEPA 2010.

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Feet

Figure 4-5
Dioxins and Furans COPCs in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-6 - EXPLOSIVES COPCS IN SURFACE SOIL.MXD BHATHAWA 7/13/2011 4:08:33 PM

IS66DP01
IS66DP22
IS66DP23
IS66DP24
IS66DP26
IS66DP25
IS66DP27
IS66DP28
IS66SO11
IS66DP29
IS66SO12
IS66SO13
IS66DP02
IS66DP30
IS66SO16
IS66SO17
IS66DP10
IS66DP03
IS66SO20
IS66SO14
IS66DP32
IS66SO19
IS66DP33
IS66DP04
IS66SO21
IS66SO42
IS66DP05
IS66DP34
IS66SO43
IS66DP35
IS66SO44
IS66DP36
IS66DP37
IS66DP08
IS66DP06
IS66SO45
IS66SO15
IS66DP38
IS66DP09
IS66DP39
IS66DP07
IS66DP40
DP41

IS66DP31	
Explosives (ug/kg)	
Nitroglycerin	1900

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
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0 90 180
Feet

Figure 4-6
Explosives COPCs in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-6 - METALS COPCS IN SURFACE SOIL.MXD BHATHAWA 7/13/2011 4:19:18 PM

IS66SO12	
TAL Metals (mg/kg)	
Arsenic	5
Chromium	11.9
Cobalt	3.7 J
Cyanide	0.12 J
Iron	10900
Manganese	305
Mercury	0.5 J
Vanadium	27.5

IS66SO11	
TAL Metals (mg/kg)	
Arsenic	1.4 J
Chromium	10.1
Cobalt	17.9 J
Iron	5550
Vanadium	19.9 J

IS66DP28	
TAL Metals (mg/kg)	
Arsenic	2.3
Chromium	13.4
Cobalt	5.1
Iron	13100
Vanadium	28.9

IS66DP02	
TAL Metals (mg/kg)	
Aluminum	7520
Arsenic	10.1
Chromium	19.4
Cobalt	5.8 J
Cyanide	0.16 J
Iron	22300
Manganese	405
Vanadium	31

IS66SO16	
TAL Metals (mg/kg)	
Arsenic	9.8
Chromium	11.9
Cobalt	4.5 J
Iron	13700
Manganese	368
Mercury	0.56 J
Vanadium	27.8

IS66SO13	
TAL Metals (mg/kg)	
Arsenic	2.3 J
Chromium	8.2
Cobalt	4 J
Iron	10100
Vanadium	36.5

IS66DP03	
TAL Metals (mg/kg)	
Arsenic	10.6
Chromium	13.3
Cobalt	3.9 J
Iron	13900
Mercury	1.1 J
Vanadium	25.8

IS66DP31	
TAL Metals (mg/kg)	
Arsenic	1.7
Chromium	8.9
Cobalt	3.9
Iron	6990
Vanadium	25.4

IS66SO17	
TAL Metals (mg/kg)	
Arsenic	22.2
Chromium	10.9
Cobalt	5 J
Cyanide	0.1 J
Iron	10500
Manganese	518
Vanadium	33.9

IS66DP33	
TAL Metals (mg/kg)	
Aluminum	8840
Arsenic	3.1
Chromium	13.8
Cobalt	11
Iron	10700
Manganese	232
Vanadium	33.7

IS66SO14	
TAL Metals (mg/kg)	
Arsenic	108
Chromium	15.5
Cobalt	10.3 J
Cyanide	0.2 J
Iron	31600
Vanadium	115

IS66DP34	
TAL Metals (mg/kg)	
Aluminum	13600
Arsenic	14.4
Chromium	28.1
Cobalt	8.5
Iron	16000
Vanadium	38.2

IS66DP04	
TAL Metals (mg/kg)	
Aluminum	8290
Chromium	22.8
Iron	35500
Vanadium	26.7

IS66SO42	
TAL Metals (mg/kg)	
Aluminum	10900
Arsenic	2.9
Chromium	13.7
Cobalt	5.8 J
Iron	14800
Manganese	217 J
Vanadium	29.6

IS66DP37	
TAL Metals (mg/kg)	
Aluminum	10200
Arsenic	1.9
Chromium	13.2
Cobalt	5.5
Iron	10300
Vanadium	18.9

IS66DP24	
TAL Metals (mg/kg)	
Aluminum	9280
Arsenic	1.8
Chromium	12.2
Cobalt	4
Iron	7850
Vanadium	36.7

IS66DP22	
TAL Metals (mg/kg)	
Arsenic	3 J
Chromium	22.2 J
Cobalt	9.7 J
Iron	16100 J
Manganese	232 J
Vanadium	47.1

IS66DP01	
TAL Metals (mg/kg)	
Arsenic	17.9
Chromium	15.7
Cobalt	3.6 J
Iron	11000
Vanadium	32.5

IS66DP29	
TAL Metals (mg/kg)	
Arsenic	2.1
Chromium	9.4
Cobalt	7.1
Iron	6890
Manganese	447
Vanadium	24.7

IS66DP23	
TAL Metals (mg/kg)	
Chromium	4.4
Vanadium	19.8

IS66DP26	
TAL Metals (mg/kg)	
Aluminum	8540
Arsenic	3.1
Chromium	14.6
Cobalt	5.4
Iron	11100
Vanadium	39.3

IS66SO20	
TAL Metals (mg/kg)	
Arsenic	5.5
Chromium	13.9
Cobalt	3.1 J
Cyanide	0.25 J
Iron	12900
Manganese	350
Mercury	22.1 J
Vanadium	32.4

IS66DP25	
TAL Metals (mg/kg)	
Arsenic	2.1
Chromium	6.8
Cobalt	3.2
Vanadium	29

IS66DP27	
TAL Metals (mg/kg)	
Arsenic	2.2
Chromium	8.8
Cobalt	5.1
Iron	5920
Vanadium	32.9

IS66DP10	
TAL Metals (mg/kg)	
Aluminum	13000
Arsenic	3.1
Chromium	16.1
Cobalt	4.2 J
Iron	16600
Vanadium	29.9

IS66DP30	
TAL Metals (mg/kg)	
Aluminum	9370
Arsenic	5.5
Chromium	13.7
Cobalt	8.6
Iron	11600
Manganese	274
Vanadium	26.4

IS66SO19	
TAL Metals (mg/kg)	
Arsenic	6.6
Chromium	11
Cobalt	9.8 J
Iron	12700
Manganese	345
Mercury	0.53 J
Vanadium	26.4

IS66DP32	
TAL Metals (mg/kg)	
Aluminum	14300
Arsenic	2.7
Chromium	17
Cobalt	6.9
Iron	14800
Vanadium	26.8

IS66SO21	
TAL Metals (mg/kg)	
Aluminum	9790
Arsenic	3.5 J
Chromium	14
Cobalt	9.5 J
Cyanide	0.57 J
Iron	18500
Manganese	381
Mercury	1.9 J
Vanadium	40

IS66DP35	
TAL Metals (mg/kg)	
Arsenic	1.2
Chromium	7.5
Cobalt	5
Manganese	209
Vanadium	15.8

IS66DP08	
TAL Metals (mg/kg)	
Arsenic	34.9
Chromium	11
Cobalt	3.9 J
Cyanide	0.18 J
Iron	17300
Manganese	207
Vanadium	75.9

IS66SO44	
TAL Metals (mg/kg)	
Aluminum	10700
Arsenic	5.6
Chromium	14.6
Cobalt	6.3
Iron	14600
Manganese	193
Vanadium	26.4

IS66DP36	
TAL Metals (mg/kg)	
Aluminum	10100
Arsenic	8.1
Chromium	12.3
Cobalt	15.1
Iron	10100
Vanadium	23.7

IS66DP38	
TAL Metals (mg/kg)	
Arsenic	1.8
Chromium	10.2
Cobalt	2.9
Iron	8740
Vanadium	19.7

IS66DP09	
TAL Metals (mg/kg)	
Arsenic	2.1 J
Chromium	12.9
Cobalt	4.7 J
Iron	11400
Vanadium	19.3

IS66DP40	
TAL Metals (mg/kg)	
Aluminum	12400
Arsenic	3
Chromium	16.8
Cobalt	9.6
Iron	11100
Vanadium	32.7

IS66SO45	
TAL Metals (mg/kg)	
Aluminum	13600
Arsenic	2.6
Chromium	18.6
Cobalt	5.7
Iron	17700
Manganese	388
Vanadium	31.7

IS66DP06	
TAL Metals (mg/kg)	
Aluminum	10500
Arsenic	3.1
Chromium	14.8
Cobalt	5.3 J
Iron	19500
Vanadium	26.8

IS66DP05	
TAL Metals (mg/kg)	
Aluminum	15100
Arsenic	6
Chromium	16.7
Cobalt	4.7 J
Iron	29000
Vanadium	30.9

IS66DP39	
TAL Metals (mg/kg)	
Aluminum	15200
Arsenic	3.3
Chromium	23
Cobalt	6
Iron	17000
Vanadium	31.1

IS66DP41	
TAL Metals (mg/kg)	
Aluminum	17600
Arsenic	4.2
Chromium	23.1
Cobalt	10.6
Iron	16500
Manganese	322
Vanadium	34.2

IS66DP07	
TAL Metals (mg/kg)	
Aluminum	9390
Arsenic	2.6
Chromium	14
Cobalt	7.3 J
Iron	18000
Manganese	380
Vanadium	24.2

IS66SO15	
TAL Metals (mg/kg)	
Arsenic	33.1
Chromium	18.9
Cobalt	5.6 J
Cyanide	0.28 J
Iron	23400
Manganese	521
Mercury	1.3 J
Vanadium	89

IS66SO43	
TAL Metals (mg/kg)	
Aluminum	10800
Arsenic	2.8
Chromium	13.4
Cobalt	4
Iron	13700
Vanadium	28.2

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180
Feet

Figure 4-7
Metals COPCs in Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-7 - SVOC COPCS IN SUBSURFACE SOIL.MXD BHATHAWA 7/14/2011 4:40:00 PM

IS66DP25	
SVOCs (ug/kg)	
Benzo(a)anthracene	390
Benzo(a)pyrene	330
Benzo(b)fluoranthene	480
Dibenz(a,h)anthracene	71
Indeno(1,2,3-cd)pyrene	210

IS66DP22	
SVOCs (ug/kg)	
Benzo(a)pyrene	45

IS66DP01		
SVOCs (ug/kg)		
Benzo(a)anthracene	530	
Benzo(a)pyrene	670	
Benzo(b)fluoranthene	680	
Dibenz(a,h)anthracene	170	J
Indeno(1,2,3-cd)pyrene	570	

IS66DP26		
SVOCs (ug/kg)		
Benzo(a)anthracene	210	
Benzo(a)pyrene	160	J
Benzo(b)fluoranthene	230	J
Dibenz(a,h)anthracene	32	J
Indeno(1,2,3-cd)pyrene	150	

IS66DP24		
SVOCs (ug/kg)		
Benzo(a)pyrene	240	
Benzo(b)fluoranthene	290	
Dibenz(a,h)anthracene	53	
Indeno(1,2,3-cd)pyrene	170	

IS66DP23		
SVOCs (ug/kg)		
Benzo(a)pyrene	120	
Benzo(b)fluoranthene	160	
Dibenz(a,h)anthracene	32	

IS66DP29		
SVOCs (ug/kg)		
Benzo(a)anthracene	220	
Benzo(a)pyrene	170	J
Benzo(b)fluoranthene	240	J
Dibenz(a,h)anthracene	31	J
Indeno(1,2,3-cd)pyrene	160	

IS66DP27		
SVOCs (ug/kg)		
Benzo(a)anthracene	150	J
Benzo(a)pyrene	110	J
Benzo(b)fluoranthene	170	J
Dibenz(a,h)anthracene	18	J

IS66SO17		
SVOCs (ug/kg)		
Benzo(a)anthracene	530	
Benzo(a)pyrene	540	
Benzo(b)fluoranthene	660	J
Dibenzofuran(a,h)anthracene	110	J
Indeno(1,2,3-cd)pyrene	360	J

IS66DP28		
SVOCs (ug/kg)		
Benzo(a)pyrene	72	
Dibenz(a,h)anthracene	16	J

IS66DP30		
SVOCs (ug/kg)		
Benzo(a)pyrene	95	J
Benzo(b)fluoranthene	150	J
Dibenz(a,h)anthracene	20	J

IS66SO12		
SVOCs (ug/kg)		
Benzo(a)anthracene	9800	
Benzo(a)pyrene	11000	
Benzo(b)fluoranthene	8900	
Benzo(k)fluoranthene	11000	
Dibenz(a,h)anthracene	1700	
Indeno(1,2,3-cd)pyrene	9600	

IS66SO19		
SVOCs (ug/kg)		
Benzo(a)anthracene	320	J
Benzo(a)pyrene	1400	J
Benzo(b)fluoranthene	320	J
Indeno(1,2,3-cd)pyrene	560	

IS66DP02		
SVOCs (ug/kg)		
Benzo(a)anthracene	1700	
Benzo(a)pyrene	1700	
Benzo(b)fluoranthene	1900	
Benzo(k)fluoranthene	1600	
Dibenz(a,h)anthracene	400	J
Indeno(1,2,3-cd)pyrene	1300	

IS66SO21		
SVOCs (ug/kg)		
Benzo(a)anthracene	3100	
Benzo(a)pyrene	4400	
Benzo(k)fluoranthene	5100	
Benzo(k)fluoranthene	7200	J
Dibenzofuran	950	
Naphthalene	2700	

IS66SO16		
SVOCs (ug/kg)		
Benzo(a)anthracene	1800	
Benzo(a)pyrene	2000	
Benzo(b)fluoranthene	1800	
Chrysene	2000	
Dibenz(a,h)anthracene	580	
Indeno(1,2,3-cd)pyrene	1500	

IS66DP05		
SVOCs (ug/kg)		
Benzo(a)anthracene	280	J
Benzo(a)pyrene	200	J
Benzo(b)fluoranthene	240	J

IS66SO44	
SVOCs (ug/kg)	
Benzo(a)pyrene	29

IS66DP31	
SVOCs (ug/kg)	
Benzo(a)pyrene	35

IS66DP36	
SVOCs (ug/kg)	
Benzo(a)pyrene	29

IS66DP03		
SVOCs (ug/kg)		
Benzo(a)anthracene	370	J
Benzo(a)pyrene	340	J
Benzo(b)fluoranthene	470	J
Dibenz(a,h)anthracene	86	J
Indeno(1,2,3-cd)pyrene	290	J

IS66DP08		
SVOCs (ug/kg)		
Benzo(a)anthracene	390	
Benzo(a)pyrene	310	J
Benzo(b)fluoranthene	360	J
Indeno(1,2,3-cd)pyrene	200	J

IS66DP34		
SVOCs (ug/kg)		
Benzo(a)pyrene	120	
Benzo(b)fluoranthene	180	
Dibenz(a,h)anthracene	22	J

IS66DP40	
SVOCs (ug/kg)	
Benzo(a)pyrene	26

IS66SO20		
SVOCs (ug/kg)		
Benzo(a)anthracene	350	J
Benzo(a)pyrene	440	J
Benzo(k)fluoranthene	620	J
Indeno(1,2,3-cd)pyrene	320	J

IS66DP07		
SVOCs (ug/kg)		
Benzo(a)anthracene	15000	
Benzo(a)pyrene	15000	
Benzo(b)fluoranthene	15000	
Benzo(k)fluoranthene	13000	
Chrysene	15000	
Dibenz(a,h)anthracene	2600	J
Indeno(1,2,3-cd)pyrene	11000	J

IS66DP04		
SVOCs (ug/kg)		
Benzo(a)anthracene	820	
Benzo(a)pyrene	600	J
Benzo(b)fluoranthene	640	
Dibenz(a,h)anthracene	150	J
Indeno(1,2,3-cd)pyrene	390	J

IS66SO15		
SVOCs (ug/kg)		
Benzo(a)anthracene	170000	J
Benzo(a)pyrene	180000	J
Benzo(b)fluoranthene	180000	J
Benzo(k)fluoranthene	1500	J
Chrysene	180000	J
Dibenz(a,h)anthracene	44000	J
Dibenzofluoranthene	9200	J
Fluoranthene	350000	J
Indeno(1,2,3-cd)pyrene	120000	J
Nephthalene	6100	J
Pyrene	280000	J

IS66DP41		
SVOCs (ug/kg)		
Benzo(a)anthracene	220	
Benzo(a)pyrene	94	
Benzo(b)fluoranthene	180	
Dibenz(a,h)anthracene	23	J

IS66SO11
IS66SO13
IS66SO14
IS66SO42
IS66SO43
IS66SO45
IS66DP10
IS66DP32
IS66DP33
IS66DP35
IS66DP37
IS66DP06
IS66DP09
IS66DP38
IS66DP39

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180
Feet

Figure 4-8
SVOC COPCs in Combined Surface and Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-9 - PESTICIDES PCBS COPCS IN TOTAL SOIL.MXD BHATHAWA 7/13/2011 4:25:27 PM

IS66DP01
IS66DP22
IS66DP23
IS66DP24
IS66DP26
IS66DP25
IS66DP27
IS66DP28
IS66SO11
IS66DP29
IS66SO12
IS66SO13
IS66DP02
IS66DP30
IS66SO16
IS66SO17
IS66DP10
IS66DP03
IS66DP31
IS66SO20
IS66SO14
IS66DP32
IS66SO19
IS66DP33
IS66SO21
IS66SO42
IS66DP05
IS66DP34
IS66SO43
IS66SO44
IS66DP35
IS66DP36
IS66DP37
IS66DP08
IS66DP06
IS66SO45
IS66DP38
IS66DP09
IS66DP39
IS66DP07
IS66DP40
DP41

IS66DP04	
Pesticides/PCBs (ug/kg)	
4,4'-DDD	83000
Heptachlor epoxide	210 J

IS66SO15	
Pesticides/PCBs (ug/kg)	
Dieldrin	40 J

IS66DP41	
Pesticides/PCBs (ug/kg)	
Dieldrin	71 J

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180 Feet

Figure 4-9
Pesticides and PCBs COPCs in Combined Surface and Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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V:\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-10 - DIOXINS AND FURANS IN TOTAL SOIL.MXD BHATHAWA 7/13/2011 4:29:43 PM

IS66DP01
IS66DP22
IS66DP23
IS66DP24
IS66DP26
IS66DP25
IS66DP27
IS66DP28
IS66SO11
IS66DP29
IS66SO12
IS66SO13
IS66DP02
IS66DP30
IS66SO16
IS66SO17
IS66DP10
IS66DP03
IS66SO20
IS66SO14
IS66DP32
IS66SO19
IS66DP33
IS66DP04
IS66SO21
IS66SO42
IS66DP05
IS66DP34
IS66SO43
IS66DP35
IS66SO44
IS66DP37
IS66DP08
IS66DP36
IS66DP06
IS66SO45
IS66SO15
IS66DP09
IS66DP38
IS66DP39
IS66DP07
IS66DP40
DP41

IS66DP32	
Dioxins/Furans (mg/kg)	
2,3,7,8-TCDD TEQ	4.60E-06

IS66DP34	
Dioxins/Furans (mg/kg)	
2,3,7,8-TCDD TEQ	5.10E-06

IS66DP39	
Dioxins/Furans (mg/kg)	
2,3,7,8-TCDD TEQ	6.10E-06

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

Note:
2,3,7,8-TCDD TEQ concentration calculated using methodology and toxicity factors from USEPA 2010.

N
W E
S

0 90 180
Feet

Figure 4-10
Dioxins and Furans COPCs in Combined Surface and Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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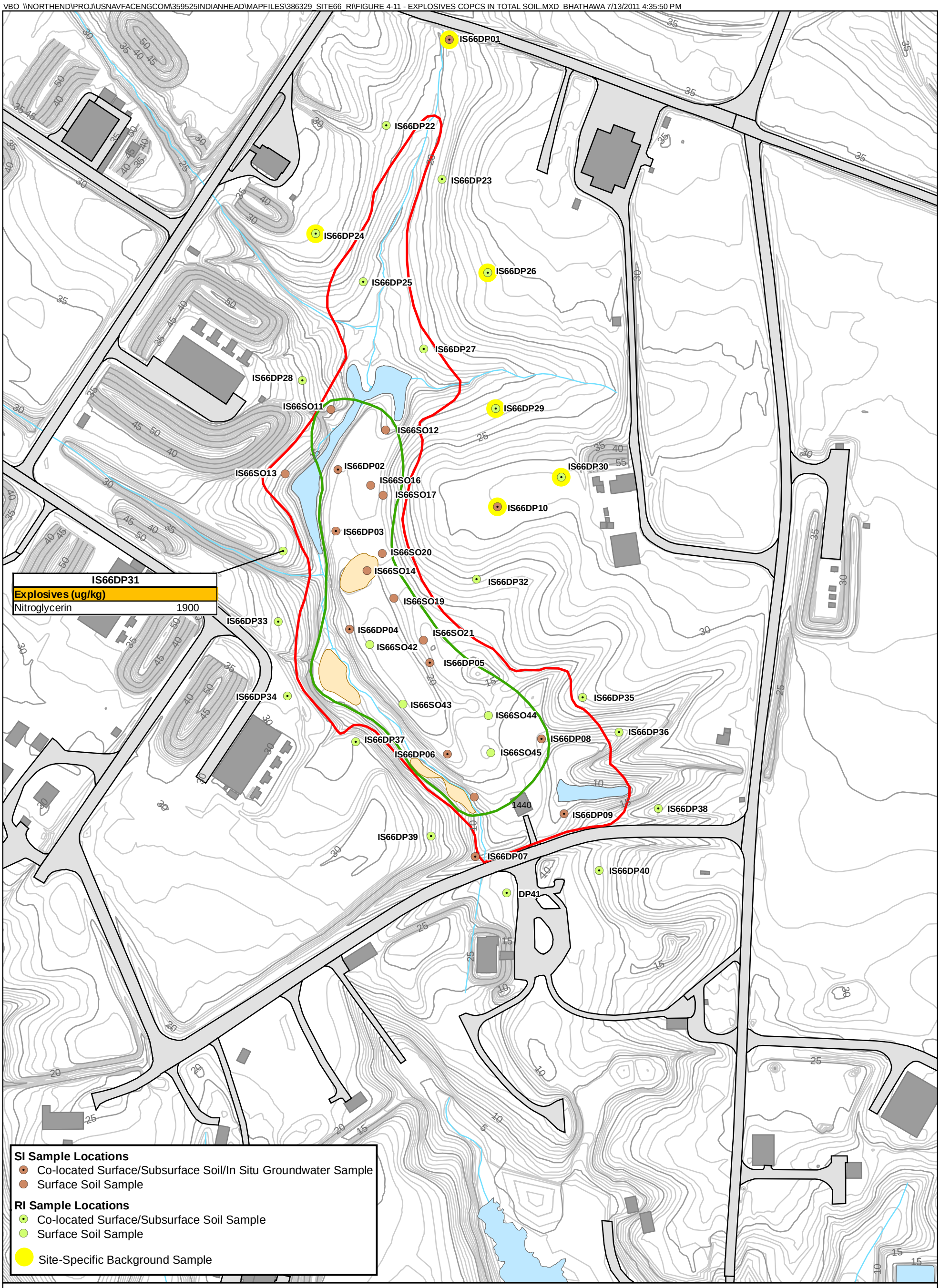
VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-11 - EXPLOSIVES COPCS IN TOTAL SOIL.MXD BHATHAWA 7/13/2011 4:35:50 PM



Legend

- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 90 180
Feet

Figure 4-11
Explosives COPCs in Combined Surface and Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-10 - METALS COPCS IN SUBSURFACE SOIL.MXD BHATHAWA 7/13/2011 4:37:34 PM

IS66DP25	
TAL Metals (mg/kg)	
Aluminum	16100
Arsenic	2.1
Chromium	24
Cobalt	16.6
Iron	31000

IS66DP24	
TAL Metals (mg/kg)	
Aluminum	9280
Arsenic	3.5
Chromium	12.2
Cobalt	4
Iron	7850

IS66DP22	
TAL Metals (mg/kg)	
Aluminum	17600
Arsenic	7.2 J
Chromium	26.2
Cobalt	9.7 J
Iron	30500 J
Manganese	232 J
Vanadium	47.1

IS66DP01	
TAL Metals (mg/kg)	
Arsenic	17.9
Chromium	15.7
Cobalt	5.9 J
Iron	60000

IS66DP26	
TAL Metals (mg/kg)	
Aluminum	12600
Arsenic	6.2
Chromium	18.9
Cobalt	7
Iron	11100
Vanadium	39.3

IS66SO16	
TAL Metals (mg/kg)	
Arsenic	9.8
Chromium	11.9
Cobalt	4.5 J
Iron	13700
Manganese	368

IS66SO12	
TAL Metals (mg/kg)	
Arsenic	5
Chromium	11.9
Cobalt	3.7 J
Iron	10900
Manganese	305

IS66DP23	
TAL Metals (mg/kg)	
Aluminum	13700
Arsenic	3.6
Chromium	19.3
Cobalt	11.7
Iron	26100

IS66DP27	
TAL Metals (mg/kg)	
Aluminum	17200
Arsenic	2.2
Chromium	18.5
Cobalt	5.1
Iron	17800

IS66DP29	
TAL Metals (mg/kg)	
Aluminum	11600
Arsenic	2.1
Chromium	19.4
Cobalt	10.5
Iron	27700
Manganese	447

IS66DP28	
TAL Metals (mg/kg)	
Aluminum	11400
Arsenic	2.3
Chromium	13.4
Cobalt	5.1
Iron	13100

IS66SO17	
TAL Metals (mg/kg)	
Arsenic	22.2
Chromium	10.9
Cobalt	5 J
Iron	10500
Manganese	518

IS66SO11	
TAL Metals (mg/kg)	
Arsenic	1.4 J
Chromium	10.1
Cobalt	17.9 J
Iron	5550

IS66SO20	
TAL Metals (mg/kg)	
Arsenic	5.5
Chromium	13.9
Cobalt	3.1 J
Iron	12900
Manganese	350
Mercury	22.1 J

IS66DP02	
TAL Metals (mg/kg)	
Arsenic	10.1
Chromium	19.4
Cobalt	5.9 J
Iron	32200
Manganese	405
Vanadium	62.2

IS66DP30	
TAL Metals (mg/kg)	
Aluminum	13100
Arsenic	5.5
Chromium	21.9
Cobalt	8.6
Iron	11600
Manganese	274

IS66SO13	
TAL Metals (mg/kg)	
Arsenic	2.3 J
Chromium	8.2
Cobalt	4 J
Iron	10100

IS66DP10	
TAL Metals (mg/kg)	
Aluminum	13000
Arsenic	3.1
Chromium	16.1
Cobalt	5.2 J
Iron	16600

IS66DP03	
TAL Metals (mg/kg)	
Aluminum	8780
Arsenic	17.1
Chromium	26.2
Cobalt	8 J
Iron	28500
Manganese	272
Vanadium	156

IS66DP32	
TAL Metals (mg/kg)	
Aluminum	14300
Arsenic	14
Chromium	56 J
Cobalt	6.9
Iron	73400 J
Vanadium	46.9

IS66SO19	
TAL Metals (mg/kg)	
Arsenic	6.6
Chromium	11
Cobalt	9.8 J
Iron	12700
Manganese	345

IS66DP31	
TAL Metals (mg/kg)	
Aluminum	15800
Arsenic	1.7
Chromium	21.2
Cobalt	16.3
Iron	21800

IS66DP35	
TAL Metals (mg/kg)	
Aluminum	14600
Arsenic	1.8
Chromium	21.3
Cobalt	8.5
Iron	23800
Manganese	209

IS66SO21	
TAL Metals (mg/kg)	
Aluminum	9790
Arsenic	3.5 J
Chromium	14
Cobalt	9.5 J
Iron	18500
Manganese	381
Vanadium	40

IS66DP33	
TAL Metals (mg/kg)	
Aluminum	11500
Arsenic	3.1
Chromium	17.8
Cobalt	12.4
Iron	20100
Manganese	232

IS66SO14	
TAL Metals (mg/kg)	
Arsenic	108
Chromium	15.5
Cobalt	10.3 J
Iron	31600
Vanadium	115

IS66DP34	
TAL Metals (mg/kg)	
Aluminum	14600
Arsenic	14.4
Chromium	28.1
Cobalt	8.5
Iron	20500

IS66DP36	
TAL Metals (mg/kg)	
Aluminum	11300
Arsenic	8.1
Chromium	16.7
Cobalt	15.1
Iron	10500

IS66DP05	
TAL Metals (mg/kg)	
Aluminum	15100
Arsenic	53.2 J
Chromium	16.8
Cobalt	10.6 J
Iron	29000
Lead	1420 J
Vanadium	166 J

IS66DP04	
TAL Metals (mg/kg)	
Aluminum	9990
Arsenic	6.6
Chromium	22.8
Cobalt	13.7 J
Iron	35500

IS66DP38	
TAL Metals (mg/kg)	
Aluminum	11400
Arsenic	5.8
Chromium	20.2
Cobalt	16.4
Iron	15300

IS66SO42	
TAL Metals (mg/kg)	
Aluminum	10900
Arsenic	2.9
Chromium	13.7
Cobalt	5.8 J
Iron	14800
Manganese	217 J

IS66SO45	
TAL Metals (mg/kg)	
Aluminum	13600
Arsenic	2.6
Chromium	18.6
Cobalt	5.7
Iron	17700
Manganese	388

IS66DP08	
TAL Metals (mg/kg)	
Arsenic	34.9
Chromium	13.3
Cobalt	4.4 J
Iron	20200
Manganese	207
Vanadium	75.9

IS66DP09	
TAL Metals (mg/kg)	
Aluminum	8510
Arsenic	3
Chromium	16
Cobalt	6.4 J
Iron	19100

IS66DP37	
TAL Metals (mg/kg)	
Aluminum	13200
Arsenic	1.9
Chromium	21.5
Cobalt	7.1
Iron	22600

IS66DP41	
TAL Metals (mg/kg)	
Aluminum	17600
Arsenic	5
Chromium	23.1
Cobalt	10.6
Iron	16500
Manganese	322

IS66SO44	
TAL Metals (mg/kg)	
Aluminum	10700
Arsenic	5.6
Chromium	14.6
Cobalt	6.3
Iron	14600
Manganese	193

IS66DP40	
TAL Metals (mg/kg)	
Aluminum	12400
Arsenic	3
Chromium	16.8
Cobalt	9.6
Iron	14000

IS66SO43	
TAL Metals (mg/kg)	
Aluminum	10800
Arsenic	2.8
Chromium	13.4
Cobalt	4
Iron	13700

IS66SO15	
TAL Metals (mg/kg)	
Arsenic	33.1
Chromium	18.9
Cobalt	5.6 J
Iron	23400
Manganese	521
Vanadium	89

IS66DP06	
TAL Metals (mg/kg)	
Aluminum	10500
Arsenic	3.1
Chromium	14.8
Cobalt	6 J
Iron	19500

IS66DP39	
TAL Metals (mg/kg)	
Aluminum	15200
Arsenic	3.3
Chromium	23
Cobalt	7.3
Iron	16700
Manganese	224

IS66DP07	
TAL Metals (mg/kg)	
Aluminum	10900
Arsenic	2.7 J
Chromium	19.1
Cobalt	12.8 J
Iron	28600
Manganese	380

SI Sample Locations
- Co-located Surface/Subsurface Soil/In Situ Groundwater Sample
- Surface Soil Sample

RI Sample Locations
- Co-located Surface/Subsurface Soil Sample
- Surface Soil Sample

Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180 Feet

Figure 4-12
Metals COPCs in Combined Surface and Subsurface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-11 - SVOC COPCS IN GROUNDWATER.MXD BHATHAWA 7/13/2011 4:39:09 PM

IS66MW02

IS66MW01

IS66MW04

IS66MW05

IS66MW03	
SVOCs (ug/L)	
Naphthalene	1.7

1440

RI Sample Locations
- Permanent Monitoring Well
- Site-Specific Background Sampling Locations

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
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0 90 180
Feet

Figure 4-13
SVOCs COPCs in Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-14 - PESTICIDES AND PCBS COPCS IN GROUNDWATER.MXD BHATHAWA 7/13/2011 4:41:14 PM

IS66MW02

IS66MW01

IS66MW03

IS66MW05

1440

IS66MW04		
Pesticides/PCBs (ug/L)		
Heptachlor	0.021	J

RI Sample Locations
- Permanent Monitoring Well
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 90 180
Feet

Figure 4-14
Pesticides and PCBs COPCs in Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525\INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-15 - TOTAL AND DISSOLVED METALS COPCS IN GROUNDWATER.MXD BHATHAWA 7/13/2011 5:00:32 PM

IS66MW02	
TAL Metals (ug/L)	
Arsenic	1.7 J
Iron	14400
Manganese	289
Dissolved Metals (ug/L)	
Barium	59.1
Iron	14400
Manganese	287

IS66MW01	
TAL Metals (ug/L)	
Cobalt	14.9
Manganese	118
Dissolved Metals (ug/L)	
Barium	72.4
Iron	382

IS66MW03	
TAL Metals (ug/L)	
Arsenic	12.8
Cobalt	1.4
Iron	21200
Manganese	732

IS66MW03	
Dissolved Metals (ug/L)	
Barium	155
Iron	19900
Manganese	725

IS66MW05	
TAL Metals (ug/L)	
Cobalt	25.8
Iron	2920
Manganese	876

IS66MW05	
Dissolved Metals (ug/L)	
Barium	101
Iron	2640
Manganese	856

IS66MW04	
TAL Metals (ug/L)	
Cobalt	46.1
Manganese	784

IS66MW04	
Dissolved Metals (ug/L)	
Barium	137
Iron	2260
Manganese	826

RI Sample Locations
- Permanent Monitoring Well
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180 Feet

Figure 4-15
Total and Dissolved Metals COPCs in Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-16 - SVOC COPCS IN SEDIMENT.MXD BHATHAWA 7/13/2011 4:46:12 PM

IS66SWSD01

IS66SD06

IS66SD07

IS66SWSD02

1440

IS66SD08	
SVOCs (ug/kg)	
Benzo(a)pyrene	160
Benzo(b)fluoranthene	280
Benzo(k)fluoranthene	88
Dibenz(a,h)anthracene	50
Indeno(1,2,3-cd)pyrene	140
Pyrene	270

IS66SD09	
SVOCs (ug/kg)	
Anthracene	120
Benzo(a)pyrene	420
Benzo(b)fluoranthene	710
Benzo(g,h,i)perylene	240
Benzo(k)fluoranthene	210
Chrysene	470
Dibenz(a,h)anthracene	86
Fluoranthene	1000
Fluorene	98
Indeno(1,2,3-cd)pyrene	250
Phenanthrene	680
Pyrene	780

IS66SWSD04		
SVOCs (ug/kg)		
Anthracene	120	J
Benzo(a)anthracene	410	J
Benzo(a)pyrene	390	J
Benzo(b)fluoranthene	450	J
Benzo(g,h,i)perylene	230	J
Benzo(k)fluoranthene	360	J
Chrysene	440	J
Fluoranthene	770	
Indeno(1,2,3-cd)pyrene	280	J
Phenanthrene	360	J
Pyrene	630	

IS66SD10	
SVOCs (ug/kg)	
Anthracene	93
Benzo(a)pyrene	470
Benzo(b)fluoranthene	820
Benzo(g,h,i)perylene	350
Benzo(k)fluoranthene	240
Chrysene	490
Dibenz(a,h)anthracene	110
Fluoranthene	1100
Indeno(1,2,3-cd)pyrene	300
Phenanthrene	390
Pyrene	890

IS66SD11	
SVOCs (ug/kg)	
Benzo(a)pyrene	500
Benzo(b)fluoranthene	810
Benzo(g,h,i)perylene	260
Benzo(k)fluoranthene	210
Chrysene	460
Dibenz(a,h)anthracene	140
Fluoranthene	730
Indeno(1,2,3-cd)pyrene	250
Phenanthrene	200
Pyrene	660

IS66SD12	
SVOCs (ug/kg)	
Anthracene	170
Benzo(a)anthracene	780
Benzo(a)pyrene	770
Benzo(b)fluoranthene	1300
Benzo(g,h,i)perylene	430
Benzo(k)fluoranthene	340
Chrysene	680
Dibenz(a,h)anthracene	210
Fluoranthene	1400
Indeno(1,2,3-cd)pyrene	420
Phenanthrene	780
Pyrene	1100

IS66SWSD05		
SVOCs (ug/kg)		
Anthracene	260	J
Benzo(a)anthracene	710	
Benzo(a)pyrene	490	J
Benzo(b)fluoranthene	590	
Benzo(g,h,i)perylene	310	J
Benzo(k)fluoranthene	640	
Chrysene	730	
Dibenz(a,h)anthracene	120	J
Fluoranthene	1500	
Fluorene	110	J
Indeno(1,2,3-cd)pyrene	390	J
Phenanthrene	940	
Pyrene	1100	

IS66SWSD03		
SVOCs (ug/kg)		
Benzo(a)anthracene	240	J
Benzo(a)pyrene	210	J
Benzo(b)fluoranthene	330	J
Benzo(k)fluoranthene	240	J
Chrysene	300	J
Pyrene	330	J

IS66SD13	
SVOCs (ug/kg)	
Benzo(a)pyrene	330
Benzo(b)fluoranthene	440
Benzo(g,h,i)perylene	230
Benzo(k)fluoranthene	150
Chrysene	250
Dibenz(a,h)anthracene	75
Fluoranthene	590
Indeno(1,2,3-cd)pyrene	220
Phenanthrene	210
Pyrene	500

IS66SD14	
SVOCs (ug/kg)	
Benzo(a)anthracene	420
Benzo(a)pyrene	370
Benzo(b)fluoranthene	700
Benzo(g,h,i)perylene	230
Benzo(k)fluoranthene	180
Chrysene	330
Dibenz(a,h)anthracene	88
Fluoranthene	560
Indeno(1,2,3-cd)pyrene	210
Pyrene	600

IS66SD15		
SVOCs (ug/kg)		
Benzo(a)anthracene	240	
Benzo(a)pyrene	190	
Benzo(b)fluoranthene	340	
Benzo(k)fluoranthene	74	
Chrysene	170	
Dibenz(a,h)anthracene	34	J
Fluoranthene	450	
Indeno(1,2,3-cd)pyrene	110	
Phenanthrene	260	
Pyrene	470	

SI Sample Locations
- Sediment/Surface Water Sample

RI Sample Locations
- Sediment Sample
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180 Feet

Figure 4-16
SVOC COPCs in Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-17 - PESTICIDES PCBS COPCS IN SEDIMENT.MXD BHATHAWA 7/13/2011 4:56:36 PM

IS66SD08		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	57	J
4,4'-DDE	29	J
4,4'-DDT	9.2	J
Dieldrin	8.3	J

IS66SWSD01		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	66	
4,4'-DDE	8.1	

IS66SD07		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	6.7	J

IS66SD06

IS66SWSD02		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	47	
4,4'-DDE	22	

IS66SWSD05		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	40	
4,4'-DDE	4.2	J

IS66SWSD04		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	13	
4,4'-DDE	4	J

IS66SD09

IS66SWSD03		
Pesticides/PCBs (ug/kg)		
4,4'-DDE	8.4	

IS66SD10		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	29	J
4,4'-DDE	9.3	J
4,4'-DDT	6.1	J

1440

IS66SD13		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	42	J
4,4'-DDE	13	J

IS66SD11		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	44	J
4,4'-DDE	4.7	J

IS66SD14		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	23	J
4,4'-DDE	22	J
4,4'-DDT	39	J
Aroclor-1254	830	

IS66SD12		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	52	
4,4'-DDE	7.5	

IS66SD15		
Pesticides/PCBs (ug/kg)		
4,4'-DDD	6.4	J
4,4'-DDE	12	J
4,4'-DDT	5.4	J

SI Sample Locations
- Sediment/Surface Water Sample

RI Sample Locations
- Sediment Sample
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 90 180
Feet

Figure 4-17
Pesticides and PCBs COPCs in Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-18 - METALS COPCS IN SEDIMENT.MXD BHATHAWA 7/13/2011 4:50:09 PM

IS66SWSD01

IS66SD08	
TAL Metals (mg/kg)	
Arsenic	5.2
Chromium	15.4
Cobalt	24.5

IS66SD06	
TAL Metals (mg/kg)	
Chromium	7.4

IS66SD07	
TAL Metals (mg/kg)	
Chromium	5.9

IS66SWSD02	
TAL Metals (mg/kg)	
Arsenic	8.2
Chromium	30.2
Cobalt	40.9
Lead	78.9

IS66SD09		
TAL Metals (mg/kg)		
Chromium	4	
Cyanide	0.51	J

IS66SWSD05	
TAL Metals (mg/kg)	
Chromium	7.9

IS66SWSD04	
TAL Metals (mg/kg)	
Arsenic	13.8
Chromium	8.2
Lead	70.9

IS66SWSD03	
TAL Metals (mg/kg)	
Arsenic	8.9
Chromium	13.2
Lead	39.8
Mercury	1.3

IS66SD10	
TAL Metals (mg/kg)	
Arsenic	8.8
Chromium	14.6
Lead	36

IS66SD13	
TAL Metals (mg/kg)	
Arsenic	5.6
Chromium	16.2
Lead	63.2

IS66SD11		
TAL Metals (mg/kg)		
Chromium	8.6	
Cyanide	0.35	J

IS66SD14	
TAL Metals (mg/kg)	
Arsenic	8.4
Chromium	26.7
Lead	262
Mercury	0.35
Silver	17

IS66SD12	
TAL Metals (mg/kg)	
Chromium	6.7

IS66SD15	
TAL Metals (mg/kg)	
Arsenic	6.4
Chromium	16.8
Lead	57.2
Mercury	1.8

SI Sample Locations
- Sediment/Surface Water Sample

RI Sample Locations
- Sediment Sample
- Site-Specific Background Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N W E S

0 90 180 Feet

Figure 4-18
Metals COPCs in Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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VBO \\NORTHEND\PROJ\USNAVFACENGCOM\359525INDIANHEAD\MAPFILES\386329_SITE66_RI\FIGURE 4-19 - METALS COPCS IN ASH MATERIAL.MXD BHATHAWA 7/13/2011 4:52:55 PM

IS66ASH04	
TAL Metals (mg/kg)	
Aluminum	6240
Arsenic	96.5
Chromium	20.3
Cobalt	17.2
Iron	45000
Mercury	0.32
Selenium	1.8
Thallium	1.5
Vanadium	86.6

IS66ASH07		
TAL Metals (mg/kg)		
Aluminum	10000	
Arsenic	123	
Chromium	28.8	
Cobalt	17.2	
Iron	51300	
Mercury	0.67	L
Selenium	6.1	
Thallium	1.9	
Vanadium	86.9	

IS66ASH05	
TAL Metals (mg/kg)	
Aluminum	8420
Arsenic	24.9
Chromium	19.8
Cobalt	9.4
Iron	35100
Manganese	378
Mercury	0.23
Selenium	3
Vanadium	76.4

IS66ASH03

IS66ASH02

IS66ASH01

IS66ASH09	
Metals (mg/kg)	
Aluminum	5960
Arsenic	37.7
Chromium	16.1
Cobalt	7.4
Iron	28600
Manganese	455
Mercury	0.28
Selenium	8.1
Vanadium	150

IS66ASH08	
TAL Metals (mg/kg)	
Aluminum	11100
Arsenic	49.4
Chromium	20.6
Cobalt	11
Iron	42500
Mercury	0.24
Selenium	2.3
Thallium	1.4
Vanadium	80.3

IS66ASH06	
TAL Metals (mg/kg)	
Aluminum	6890
Arsenic	49
Chromium	14.8
Cobalt	10.4
Iron	23000
Manganese	232
Mercury	0.66
Selenium	3.1
Vanadium	50.5

SI Sample Locations
Ash Sample

RI Sample Locations
Ash Sample

Legend
- Approximate Limit of Fill Material
- Site Boundary (Approximate Limit of Visible Waste Material)
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour
- 1 Foot Elevation Contour

N
W E
S

0 90 180
Feet

Figure 4-19
Metals COPCs in Ash
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

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SECTION 5

Contaminant Fate and Transport

The fate and transport of individual chemical constituents depends on how the constituents interact with the physical, geochemical, and biological conditions that are encountered in the environment. This section describes the general processes controlling the fate and transport of contaminants in the environment and discusses how select constituents detected in specific environmental media at Site 66 tend to react to these processes.

5.1 General Fate and Transport Concepts

The environmental fate and transport of chemical constituents is governed by four basic processes: hydrodynamic dispersion, advection, sorption, and reaction. The rate and effectiveness of these processes at transporting and/or removing chemicals from the environment depends on the nature of the particular chemical constituent and the specific environmental conditions where the constituent is encountered. These four fate and transport processes are briefly discussed below, and the concepts presented below are applied in the discussion in Sections 5.3 and 5.4 of the fate and transport of media- and site-specific constituents.

5.1.1 Hydrodynamic Dispersion

In most natural environments, the separate processes of molecular diffusion and mechanical dispersion operate simultaneously in a collective process known as hydrodynamic dispersion. Hydrodynamic dispersion controls the rate and direction of movement of dissolved constituents in groundwater, which is one of the primary transport mechanisms for environmental contaminants. The components of hydrodynamic dispersion are considered separately below.

Molecular Diffusion

Molecular diffusion is defined as the process by which constituents move from areas of greater concentrations to areas of lower concentration. For dissolved constituents, diffusion will occur as long as there is a concentration gradient, even if the fluid is not moving, and the rate of diffusion will depend on the magnitude of the concentration gradient. Diffusion alone may be an important transport mechanism in certain situations, but in most natural environments the effects of molecular diffusion operate in conjunction with mechanical dispersion (Fetter, 1993).

Mechanical Dispersion

Mechanical dispersion occurs because groundwater does not move at the same rate throughout a given volume of natural porous media. The groundwater velocity variations occur at the pore space level, resulting in a dilution of the solute at the margins of an advancing contaminant plume. Mechanical dispersion is related to the average linear velocity of groundwater and can be described as directions that are parallel (longitudinal dispersion) and normal (transverse dispersion) to the principal groundwater flow path.

5.1.2 Advection

Advection is defined as the transport of dissolved constituents by the motion of flowing groundwater. Advection causes the dissolved contaminant plume to migrate parallel to groundwater flow direction. The rate at which advective transport operates is determined by the average linear velocity of flowing groundwater, which is subject to the effective porosity and horizontal hydraulic conductivity of the porous media and the hydraulic gradient along the flow path.

5.1.3 Sorption

Sorption is generally defined as the attraction of an aqueous chemical species to the surface of a solid. The dissolved species can either be adsorbed or absorbed. Adsorption occurs when solutes adhere to the outside of a solid particle, and absorption occurs when solutes are incorporated into the internal structure of a solid particle. Sorption of a particular chemical species is determined experimentally, and in its most general form the degree to which a particular constituent will sorb is proportional to the distribution coefficient for an individual constituent

times the concentration of the constituent in solution. The distribution coefficient for organic constituents is calculated as the product of a compound's organic carbon partition coefficient (K_{oc}) and the fraction of organic carbon in the site soil. The K_{oc}s for inorganic constituents is a complex function of pH, soil organic content, and other factors, and the actual coefficient values tend to be site- or material-specific. A rough estimate of the sorption potential for a particular solute can be estimated by the respective constituents' water solubility because water solubility and degree of sorption tend to be inversely proportional.

Adsorbed or absorbed constituents may still be transported in the environment by natural or anthropogenic processes that move contaminated soil and/or sediment particles from one place to another. For example, contaminated soils and sediment can be eroded and entrained by water and wind, or construction activities may cause the transport or exposure of contaminated particles that may then be further exposed to natural elements. The deposition of contaminated particles in a new environment with different chemical conditions could cause desorption of the solute.

5.1.4 Reaction

As contaminants move in the environment, they are subjected to variable physical and geochemical conditions that may reduce the concentration and/or mobility of a particular contaminant through chemical reactions. For example, redox reactions may decrease the mobility of particular chemical species (e.g., reduction of hexavalent chromium to trivalent chromium) and biodegradation reactions can break down a toxic parent compound into less-harmful components (e.g., reductive dechlorination of Aroclors).

With respect to chemicals in the environment, degradation refers to the destruction or transformation of a parent constituent by simplifying or breaking down its molecular structure. In the natural environment, chemical degradation may occur through several processes, including hydrolysis, photolysis, and biodegradation. Hydrolysis and photolysis are terms used to describe degradation reactions catalyzed by water or sunlight, respectively. Hydrolysis occurs in many environments, and photolysis may play an important role in the removal of volatile constituents from surface soil, surface water, and sediment. Biodegradation reactions break down organic molecules by biological means, which is especially important for the removal of hydrocarbons, chlorinated hydrocarbons, and organic pesticides from groundwater (Fetter, 1993).

Volatilization is the conversion of a solid or liquid to a gas. This process is discussed here because volatilization plays an important role in the removal of volatile constituents (particularly VOCs) from soil, sediment, groundwater, and surface water. The volatility of a particular constituent in the environment can be estimated based on its vapor pressure within a normal range of temperatures (approximately 25°C) and to some degree by its Henry's Law Constant, or K_h. Constituents with high vapor pressures and relatively higher K_h values will tend to volatilize under normal environmental conditions.

5.2 Representative Chemicals

The common constituent groups detected in the various media types during the investigation are SVOCs (soil, sediment, and groundwater), pesticides/PCBs (soil, sediment, and groundwater), dioxins (soil), explosives (soil), and inorganics (soil, sediment, surface water, and ash). Specific constituents are mentioned in Section 5.3 and 5.4 because the respective constituent has been identified as a risk-driving COPC in either the HHRA or SERA.

5.3 Fate and Transport of Detected Constituents in Soil, Sediment, and Ash

The constituents identified as risk-driving COPCs in soil, sediment, and ash include a select group of SVOCs, pesticides, PCBs, and inorganics. The select SVOCs are polycyclic aromatic hydrocarbons (PAHs: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene). The pesticides are 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, and atrazine. Aroclor 1254 was identified as a risk-driving PCB COPC. The inorganics identified as risk-driving COPCs are aluminum, arsenic, chromium, cobalt, cyanide, iron, lead, manganese, mercury, selenium, silver, thallium, and vanadium. The general

fate and transport characteristics of these constituents are described below. Soil, sediment, and ash are discussed together because the fate and transport characteristics are generally similar in these media.

5.3.1 PAHs

PAHs are a group of chemicals formed by the incomplete combustion of coal, oil, gas, wood, garbage, or other organic substances (Agency for Toxic Substances and Disease Registry [ATSDR], 1995). There are more than 100 different PAH compounds, but the 6 compounds detected at Site 66 are among the most common found at hazardous waste sites and exhibit more harmful exposure effects than the other PAH compounds. In the environment, PAHs tend to strongly partition to and remain tightly bound to soil and sediment particles, as evidenced by their low water solubility and relatively high K_{oc} values. As a result, PAHs may be transported with sorbed particles by wind and water. Microbial metabolism is thought to be the primary process by which PAHs degrade in the environment.

5.3.2 Pesticides

DDT, DDD, and DDE were once in widespread use in pesticide products. DDD and DDE are breakdown products of DDT (ATSDR, 2002a). Dieldrin is a breakdown product of aldrin (another common historical pesticide and termiticide). The K_{oc} and water solubility values for these four compounds suggest that they bind strongly to soil and are relatively insoluble. Because these chemicals were historically applied to the ground surface, the major environmental mode of transport appears to have been through the physical erosion, entrainment, and re-deposition of contaminated soil and/or sediment particles. These compounds do not degrade readily and therefore are very persistent in the environment, although they may tend to become less bioavailable over time (ATSDR, 2002a,b).

Atrazine is an extensively-used, broad leaf herbicide (ATSDR, 2003). The K_{oc} and water solubility values for atrazine suggest it is relatively mobile in soil and low to moderately soluble in groundwater. Atrazine is one of the most widely used herbicides in the U.S., and is commonly applied to the ground surface for weed control. It does not degrade readily and therefore is very persistent in the environment.

5.3.3 PCBs

Aroclor 1254 may have been released to soils from various debris potentially containing PCBs (e.g., plasticizers, surface coatings, inks, adhesives, flame retardants, pesticide extenders, paints, and microencapsulation of dyes for carbonless duplicating paper) and deposition of vehicular emissions near roadway soil (ATSDR, 2000). Aroclors are no longer produced in the U.S, except under exemption, and are no longer used in the manufacture of new products. Given its K_{oc} and water solubility values, Aroclor 1254 is immobile in soil and relatively insoluble in water. The compound is removed from the water column by sorption to suspended solids and sediments as well as by volatilization from water surfaces; however, volatilization is attenuated by adsorption to soil and sediment particles. Aroclor 1254 is not readily degraded in the environment and is considered persistent.

5.3.4 Metals

Discussion of every metal COPC is not practical in the scope of this report; therefore, the discussion of environmental fate and transport is limited to arsenic and chromium, which are human health risk drivers for soil, sediment, and ash at Site 66.

Arsenic

Arsenic is a naturally occurring element that is widely distributed in the earth's crust (ATSDR, 2005). Arsenic compounds have been used historically as wood preservatives and pesticides. Under most natural conditions, arsenic binds with oxygen, chlorine, and sulfur to form inorganic arsenic compounds or with carbon and hydrogen to form organic arsenic compounds. In soil, arsenic adsorbs onto iron, aluminum, and manganese coatings on the surface of soil particles and in this form is relatively immobile. Under reducing conditions, arsenic becomes more mobile and may leach to groundwater and/or surface water. The overall fate of arsenic is complex and is controlled by many abiotic and biotic processes (ATSDR, 2005).

Chromium

Chromium is a naturally occurring element (as a component of more than 80 identified minerals) that is commonly encountered in the subsurface environment as naturally occurring and as a result of anthropogenic influences. Anthropogenic sources of chromium include paints and pigments, batteries, ferrochrome alloys, corrosion inhibitors, stainless steel welds and coatings, as a minor constituent of many commercial and industrial products. The mobility of chromium in soil is dependent upon the speciation of chromium, which is a function of redox potential and the pH of the soil. In most soils, chromium is present predominantly in the chromium (III) oxidation state, which has very low solubility and low reactivity, resulting in low mobility in the environment. It can be adsorbed by clays, iron hydroxides, aluminum hydroxides, manganese compounds, and organic material at acidic and neutral pHs. Chromium can be reduced from higher to lower valance states by organic matter, divalent metals, and dissolved sulfide. Under reducing conditions, chromium will form insoluble chromium hydroxide or be sorbed by manganese oxides (ATSDR, 2008).

5.4 Fate and Transport of Detected Constituents in Groundwater

The constituents identified as risk-driving COPCs in groundwater include the pesticide heptachlor and the metals arsenic, barium, cobalt, iron, and manganese. The general fate and transport characteristics of these constituents are described below.

5.4.1 Pesticides

Heptachlor was used extensively until the 1970s as a broad-spectrum insecticide on a wide variety of agricultural crops, with the major use on corn. It also had nonagricultural uses including seed treatment, home and garden uses, and termite control (ATSDR, 2007). Heptachlor is converted to heptachlor epoxide and other degradation products in the environment. The K_{oc} and water solubility values for this compound suggest it binds strongly to soil and is relatively insoluble. It may enter surface water and groundwater in runoff from contaminated soils. Heptachlor has a high potential for bioaccumulation and biomagnification in the aquatic food chain.

5.4.2 Metals

Discussion of every metal COPC (arsenic, barium, cobalt, and iron) is not practical in the scope of this report; therefore, the discussion of environmental fate and transport is limited to arsenic and cobalt, which are human health risk drivers for groundwater at Site 66.

Arsenic

As stated in Section 5.3.4.1, arsenic is a naturally-occurring element that tends to strongly adsorb to soil and/or sediment particles. Arsenic in groundwater is subjected to several transformation reactions, including redox, ligand exchange, precipitation, and biotransformation reactions. The ultimate fate of arsenic in the environment is complex and depends on a number of site-specific factors (ATSDR, 2005).

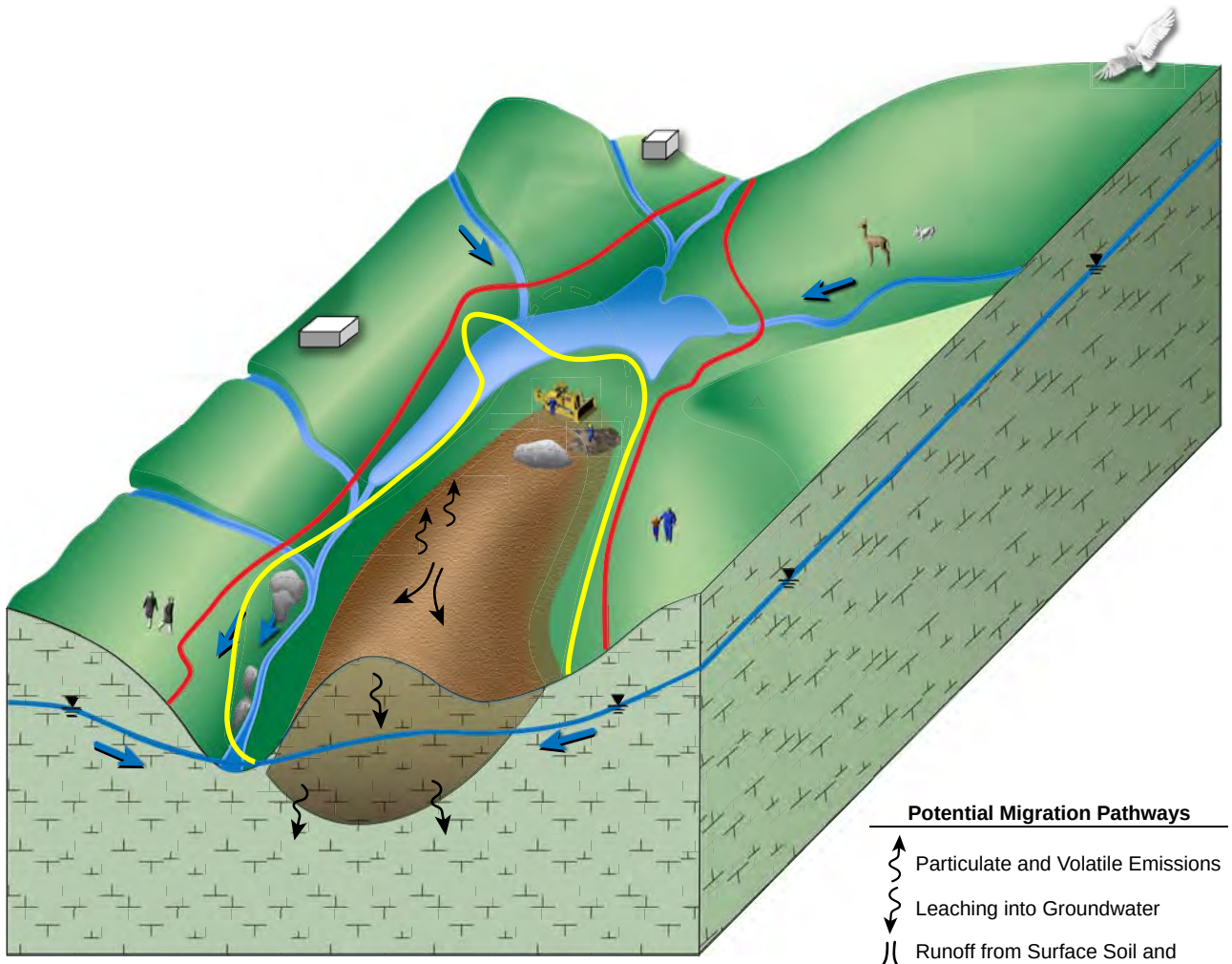
Cobalt

Cobalt is a naturally occurring element in soil. Elevated concentrations of cobalt in soil and groundwater may result from anthropogenic activities such as the application of cobalt-containing sludge or phosphate fertilizers to soil, the disposal of cobalt-containing wastes, and atmospheric deposition from activities such as the burning of fossil fuels and smelting and refining of metals. Cobalt adsorbs rapidly and strongly to soil and sediment in which it is retained by metal oxides, crystalline minerals, and natural organic matter. The mobility of cobalt depends on the nature of the soil or sediment; it increases with decreasing pH and redox potential and in the presence of chelating/complexing agents. Cobalt in water will sorb to particles and may settle into the sediment or be sorbed directly by sediment, or may precipitate out as carbonates and hydroxides or with mineral oxides (ATSDR, 2004).

5.5 Conceptual Site Model

A CSM for Site 66 was developed to present a three-dimensional representation of the waste material (i.e., source area), potential migration pathways, exposure routes, and receptors (Figure 5-1). The source of waste material at Site 66 is anthropogenic material, such as construction debris, metal scrap, lead flooring, scrap wood, asphalt, and

laboratory bottles; and ash. Constituents originating from these waste materials and ash can migrate through the environment through the following processes: leaching of constituents from waste material or ash as a result of infiltration of precipitation and subsequent downward migration to groundwater; leaching of constituents from waste material in direct contact with groundwater; and runoff of constituents from surface soil, surface waste material, or ash into surface water bodies. The potential receptors for current human health exposure scenarios are described in Section 6.3. The potential receptors for ecological exposure are described in Section 7.2.



Potential Migration Pathways

- Particulate and Volatile Emissions
- Leaching into Groundwater
- Runoff from Surface Soil and Waste Material

- General Groundwater & Surface Water Flow Direction
- Waste Consisting of Silt, Sand, Debris, & Ash-Like Material
- Silt, Clay, and Sand
- Ash Pile

- Site Boundary (Approximate Limit of Visible Waste Material)
- Approximate Limit of Fill
- Surface Water & Waterbodies
- Potentiometric Surface

N

Not to Scale

HUMAN RECEPTORS	
Current Human Health Exposure Scenarios	• Adult and adolescent trespassers/visitors exposed to constituents of potential concern (COPCs) in surface soil and ash through incidental ingestion, dermal contact, and inhalation of particulate and volatile emissions. • Adult and adolescent trespassers/visitors exposed to COPCs in sediment through incidental ingestion, and dermal contact.
Future Human Health Exposure Scenarios	• Industrial workers, construction workers, adult and child residents, and adult and adolescent trespassers/visitors exposed to COPCs in surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation of particulate and volatile emissions. • Adult and child residents exposed to COPCs in groundwater used as a potable supply through ingestion, dermal contact, and inhalation of volatiles while showering. • Construction workers exposed to COPCs in groundwater through dermal contact and inhalation of volatiles. • Industrial workers and adult and child residents exposed to COPCs in indoor air from vapor intrusion from groundwater through a future building foundation through inhalation. • Industrial workers, construction workers, adult and child residents, and adult and adolescent trespassers/visitors exposed to COPCs in sediment through incidental ingestion and dermal contact.
ECOLOGICAL RECEPTORS	
Current and Future Exposure Scenarios	• Soil invertebrates exposed to COPCs in the surface soil through dermal contact and ingestion. • Benthic invertebrates exposed to COPCs in the sediment through dermal contact and ingestion. • Upper trophic level receptors (i.e., carnivorous birds and mammals) exposed to COPCs accumulated in the tissues of soil invertebrates, benthic invertebrates, small mammals, amphibians, fish, or reptiles exposed to COPCs in site media.

FIGURE 5-1
Conceptual Site Model
Site 66 Remedial Investigation
NSF-IH, Indian Head, Maryland

SECTION 6

Baseline Human Health Risk Assessment

6.1 Scope of Risk Assessment

The baseline HHRA for Site 66 comprises the following components:

- **Identification of COPCs**—identifies and characterizes the distribution of COPCs found on the site. COPCs are the focus of the subsequent evaluation in the risk assessment.
- **Exposure Assessment**—identifies contaminated media and potential pathways by which exposure could occur, characterizes the potentially exposed populations (e.g., residents), and estimates the magnitude, frequency, and duration of exposures.
- **Toxicity Assessment**—identifies the types of adverse health effects associated with exposure to COPCs and summarizes the relationship between magnitude of exposure and occurrence of adverse health effects (toxicity factors).
- **Risk Characterization**—integrates the results of the exposure assessment and toxicity assessment to estimate the potential risks to human health. Both cancer and noncancer human health effects are evaluated.
- **Uncertainty Assessment**—identifies sources of uncertainty associated with the data, methodology, and the values used in the risk assessment.

These components are described in the following sections. The spreadsheets used to screen for COPCs, and calculate estimated exposures and health risks associated with the COPCs, are presented in Appendix G.

6.2 Identification of Chemicals of Potential Concern

The identification of COPCs includes data collection, data evaluation, and data screening steps. The data collection and evaluation steps involve gathering and reviewing the available site data and identifying a set of data that is of acceptable quality for the risk assessment. This data set is then further screened against concentrations that are protective of human health to reduce the data set to those chemicals and media of potential concern (the COPCs).

6.2.1 Data Selection and Evaluation

Section 2.2.2 summarizes the previous investigations at Site 66, and Section 3.1 summarizes the investigation activities conducted as part of this RI. Data collected during the RI and data collected during the SI in 2007 were evaluated in the risk assessment. All analytical results evaluated in the HHRA were fully validated (see Section 4.2 and Appendix E). The following bullets discuss how validated, qualified results were evaluated in the risk assessment:

- Data qualified with a J (estimated) were treated as detected concentrations.
- Data qualified with an R (rejected) were excluded from the risk assessment.
- Data qualified with a B (blank contamination) was used in the risk assessment as if they were not detected, and one-half the value was used as the sample concentration.
- Data qualified with an X (present but at an unknown concentration) were treated as non-detected concentrations and were excluded from the risk assessment.
- For duplicate samples, the higher of the two concentrations was used.
- Analytes for which no detected results are reported for a particular medium were not considered COPCs for that medium.

6.2.2 Data Summary

All of the data used in the risk assessment have been fully validated and are assumed to represent current conditions. Soil, sediment, ash, and groundwater data that were used in the HHRA are presented in this section. As described in the UFP-SAP (CH2M HILL, 2010), no surface water sampling was recommended for the Site 66 RI, and therefore, evaluation of surface water was not included in the risk assessment. This is because the risk assessment for Site 11 did not identify any surface water issues, and no buildings were identified in the area between Site 66 and Site 11 that might contribute additional contamination to the area downstream of Site 66. For each medium, chemical-specific summary statistics are included in Appendix C of the UFP-SAP.

Soil

Twenty co-located surface soil and subsurface soil samples were collected during the RI from locations outside the current site boundary to supplement the soil data collected from locations within the site boundary during the SI. The sample locations were chosen to provide an even distribution of samples across and outside of the site boundary where samples were not previously collected. In addition, four surface soil samples were collected from locations within the current site boundary to augment the human health and ecological risk data set. The surface soil samples collected during the RI were analyzed for VOCs, SVOCs, pesticides, PCBs, metals, dioxins/ furans, and explosives (including nitroglycerin, nitroguanidine, and perchlorate). The soil samples collected during the SI were analyzed for the same constituents, with the exception of dioxins/furans, which were not analyzed in the SI soil samples. Soil sample locations are shown on Figure 3-1.

Table 6-1 summarizes each soil sample and the corresponding analysis. Analytical results for the soil samples are summarized in Tables 4-4 and 4-5 and Appendix F.

Ash

Six samples from various locations were collected during the RI from the ash-like material at Site 66 to supplement the three samples collected during the SI. Three of the RI samples were collected from the locations sampled during the SI and were analyzed for TAL metals (the SI ash samples were analyzed for dioxins and furans). Three additional samples were collected from ash material and analyzed for dioxins, furans, and TAL metals. Ash sample locations are shown on Figure 3-1.

Table 6-1 summarizes the ash samples analyzed in the risk assessment. Analytical results for the ash samples are summarized in Table 4-8 and Appendix F.

Groundwater

Five monitoring wells were installed during the RI at locations based on site hydrogeology and *in situ* groundwater analytical results from the SI (CH2M HILL, 2008). One well was installed hydrogeologically upgradient of the site, two wells within the current site boundary, and two wells hydrogeologically downgradient of the site. Groundwater samples were collected from the monitoring wells and analyzed for VOCs, SVOCs, pesticides, PCBs, metals, dioxins/ furans, and explosives. Monitoring well locations are shown on Figure 3-1.

Table 6-1 summarizes the groundwater samples evaluated in the risk assessment and the corresponding laboratory analysis. The hydrogeologically upgradient well was not included in the data set evaluated in the risk assessment, but was used to represent site-specific background concentrations for the site. Likewise, only monitoring well data obtained during the RI was used in the HHRA analysis. Analytical results for the groundwater samples are summarized in Table 4-6 and Appendix F.

Sediment

Ten sediment samples were collected from within and downstream of the current site boundary to supplement the sediment data collected during the SI (4 sediment samples). Six sediment samples were collected from the unnamed creek within the current site boundary, and four sediment samples were collected from the unnamed creek from locations between the southern boundary of Site 66 and the northern boundary of Site 11. The sediment samples collected during the RI were analyzed for VOCs, SVOCs, pesticides, PCBs, metals, dioxins/furans, and explosives. The sediment samples collected during the SI were analyzed for the same constituents, with the

exception of dioxins/furans, which were not analyzed in the SI sediment samples. The sample locations are shown on Figure 3-1.

Table 6-1 summarizes the sediment samples analyzed in the risk assessment. Analytical results for the sediment samples are summarized in Table 4-7 and Appendix F.

6.2.3 Selection of Chemicals of Potential Concern

All of the detected constituents were screened following the procedures described below. The selection of COPCs was based on the criteria presented in the USEPA *Region III Technical Guidance Manual, Selection Exposure Routes and Contaminants of Concern by Risk-Based Screening* (USEPA, 1993b) and Risk Assessment Guidance for Superfund (RAGS) Part D (USEPA, 2001a).

The maximum detected concentration of each constituent for each medium was compared to the criteria discussed below to select the COPCs. If the maximum concentration exceeded the criteria, the constituent was identified as a COPC. Constituents that were not detected in any of the samples or were detected at concentrations less than the criteria were not retained as COPCs. Detection limits for constituents that were not detected were also compared to the screening levels as discussed in Section 6.6, the uncertainty assessment.

- **Comparison with Health-based Criteria for Surface Soil and Soil (combined surface and subsurface soil):** The maximum detected constituent concentrations in soil were compared to USEPA residential soil regional screening levels (RSLs) (USEPA, 2010a). RSLs based on noncarcinogenic effects were divided by 10 to account for exposure to multiple constituents that affect the same target organ (e.g., kidney). RSLs based on carcinogenic effects were used as presented in the RSL table. Lead concentrations in soil were compared to the USEPA residential child lead soil screening value of 400 mg/kg (USEPA, 1994b). Screening for dioxin/furan congeners was performed using the dioxin TEQ, calculated as discussed in Section 6.3.3.
- **Comparison with Health-based Criteria for Ash:** The maximum detected constituent concentrations in ash were compared to USEPA residential soil RSLs (USEPA, 2010a). RSLs based on noncarcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table. Lead concentrations in soil were compared to the USEPA residential child lead soil screening value of 400 mg/kg (USEPA, 1994b). Screening for dioxin/furan congeners was performed using the dioxin TEQ concentration, calculated as discussed in Section 6.3.3.
- **Comparison with Health-based Criteria for Volatile and Fugitive Dust Emissions from Soil and Ash:** The maximum detected concentrations in soil and ash were used to model the maximum potential air concentrations. Fugitive emissions from soil and ash were estimated using the particulate emission factor approach presented in USEPA's Soil Screening Guidance (USEPA, 1996a). Volatile emissions from soil were estimated using a calculated volatilization factor (USEPA, 1996b). The modeled ambient air concentrations were compared to USEPA ambient air RSLs (USEPA, 2010a).
- **Comparison with Health-Based Criteria for Sediment:** Sediment data were compared to 10 times the USEPA residential soil RSLs (USEPA, 2010a). This was done following USEPA Region III guidance because exposure to sediment is expected to be significantly less than exposure to soil, and there are no human health screening levels specifically for sediment. RSLs based on noncarcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were not adjusted. Therefore, RSLs based on noncarcinogenic effects were used as presented in the RSL table (10 times the residential soil RSL divided by 10), and RSLs based on carcinogenic effects were multiplied by 10. Lead concentrations in sediment were compared to the USEPA residential child lead soil screening value of 400 mg/kg (USEPA, 1994b). Screening for dioxin/furan congeners was performed using the dioxin TEQ concentration, calculated as discussed in Section 6.3.3.
- **Comparison with Health-Based Criteria for Groundwater:** Groundwater data were compared to the USEPA tap water RSLs (USEPA, 2010a). RSLs that are based on noncarcinogenic effects were divided by 10 to account for exposure to multiple constituents. RSLs based on carcinogenic effects were used as presented in the RSL table. Lead concentrations in groundwater were compared to the federal action level for drinking water of

15 μg/L (USEPA, 2002a). Screening for dioxin/furan congeners was performed using the dioxin TEQ concentration, calculated as discussed in Section 6.3.3.

- **Comparison with Health-based Criteria for Vapor Intrusion from Groundwater to Indoor Air:** Groundwater risk-based screening levels protective of the vapor intrusion exposure pathway were calculated using the methodology described in Appendix D of the *OSWER Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)* (USEPA 2002b). The groundwater risk-based screening levels were calculated for noncarcinogenic and carcinogenic endpoints, and for constituents with both, the lower value was selected as the screening level. Additionally, if the constituent has a maximum contaminant level (MCL), the MCL was selected as the screening level if it was greater than the calculated risk-based screening level. The screening levels are calculated in Appendix G, Tables 2.10 A and 2.10 B.
- **Essential Human Nutrients:** Constituents that are considered essential nutrients, present at low concentrations (i.e., only slightly elevated above naturally occurring levels), and toxic only at very high doses were eliminated from the quantitative risk analysis. These constituents are calcium, magnesium, potassium, and sodium. Although iron and manganese are also considered essential nutrients and are only toxic at very high doses, they were included in the HHRA because toxicity values are available.

A few of the constituents detected at the site do not have RSLs included in the RSL table (USEPA, 2010a). Appropriate surrogate constituents were selected and their RSLs were used for the screening, as identified in the Table 2 series included in Appendix G.

6.2.4 Chemicals of Potential Concern

Table 6-2 identifies the chemicals that were selected as COPCs based on the above screening methodology for soil, ash, sediment, and groundwater. Details of the screening process are shown in the screening tables, Tables 2.1 through 2.10, in Appendix G. The COPCs for soil are primarily PAHs and metals, along with dioxins/furans and pesticides. Naphthalene and chromium were retained as COPCs for the inhalation of volatile and fugitive emissions from surface soil and combined surface and subsurface soil. For sediment, two PAHs and three metals were retained as COPCs. The COPCs for ash were seven metals. The COPCs for groundwater were metals, heptachlor, and naphthalene.

6.3 Exposure Assessment

Exposure refers to the potential contact of an individual with a chemical. The exposure assessment identifies pathways and routes by which an individual may be exposed to the COPCs and estimates the magnitude, frequency, and duration of potential exposure. Contaminant fate and transport is evaluated in Section 5, which discusses the potential release mechanisms at the site. A conceptual exposure model showing potential exposure scenarios identified under current and potential future conditions is presented in Figure 6-1. The following subsections discuss the three components of exposure assessment:

- Characterization of exposure setting
- Identification of exposure pathways
- Quantification of exposure

6.3.1 Characterization of Exposure Setting

Characterizing an exposure setting consists of two parts: (1) identifying the physical characteristics of the site as they relate to exposure, and (2) characterizing human populations on or near the site.

Basic facility characteristics such as physical setting, climate, and groundwater hydrology were summarized in Section 2.

Potentially exposed populations are identified based on their locations relative to the site, their activity patterns, and the presence of potentially sensitive subpopulations.

Current Land Use

The Turkey Run Disposal Area, Site 66, is located on the southern portion of the main installation. The site was used as an unregulated dump site and contains various solid wastes, including ash, construction debris, metal scrap, lead flooring, scrap wood, asphalt, and laboratory bottles. The approximately 8.2-acre site was defined during SI activities in 2007 as an area where wastes were observed on the land surface.

Since access to Site 66 is not restricted, adult and adolescent trespassers/visitors could access the site and contact the surface soil, ash, and sediment across the site. The site is not currently in use. However, Building 1440, located at the downgradient site boundary, was once authorized as a PCB storage facility. Bldg 1440 demolition and associated confirmatory sampling is planned under a separate project.

Potential Future Land Use

As the site is currently an inactive dump site, potential future site use will likely stay the same and it is unlikely it will be developed for future industrial or residential uses. However, for a conservative evaluation of potential future risks, residential and industrial uses were evaluated as potential future site uses.

The potential future uses of the site assume that the subsurface soil will be excavated and placed on the ground surface. Therefore, future exposure to soil includes exposure to combined surface and subsurface soil. It was assumed a future trespasser (adult and adolescent) might be exposed to this soil, as well as ash. And although unlikely, it was assumed the site could be used for future residential development, and future residents could contact site surface and subsurface soil and ash, or the site could be used for future industrial use, and the future industrial workers could be exposed to the site surface and subsurface soil and ash. Future excavation or construction activities at the site may also expose construction workers to the soil and ash.

Shallow groundwater is not anticipated to be used as a future potable water supply at the base. However, the groundwater data from the site was used as a conservative assessment of groundwater quality for the future residential exposure scenario. Additionally, future construction or excavation activities at the site could result in construction worker exposure to the groundwater.

Industrial workers and adult and child residents could be exposed to COPCs in indoor air in future industrial or residential buildings from vapor intrusion from groundwater through a future building foundation. However, the screening for this pathway indicated there are no COPCs for vapor intrusion from groundwater to indoor air.

Industrial workers, construction workers, adult and child residents, and adult and adolescent trespassers/visitors could be exposed to COPCs in sediment through contact with the sediment in the unnamed creek.

6.3.2 Identification of Exposure Pathways

An exposure pathway can be described as a mechanism that moves a COPC from its source to an exposed population or individual, referred to as a receptor. An exposure pathway must be complete or exposure cannot occur. A complete exposure pathway has five elements:

- Source (e.g., chemical residues in soil)
- Mechanism for release and migration of chemical (e.g., runoff, leaching)
- Environmental transport medium (e.g., soil, groundwater)
- Point or site of potential human contact (exposure point, e.g., contact with soil)
- Route of intake (e.g., incidental ingestion of soil)

All five elements must be present for a pathway to be considered complete. If one or more elements are not present, then the pathway is incomplete and there is no possibility of exposure. The following subsections discuss the elements as they pertain to Site 66.

Contaminant Sources

Sources at Site 66 include disposed anthropogenic material, such as construction debris, metal scrap, lead flooring, scrap wood, asphalt, laboratory bottles, and ash at the site.

Release and Transport Mechanisms

The fate and transport of chemicals in soil, ash, groundwater, and sediment are determined by physical characteristics of the site as well as by the chemical and physical properties of the constituents. A detailed description of the fate and transport of site-related constituents is presented in Section 5 of this report.

The primary transport mechanisms from sources at Site 66 appear to be leaching of constituents from waste material or ash as a result of infiltration of precipitation and subsequent downward migration to groundwater, leaching of constituents from waste material in direct contact with groundwater, particulate and volatile emissions from waste material and soil, and runoff of constituents from surface soil, surface waste material, or ash into nearby surface water bodies and accumulation in the sediment.

Potential Exposure Points and Exposure Routes

Exposure points are locations where humans could come in contact with contamination. On-site exposure points include surface soil, soil (combined surface and subsurface soil), ash, sediment, and groundwater.

Potential exposure routes are evaluated for current and potential future site use. Existing and potential exposure pathways are illustrated in the conceptual exposure model (Figure 6-1). Exposure scenarios and potentially complete pathways of exposure evaluated in this risk assessment are identified in Table 1, Appendix G.

Current Exposure Routes

The only contaminated media currently accessible at the site are surface soil, ash, and sediment. Based on current site use, potential receptors for these media are adult and adolescent trespassers/visitors. These receptors may be exposed to the surface soil and ash through incidental ingestion, dermal contact, and inhalation of particulate and volatile emissions, and to the sediment through incidental ingestion and dermal contact.

Future Exposure Routes

The potential future use of the site was discussed in Section 6.3.1.2. Potential future receptors include construction workers (exposed to combined surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation, sediment through incidental ingestion and dermal contact, and groundwater through dermal absorption and inhalation), industrial workers (exposed to soil and ash through incidental ingestion, dermal contact, and inhalation, and sediment through ingestion and dermal contact), and adult and adolescent trespassers/visitors (soil and ash through incidental ingestion, dermal contact, and inhalation, sediment through incidental ingestion and dermal contact). The potential future exposure scenario assumes that the subsurface soil will be excavated, mixed with the surface soil, and placed on the ground surface. Additionally, a future residential child and adult (exposed to soil and ash through incidental ingestion, dermal contact, and inhalation, sediment through incidental ingestion and inhalation, and groundwater through incidental ingestion, dermal contact, and inhalation) was conservatively included to evaluate an unrestricted use scenario.

6.3.3 Quantification of Exposure

Exposure is quantified by estimating the exposure point concentrations (EPCs) and chemical intake by the receptors for both reasonable maximum exposure (RME) and central tendency exposure (CTE) scenarios. CTE scenarios were only evaluated when the RME scenario hazards and/or risks exceeded acceptable risk levels (see Section 6.5).

Exposure Point Concentrations

EPCs are estimated constituent concentrations that a receptor may contact and are specific to each exposure medium. EPCs may be directly measured or estimated using environmental fate and transport models. Constituent concentrations in soil, ash, sediment, and groundwater were measured for this assessment. Fate and transport modeling conducted for risk assessment included estimating fugitive dust and volatile emissions from soil for the COPC screening process following the methods in USEPA's Soil Screening Guidance Document (USEPA, 2002c), as shown in Tables 2.2, 2.2A, 2.4, 2.7 and 2.7.A Appendix G.

Two COPCs (naphthalene and chromium) were retained for inhalation of volatile and fugitive emissions from surface soil and combined surface and subsurface soil. The same fate and transport modeling used for the COPC screening was used to estimate the EPCs in air for these two COPCs.

One COPC (naphthalene) was retained for groundwater for inhalation while showering and for volatilization from an excavation pit.

The RME EPCs were calculated as the 95 percent upper confidence limit (95 percent UCL) of the arithmetic mean concentration. ProUCL software Version 4.00.05 (USEPA, 2010b) was used to determine the distribution that the data fit and to calculate the 95 percent UCLs used as the RME and CTE EPCs. ProUCL identifies three possible data distributions: normal distribution, log-normal distribution, and gamma distribution. The 95 percent UCL calculation method is then selected based on the data distribution (normal, lognormal, gamma, or nonparametric if the data do not fit any of the distributions). The recommendations outlined in the ProUCL software documentation were followed to select the appropriate 95 percent UCL to use as the EPC (USEPA, 2010c). The maximum detected concentration was used as the EPC in cases where the estimated 95 percent UCL was greater than the maximum detected concentration or less than five samples were available for the data set (i.e., the groundwater).

The data qualifiers were handled as discussed in Section 6.2.1 to calculate the EPCs. The EPCs are included in Appendix G, Tables 3.1 through 3.9.

Dioxin/Furan Congeners

The TEQ approach was used to calculate the EPCs for the dioxin/furan congeners. TEQ concentrations for the dioxin/furan congeners were calculated for each sample in accordance with the World Health Organization toxicity equivalency factor (TEF) approach (Van den Berg et al., 2006; USEPA, 2010d) to adjust the relative carcinogenic potency of specific dioxin/furan congeners, relative to 2,3,7,8-TCDD, the most potent dioxin congener. The EPCs were calculated using only the dioxin/furan congeners detected in each sample. Non-detected congeners, X-flagged congeners, and B-flagged congeners were not included in the sample sums discussed below.

Using the measured concentration values for each congener and the TEF for that congener, the dioxin TEQ concentration for a mixture of dioxin/furan congeners in a specific sample was calculated as follows:

$$\textit{Dioxin TEQ Concentration} = \Sigma\ (TEFi \times Ci)$$

where:

Dioxin TEQ = 2,3,7,8-TCDD toxicity equivalent concentration (mg/kg)

TEFi = Toxicity equivalency factor for congener "i" (unitless)

Ci = Concentration of congener "i" (mg/kg)

The TEFs used to calculate the dioxin TEQ concentrations and the TEQ concentration calculations are included in Appendix G, Tables 2.1.A, 2.3.A, 2.5.A, 2.6.A, and 2.8.A.

Estimation of Chemical Intakes for Individual Pathways

Chemical intake is the amount of a chemical contaminant entering the receptor's body. Chemical intakes for the ingestion and dermal pathways are generally expressed as follows:

$$I = \frac{C\ x\ CR\ x\ EF\ x\ ED}{BW\ x\ AT}\ \textit{(mg/kg/day)}$$

Where:

I = intake (mg/kg-day)

C = chemical concentration at exposure point (mg/L, mg/kg, mg/m^3)

CR = contact rate, or amount of contaminated medium contacted per unit time or event (L/day, mg/event, m^3/day)

EF = exposure frequency (days/year)

ED = exposure duration (years)

BW = body weight of exposed individual (kg)

AT = averaging time, or period over which exposure is averaged (days)

For the dermal pathway, the contact rate usually incorporates the skin surface area in contact with the exposure medium, and an absorption factor. The intake equation for the dermal exposure pathway is shown in the Appendix G, Table 4 series.

Chemical exposure estimates for the inhalation pathway are generally expressed as follows:

$$EC = \frac{Ca \times ET \times EF \times ED \times CF}{AT}$$

Where:

EC = exposure concentration (mg/m^3)

Ca = chemical concentration in air (mg/m^3)

ET = exposure time (hours/day)

EF = exposure frequency (days/year)

ED = exposure duration (years)

CF = conversion factor (day/24 hours)

AT = averaging time (days)

The intake and exposure equations require exposure parameters that are specific to each exposure pathway. Many of the exposure parameters have default values, which were used for this assessment. These assumptions, based on estimates of body weights, media intake levels, and exposure frequencies and duration, are provided in USEPA guidance. Other assumptions (e.g., for the visitor/trespasser scenarios) require consideration of location-specific information and were determined using professional judgment. Appendix G, Tables 4.1.RME through 4.10.RME present the RME exposure factors that were used for the exposure scenarios that were evaluated in the risk assessment. RME scenario exposure parameters were compiled for all scenarios; CTE parameters were compiled only for scenarios where the RME risk for an environmental medium is greater than the acceptable noncarcinogenic hazard or carcinogenic risk levels (target organ-specific hazard index (HI) >1, and excess lifetime cancer risk (ELCR) $>1 \times 10^{-4}$).

For residential exposure, lifetime age-adjusted intakes were calculated for carcinogenic COPCs. Age-adjusted exposure factors were calculated using the equations presented in the USEPA RSLs (USEPA, 2010a) and shown in Tables 4.6.RME through 4.10.RME in Appendix G.

The dermal exposure model presented in USEPA's dermal exposure assessment guidance (USEPA, 2004) was used to estimate dermal exposure to groundwater. The values for parameters used in this model (i.e., permeability constant) were obtained from this guidance document and are included in the RAGS Part D Table 4 (USEPA, 2001a) series in Appendix G. The dermal exposure method for soil (USEPA, 2004) was used to estimate dermal exposure to soil. This method includes the use of a chemical-specific dermal absorption factor (DABS). The DABS values used in the risk calculations were obtained from USEPA 2004a and include a DABS of 0.13 for the PAHs, a DABS of 0.03 for 2,3,7,8 TCDD, a DABS of 0.03 for arsenic, a DABS of 0.01 for other metals, and a DABS of 0.1 for the SVOCs.

6.4 Toxicity Assessment

Toxicity assessment defines the relationship between the magnitude of exposure and possible severity of adverse effects, and weighs the quality of available toxicological evidence. Toxicity assessment generally consists of two steps: hazard identification and dose-response assessment. Hazard identification is the process of determining the potential adverse effects from exposure to the chemical along with the type of health effect involved. Dose-response assessment is the process of quantitatively evaluating the toxicity information and characterizing the relationship between the dose of the contaminant administered or received and the incidence of adverse health effects in the exposed population. Toxicity criteria (e.g., reference doses [RfDs], inhalation reference concentrations [RfCs], cancer slope factors [CSFs], and inhalation unit risk factors [IURs]) are derived from the dose-response relationship.

USEPA recommends that a tiered approach be used to obtain the toxicity values (RfDs, RfCs, CSFs, and IURs) that are used to estimate noncarcinogenic hazards and carcinogenic risks (USEPA, 2003a). The hierarchy of toxicity value sources is the following:

1. Integrated Risk Information System (IRIS) (USEPA, 2010e)
2. Provisional Peer-Reviewed Toxicity Values (PPRTV)
3. Other USEPA and non-USEPA sources, including the National Center for Environmental Assessment, ATSDR, Health Effects Assessment Summary Tables, California EPA, and USEPA's Office of Water

The use in an HHRA of toxicity values from sources other than IRIS increases the uncertainty of the quantitative risk estimates. Some of the COPCs elicit both systemic (noncarcinogenic) toxic effects and cancer (carcinogenic) effects. Because of this, these constituents are evaluated as both noncarcinogens and carcinogens. The health risks for carcinogenic and noncarcinogenic effects were estimated separately based on different toxicity values.

Chromium is a COPC for soil, ash, and sediment. It was assumed that all of the chromium detected in these media is hexavalent chromium, or Cr(VI), both for determining if chromium was a COPC (comparing the total chromium concentrations to the Cr(VI) RSLs) and for calculating the risks associated with exposure to chromium in these media. Cr(VI) is unstable in the body (in biological tissues) and is ultimately reduced to trivalent chromium, or Cr(III), by a variety of reducing agents, including ascorbate and glutathione (ATSDR, 2008; USEPA, 2010e). However, the Cr(VI) toxicity values were used to evaluate the risks associated with chromium in all media. An RfD and RfC for Cr(VI) are available in IRIS; however, IRIS does not include a CSF or IUR for CR(VI). The CSF for CR(VI) used in the HHRA is the same one included on the RSL table (USEPA, 2010a).

Although laboratory glassware has been observed at the site, no mercury beads (elemental mercury) have been observed. Therefore, the detected mercury concentrations were screened against inorganic mercury RSL for the COPC selection, and potential hazards associated with exposure to mercury were evaluated using the inorganic mercury toxicity values.

6.4.1 Toxicity Information for Noncarcinogenic Effects

Noncarcinogenic health effects include a variety of toxic effects on body systems, ranging from toxicity to the kidneys to central nervous system disorders. Noncarcinogenic health effects are grouped into two basic categories: acute toxicity and chronic toxicity. Acute toxicity can occur after a single exposure (usually at high doses), and the effect is most often seen immediately. Chronic toxicity generally occurs after repeated exposure (usually at low doses) and is seen weeks, months, or years after the initial exposure. The toxicity of a chemical is assessed through a review of toxic effects noted in short-term (acute) animal studies, long-term (chronic) animal studies, and epidemiological investigations.

USEPA (1989a) defines the chronic RfD (or RfC) as a dose that is likely to be without appreciable risk of deleterious effects during a lifetime of exposure. Chronic RfDs and RfCs are specifically developed to be protective for long-term exposure to a compound (for example, 7 years to a lifetime), and consider uncertainty in the toxicological database and sensitive receptors. Chronic RfDs and RfCs may be overly protective if used to evaluate the potential

for adverse health effects resulting from short-term exposure. USEPA's National Center for Environmental Assessment develops subchronic RfDs and RfCs for short-term exposure (2 weeks to 7 years). Subchronic RfDs and RfCs have been peer-reviewed by USEPA and outside reviewers, but they have not undergone verification by an intra-USEPA workgroup, and as a result are considered interim rather than verified toxicity values. Subchronic RfDs and RfCs were used for the construction worker scenario because the exposure duration is 1 year. Chronic RfDs and RfCs were used to evaluate the noncarcinogenic hazards to all other receptors evaluated in the risk assessment.

In the development of RfDs, all available studies examining the toxicity of a chemical following exposure are considered based on their scientific merit. The lowest dose level at which an observed toxic effect is occurring is identified as the lowest observed adverse effect level (LOAEL) and the dose at which no effect is observed is identified as the no observed adverse effect level (NOAEL). Several uncertainty factors (UFs) may be applied to account for uncertainties such as limited data, extrapolation of data from animal studies to human exposures, or the use of subchronic studies to develop chronic criteria. These UFs range between 10 to 10,000, and are based on professional judgment. Therefore, there are varying degrees of uncertainty in the toxicity criteria.

USEPA-derived oral RfDs and inhalation RfCs, and associated UFs and modifying factors for the COPCs are listed in Tables 5.1 and 5.2 in Appendix G.

Following USEPA guidance, oral RfDs were adjusted from administered doses to absorbed doses (dermal) to evaluate dermal toxicity. When appropriate, the RfDs were adjusted using oral absorption factors (USEPA, 2004). This adjustment is shown in Table 5.1 in Appendix G.

6.4.2 Toxicity Information for Carcinogenic Effects

Potential carcinogenic effects are quantified using oral CSFs or IURs that convert estimated exposure directly to incremental lifetime carcinogenic risks.

CSFs may be derived from the results of chronic animal bioassays, human epidemiological studies, or both. Animal bioassays are usually conducted at dose levels that are much higher than are likely to be encountered in the environment. This study design detects possible adverse effects in the relatively small test populations used in the studies. The actual risks from exposure to a potential carcinogen are not likely to exceed the estimated risks and are probably much lower or even zero. USEPA-derived CSFs and IURs are listed in Tables 6.1 and 6.2 in Appendix G. In accordance with USEPA guidance, oral CSFs were adjusted from administered doses to absorbed doses to evaluate dermal toxicity. When appropriate, the CSFs were adjusted using oral absorption factors from USEPA (2004). The adjusted dermal CSFs are summarized in Table 6.1 in Appendix G.

6.4.3 Approach for Potential Mutagenic Effects

For COPCs that act via a mutagenic mode of action (MMOA), carcinogenic risks were estimated using age-dependent adjustment factors (ADAFs), as is consistent with cancer guidelines and supplemental guidance (USEPA, 2005a, b). Consistent with the Superfund guidance on MMOA (http://www.epa.gov/oswer/riskassessment/sghandbook/chemicals.htm), the carcinogenic PAHs are considered to act via an MMOA. Additionally, chromium is also categorized as a chemical with an MMOA (McCarroll et al., 2010). The calculation of carcinogenic risk using ADAFs is presented in Tables 7.5.RME , 7.5.RME Supplement A, 7.3.CTE, and 7.3.CTE Supplement A in Appendix G. As chemical-specific data are not available for the carcinogenic PAHs or chromium, default ADAFs, as included in the USEPA Region III memorandum *Derivation of RBCs* (risk-based concentrations) *for Carcinogens That Act via a Mutagenic Mode of Action and Incorporate Default ADAFs* (USEPA, 2006a), were used for the MMOA evaluation. The default ADAFs used to adjust the CSFs are 10 for 0-2 year olds, 3 for 2-6 year olds, 3 used for 6-12 year olds, and 1 for 16-30 year olds. The CSF was multiplied by the appropriate ADAF to derive the age-specific CSF for a receptor to calculate the total carcinogenic risk. Additionally, the exposure factors for children 0–2 years old and 2–6 years old were assumed to be the same as the parameters for a child 0–6 years old, with the exception of the exposure duration, which was instead 2 years and 4 years, respectively. The exposure factors for the adult residential receptor were used for residents 6–16 years old and 16–30 years old, with the exception of the exposure durations, which were 10 years and 14 years, respectively. For the adolescent

receptors, the exposure factors for the adolescents 12-16 years old and 16-18 years old were assumed to be the same as the parameters for an adolescent 12-18 years old, with the exception of the exposure duration, which was 4 years and 2 years, respectively.

6.4.4 Chemicals for Which no USEPA Toxicity Values Are Available

Most of the constituents detected at Site 66 have toxicity factors and USEPA RSLs. Detected constituents that did not have RSLs were compared to RSLs for appropriate surrogate constituents during the COPC selection process. Surrogates were selected based on previous recommendations from USEPA Region III. The surrogates are identified in the RAGS Table 2 series in Appendix G. Lead, which does not have an RSL or applicable surrogate, is evaluated by USEPA based on blood-lead uptake using a physiologically based pharmakokinetic model called the Integrated Exposure Uptake Biokinetic (IEUBK) Model (see Section 6.5). As a screening tool, lead is screened at 400 mg/kg in soil (and ash and sediment), and 15 μg/L in groundwater based on residential exposure.

6.5 Risk Characterization

Risk characterization combines the results of the previous elements of the risk assessment to evaluate the potential health risks associated with exposure to the COPCs. The calculated risk is then used as an integral component in remedial decision-making.

6.5.1 Risk Estimation Methods

Potential human health risks are discussed independently for carcinogenic and noncarcinogenic effects because of the different toxicological endpoints, relevant exposure duration, and methods used to characterize risk.

Noncarcinogenic Risk Estimation

Noncarcinogenic health risks are estimated by comparing the calculated exposures to RfDs (or RfCs). The calculated intake divided by the RfD (or exposure concentration divided by the RfC) is equal to the hazard quotient (HQ):

Hazard Quotient (HQ) = Intake / RfD or Exposure Concentration/RfC
HQ = Intake / RfD or *Exposure Concentration / RfC*

The intake and RfD (or exposure concentration and RfC) represent the same exposure period (i.e., chronic or subchronic) and the same exposure route, (i.e., oral intakes are divided by oral RfDs, inhalation exposure concentrations are divided by the inhalation RfCs). An HQ that exceeds one (i.e., intake exceeds the RfD) indicates that there is a potential for adverse health effects associated with exposure to that constituent.

To assess the potential for noncarcinogenic health effects posed by exposure to multiple chemicals and multiple exposure pathways, an HI approach is used (USEPA, 1986). This approach assumes that noncarcinogenic hazards associated with exposure to more than one chemical and pathway are additive (HI = sum of the HQs). Synergistic or antagonistic interactions between chemicals are not considered. The HI may exceed one even if all of the individual HQs are less than one. If the HI is greater than 1, separate HIs are estimated for each target organ to assess whether the HI for a specific target organ is greater than 1. A target-organ-specific HI greater than 1 indicates that there is some potential for adverse noncarcinogenic health effects associated with exposure to the COPCs, possibly warranting remedial action. If the HI for each target organ does not exceed 1, noncarcinogenic hazards are not expected.

Carcinogenic Risk Estimation

The potential for carcinogenic effects due to exposure to site-related contamination is evaluated by estimating the ELCR, which is the incremental increase in the probability of developing cancer during one's lifetime in addition to the background probability of developing cancer associated with exposure to all non-site-related carcinogens.

The carcinogenic risk is calculated by multiplying the intake by the CSF (or exposure concentration) by the IUR.

ELCR = Intake × CSF or Exposure Concentration x IUR

The combined risk from exposure to multiple chemicals at a site was evaluated by adding the risks from individual chemicals. Risks were also added across the pathways, if an individual would be exposed through multiple pathways.

When a cumulative carcinogenic risk to an individual receptor under the assumed RME exposure conditions at the site exceeds 100 in a million (10^{-4} ELCR), CERCLA generally requires remedial action to reduce risks at the site (USEPA, 1991). If the cumulative risk is less than 10^{-4}, action generally is not required, but may be warranted if a risk-based chemical-specific standard, for example, MCL, is exceeded. A risk-based remedial decision could be superseded by the presence of an environmental impact requiring action at the site.

Lead

Lead concentrations less than 400 mg/kg in soil, ash, and sediment (USEPA, 1994b) and less than 0.015 mg/L in groundwater (the Safe Drinking Water Act action level for lead in potable water) are considered adequately protective of human health under residential land-use conditions. Lead was retained as a COPC when exceeding the residential values. Lead was identified as a COPC for combined surface and subsurface soil. Lead does not have available published toxicity factors, and therefore potential risks associated with lead are evaluated differently than the other COPCs. The toxicity of lead is evaluated by USEPA based on blood-lead uptake using a physiologically based pharmacokinetic model called the IEUBK model.

The IEUBK model is used to evaluate lead exposure to children. An interim approach to assessing risks associated with adult exposures to lead was developed by USEPA's Technical Review Workgroup for Lead (USEPA, 2003b) and updated in 2005 (USEPA, 2005c). This methodology is a variation of the IEUBK model. The adult lead methodology (ALM) is used to evaluate risks associated with nonresidential adult exposures to lead in soil. The model focuses on estimating fetal blood concentrations in women exposed to lead in soil (USEPA, 2003b). It was used in this risk evaluation to be protective of potentially sensitive receptors within the industrial worker population and construction worker population that may be exposed to soil. Because the lead model is a probabilistic model, several of the USEPA default parameters are based on CTE (i.e., average) values (USEPA, 2003b). Therefore, the arithmetic mean of the combined surface and subsurface soil concentration served as the input value for the soil concentration.

The exposure parameters used in the ALM for ingestion and exposure frequency are the same as those that were used to evaluate direct contact with soil by the industrial worker and construction worker. The soil ingestion rate of 100 mg/day and exposure frequency of 250 days/year was assumed for the adult industrial worker. For the construction worker, a soil ingestion rate of 480 mg/day and an exposure frequency of 125 days/year were used.

The ALM uses different sets of geometric standard deviations (GSDs) and baseline blood lead levels based on different studies. The GSD is a measure of the inter-individual variability in blood lead concentrations in a population whose members are exposed to the same nonresidential environmental lead levels. The baseline blood lead concentration is intended to represent the best estimate of a reasonable central value of blood lead concentrations in women of child-bearing age that are not exposed to lead-contaminated nonresidential soil or dust at the site (USEPA, 2003b). In this analysis, geometric means were used.

ALM spreadsheets provided by USEPA (version date June 21, 2009) were used to calculate blood lead concentrations for the industrial worker. The model results are expressed as the predicted geometric mean blood lead level for adults (i.e., women of child-bearing age) and the corresponding 95th percentile fetal blood lead concentrations and the percent of the population potentially experiencing concentrations above 10 micrograms per deciliter (µg/dL), below which adverse manifestations are not expected.

The potential risks associated with residential/recreational exposures to lead are addressed using the IEUBK Lead Model for Windows, Version 1.1, Build 11 (USEPA, 1994c, 2010f). The IEUBK model was designed to provide predictions of the probability of elevated blood lead levels for children. This model addresses three components of environmental risk assessments: the multimedia nature of exposures to lead, lead pharmacokinetics, and significant variability in exposure and risk, through estimation of probability distributions of blood lead levels for children exposed to similar environmental concentrations. The arithmetic mean of the lead concentration in soil was used with the default input parameters to represent site-specific exposures to lead.

6.5.2 Risk Assessment Results

The results of the risk characterization are presented below by receptor group. A summary of the RME results is shown in Table 6-4 and a summary of the CTE results is shown in Table 6-5 for the CTEs. CTE risks were calculated when the RME hazards exceeded 1 or the carcinogenic risks exceeded 10^{-4}.

The noncarcinogenic hazards and carcinogenic risks are calculated in Appendix G, Tables 7.1.RME through 7.9.RME, and 7.1.CTE through 7.4.CTE. Tables 9.1.RME through 9.9.RME in Appendix G summarize the RME total potential risks to each receptor. Tables 9.1.CTE through 9.4.CTE in Appendix G summarize the CTE total potential risks to each receptor that had hazards that exceeded an HI of 1 or exceeded a carcinogenic risk of 1×10^{-4}. Tables 10.1.RME through 10.4.RME and Tables 10.1.CTE through 10.3.CTE in Appendix G summarize only the chemicals that contribute an HI above 0.1 to a total HI greater than 1, or a carcinogenic risk greater than 1×10^{-6} to a total carcinogenic risk greater than 1×10^{-4}.

The risk estimates for each receptor group are summarized below and compared to the acceptable HI of 1 and target ELCR range of 1×10^{-6} to 1×10^{-4}. Noncarcinogenic hazards less than 1 are below the noncarcinogenic goal of protection of an HI of 1. Carcinogenic risks between or below 1×10^{-6} to 1×10^{-4} are within acceptable carcinogenic risk levels.

Noncarcinogenic hazards and carcinogenic risks are calculated for each of the receptors. However, carcinogenic risks are calculated for the combined adult and child resident (not individual for the adult and child resident) to estimate the lifetime carcinogenic risks to the resident.

Current/Future Adult Trespasser/Visitor (Tables 9.1.RME, Appendix G)

The risk assessment assumed that a current/future adult trespasser/visitor could be exposed to surface soil and ash at Site 66 through incidental ingestion, dermal contact, and inhalation of volatile emissions, and sediment through incidental ingestion and dermal contact.

The total RME noncarcinogenic hazard associated with exposure to the surface soil, ash, and sediment (HI = 0.2) is acceptable (i.e., below an HI of 1). The total RME carcinogenic risk associated with exposure to the surface soil, ash, and sediment ($CR = 9x10^{-5}$) is within the acceptable risk range of 1×10^{-6} to 1×10^{-4}.

Current/Future Adolescent Trespasser/Visitor (Tables 9.2.RME, Appendix G)

The risk assessment assumed that a current/future adolescent trespasser/visitor could be exposed to surface soil and ash through incidental ingestion, dermal contact, and inhalation of volatile emissions and sediment through incidental ingestion and dermal contact.

The total RME noncarcinogenic hazard associated with exposure to the surface soil, ash, and sediment (HI = 0.3) is acceptable (i.e., below an HI of 1). The total RME carcinogenic risk associated with exposure to the surface soil, ash, and sediment ($CR = 7x10^{-5}$) is within the acceptable risk range of 1×10^{-6} to 1×10^{-4}.

Future Resident Adult (Tables 9.3.RME and 9.1.CTE, Appendix G)

The risk assessment assumed that potential future adult residents living on-site would be exposed to combined surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation of volatile emissions; to sediment through incidental ingestion and dermal contact; and to shallow groundwater through ingestion, dermal contact and inhalation while showering.

The total RME noncarcinogenic hazard associated with exposure to the soil, ash, sediment, and groundwater (HI = 8) exceeds the acceptable HI of 1. The hazard is primarily associated with exposure to groundwater (HI = 6), and primarily with arsenic and cobalt, the only COPCs with HIs above 1 detected in the groundwater. The individual hazards associated with exposure to soil (HI = 0.3), ash (HI = 0.8), and sediment (HI = 0.02) are all acceptable.

The CTE noncarciongenic hazard associated with exposure to the soil, ash, sediment, and groundwater (HI = 4) also exceeds the acceptable HI of 1. Again, the hazard is primarily associated with exposure to groundwater (HI =4), and primarily cobalt.

Future Resident Child (Tables 9.4. RME and 9.2.CTE, Appendix G)

The risk assessment assumed that potential future child residents living on-site could be exposed to combined surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation of volatile emissions; sediment through incidental ingestion and dermal contact; and to shallow groundwater through ingestion, dermal contact and inhalation while showering.

The total RME noncarcinogenic hazard associated with exposure to the soil, ash, sediment, and groundwater (HI = 24) exceeds the acceptable HI of 1. The hazard is primarily associated with exposure to groundwater (HI = 15), and primarily with arsenic, cobalt, and iron, the only COPCs with HIs above 1 detected in the groundwater. The hazard associated with exposure to soil (HI = 2) and ash (HI = 7) also exceed the acceptable HI of 1. This hazard from soil is associated with metals; however, there are no individual COPCs with HIs above 1. The hazard from ash is primarily associated with arsenic, which exceeds 1, along with a lesser contribution from the other metals. The individual hazard associated with exposure to sediment (HI = 0.1) is acceptable.

The CTE noncarcinogenic hazard associated with exposure to the soil, ash, sediment, and groundwater (HI = 14) also exceeds the acceptable HI of 1. Again, the hazard is primarily associated with exposure to groundwater, but the hazard from ash alone also exceeds 1.

Lead was identified as a COPC for the combined surface and subsurface soil. Site-specific lead exposures were evaluated for the residential child using the IEUBK model. This calculation was based on the site-specific arithmetic mean concentration of lead detected in the soil (63 mg/kg). The results of the model, along with the probability distribution plot are presented in Tables 11.1 and 11.2 in Appendix G. The predicted geometric mean blood lead level for a young child was 1.4 μg/dL, with 0.002 percent of the population potentially experiencing concentrations exceeding 10 μg/dL, below which adverse manifestations are not expected. These results indicate that if a child was exposed to the soil the percent of the exposed population with a blood lead level exceeding 10 μg/dL would be below the 5 percent level that USEPA considers to be protective of human health. Therefore, there would be no adverse effects associated with exposure to the lead.

Future Lifetime Resident (Tables 9.5.RME and9.3.CTE, Appendix G)

The risk assessment assumed that a potential future lifetime resident living on-site could be exposed to combined surface and subsurface soil and ash at Site 66 through incidental ingestion, dermal contact, and inhalation of volatile emissions; to sediment through incidental ingestion and dermal contact; and to shallow groundwater through ingestion, dermal contact, and inhalation while showering.

The total RME carcinogenic risk associated with exposure to the soil, ash, sediment, and groundwater ($CR = 3x10^{-3}$) exceeds the acceptable risk range of $1x10^{-6}$ to $1x10^{-4}$. The risk associated with exposure to each of the media alone, with the exception of sediment, exceeds the acceptable risk range.

The RME carcinogenic risk associated with exposure to combined surface and subsurface soil across the site ($CR = 2x10^{-3}$) exceeds the acceptable risk range of $1x10^{-6}$ to $1x10^{-4}$. The risk is primarily associated with carcinogenic PAHs (mainly benzo(a)pyrene and dibenz(a,h)anthracene) and chromium. The majority of the risks from PAHs are associated with sample locations IS66S015 and IS66DP07 (near the southwestern boundary of the site), with a smaller contribution from IS66SO12 (near the northeastern portion of the fill area) and IS66SO21 (near the east-central portion of the fill area). For chromium, the majority of detected concentrations in site samples were similar to those detected in background, except for one subsurface soil sample with a detection that exceeded both the site specific background concentration and the 95% upper tolerance limit for soil from the background soil investigation report (Tetra Tech NUS, 2002a). As discussed in Section 6.4, it was assumed all of the chromium detected in the soil is chromium VI; however, it is likely that this is not the case, and therefore the risks associated with chromium are overestimated. In addition to these constituents, there is one sample location (IS66S014, located in an ash pile in the central portion of the site) where the concentration of arsenic (108 mg/kg) at this location alone could pose a potentially unacceptable risk to a potential residential receptor. There is also one sample location (IS66DP05, located in the central portion of the site) where the concentration of lead (1420 mg/kg) is elevated compared to the lead concentrations detected at other sample locations.

The CTE carcinogenic risk (CR=8x10^{-4}) is also above the acceptable risk range primarily associated with carcinogenic PAHs.

The RME carcinogenic risk associated with exposure to ash (CR= 4x10^{-4}) is above the acceptable risk range of 1x10^{-6} to 1x10^{-4}. The risk is primarily associated with arsenic and chromium. As discussed in Section 6.4, it was assumed all of the chromium detected in the ash is chromium VI; however, it is likely that this is not the case, and therefore the risks associated with chromium are overestimated. The CTE carcinogenic risk (CR=2x10^{-4}) also exceeds the acceptable risk range.

The RME carcinogenic risk associated with exposure to shallow groundwater (CR = 3x10^{-4}) is above the acceptable risk range of 1x 10^{-6} to 1x10^{-4}. The risk is primarily associated with the arsenic (CR=3x10^{-4}). The CTE carcinogenic risk is also above the acceptable risk range (CR=2x10^{-4}).

The maximum detected constituent concentrations were used as the EPCs for groundwater due to the limited number of samples available. This may result in an overestimation of the risk.

Future Construction Worker (Table 9.6.RME, Appendix G)

The risk assessment assumed that a future construction worker could be exposed to combined surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation of volatile emissions; to sediment through incidental ingestion and dermal contact; and to shallow groundwater through dermal contact and inhalation through volatilization from water in an excavation pit.

The total RME noncarcinogenic hazard associated with exposure to the soil, ash, sediment, and groundwater (HI = 2) is slightly above the acceptable HI of 1. The hazard is primarily associated with ash (HI = 1); however, none of the individual media contribute HIs above 1 and the target organ HIs are all below 1. The total RME carcinogenic risk associated with exposure to the soil, ash, sediment, and groundwater (CR = 2x10^{-5}) is within the acceptable risk range of 1×10^{-6} to 1×10^{-4}.

The RME noncarcinogenic hazard associated with exposure to ash across the site (HI = 1) equals the acceptable HI of 1. The hazard is primarily associated with arsenic (HI=0.8) although all of the individual hazard quotients and target organ HIs are less than 1.

Lead was identified as a COPC for soil. Site-specific lead exposures were evaluated for the construction worker. Exposure to lead in soil was evaluated using the adult lead model. The model results are presented in Table 11.3 in Appendix G. The mean soil lead concentration of 63mg/kg results in geometric mean blood levels ranging from 1.5 to 2.0 µg/dL for women of child-bearing age. The corresponding 95th percentile fetal blood lead levels range from 3.5 to 6.1 µg/dL. The probabilities that the fetal blood lead levels exceed 10 µg/dL range from 0.01 to 0.58 percent. These values are less than the blood lead goal as described in the 1994 OSWER Directive (USEPA, 1994b) of no more than 5 percent of children (fetuses of exposed women) exceeding 10 µg/dL blood lead.

Future Industrial Worker (Tables 9.7.RME and 9.4.CTE, Appendix G)

The risk assessment assumed that a future industrial worker could be exposed to combined surface and subsurface soil and ash through incidental ingestion, dermal contact, and inhalation of volatile emissions, and to sediment through incidental ingestion and dermal contact.

The total RME noncarcinogenic hazard to the future industrial worker (HI = 0.8) is acceptable. The total RME carcinogenic risk (CR = 2x10^{-4}) is above the acceptable risk range of 1×10^{-6} to 1×10^{-4}. The RME carcinogenic risk is primarily associated with exposure to soil (CR = 1x10^{-4}), and primarily with carcinogenic PAHs. The CTE carcinogenic risk associated with exposure to soil (CR = 1x10^{-5}) is within the acceptable risk range. The individual carcinogenic risks associated with exposure to ash (CR = 7x10^{-5}) and sediment (CR = 7x10^{-7}) are within or below the acceptable risk range. The CTE carcinogenic risk (CR = 2x10^{-5}) is within the acceptable risk range.

Lead was identified as a COPC for soil. Site-specific lead exposures were evaluated for the industrial worker. Exposure to lead in soil was evaluated using the adult lead model. The model results are presented in Table 11.4 in Appendix G. The mean soil lead concentration of 63mg/kg results in geometric mean blood levels ranging from 1.2 to 1.7 µg/dL for women of child-bearing age. The corresponding 95th percentile fetal blood lead levels range

from 2.9 to 5.2 µg/dL. The probabilities that the fetal blood lead levels exceed 10 µg/dL range from 0.3 to 1 percent. These values are less than the blood lead goal as described in the 1994 OSWER Directive (USEPA, 1994b) of no more than 5 percent of children (fetuses of exposed women) exceeding 10 µg/dL blood lead.

Future Adult Trespasser/Visitor (Tables 9.8.RME, Appendix G)

The risk assessment assumed that a future adult trespasser/visitor could be exposed to combined surface and subsurface soil, ash, and sediment at Site 66 through incidental ingestion, dermal contact, and inhalation of volatile emissions, and to sediment through incidental ingestion and dermal contact.

The total RME noncarcinogenic hazard associated with exposure to the soil, ash, and sediment (HI = 0.2) is acceptable. The total RME carcinogenic risk associated with exposure to the soil, ash, and sediment (CR = $4x10^{-5}$) is within the acceptable risk range of $1×10^{-6}$ to $1×10^{-4}$.

Future Adolescent Trespasser/Visitor (Tables 9.9.RME, Appendix G)

The risk assessment assumed that a future adolescent trespasser/visitor could be exposed to combined surface and subsurface soil, ash, and sediment at Site 66 through incidental ingestion, dermal contact, and inhalation of volatile emissions, and to sediment through incidental ingestion and dermal contact.

The total RME noncarcinogenic hazard associated with exposure to the soil, ash, and sediment (HI = 0.3) is acceptable. The total RME carcinogenic risk associated with exposure to the soil, ash, and sediment (CR = $3x10^{-5}$) is the acceptable risk range of $1×10^{-6}$ to $1×10^{-4}$.

6.6 Uncertainty Associated with Human Health Assessment

The risk measures used in HHRAs are not fully probabilistic estimates of risk, but are conditional estimates given that a set of assumptions about exposure and toxicity are realized. Thus it is important to specify the assumptions and uncertainties inherent in the risk assessment to place the risk estimates in proper perspective (USEPA, 1989a).

6.6.1 General Uncertainty in COPC Selection

The sampling conducted at Site 66 generally focused on areas of known or suspected impact from past site use, based on previous sampling information and past use of the site. Therefore, the uncertainty in sampling and the possibility of missing a location impacted by site constituents are expected to be minimal. The uncertainty associated with the data analysis is minimal, as the data were fully validated prior to use in the risk assessment.

The general assumptions used in the COPC selection process were conservative to ensure that true COPCs were not eliminated from the quantitative risk assessment and that the highest possible risk was estimated. RSLs based on residential assumptions were used to select the COPCs for all of the scenarios, including non-residential scenarios.

A comparison of site concentrations to background concentrations was not used to select the COPCs in accordance with USEPA Region III guidance. This may result in the inclusion of risks that may be associated with background conditions and are not necessarily site-related.

The maximum detected constituent concentrations were used as the EPCs for groundwater due to the limited number of samples available. This may result in an overestimation of the risk.

6.6.2 Uncertainty Associated with Exposure Assessment

The most significant source of uncertainty associated with the exposure assessment is the underlying assumption that contact with affected media would occur under current land use conditions, and that the land use and human activity patterns assumed for the hypothetical future scenarios would occur. There is no information to suggest that trespassers/visitors currently at NSF-IH routinely come into contact with affected media in the course of their daily activities (or will in the future); therefore, the generic exposure assumptions used to evaluate exposure are likely to overestimate current (and future) exposure.

Most of the exposure pathways analyzed are assumed, and exposure factors used for quantification of exposure are conservative and reflect worst-case or upper-bound assumptions on the exposure. Most of the exposure pathways evaluated for Site 66 are hypothetical and are not likely to occur in the future. Site 66 is not expected to be used for residential use, so the inclusion of this receptor in the assessment is conservative.

The future soil exposure scenario adds additional conservatism by assuming that the subsurface soil will become surface soil during any future construction activities. During many construction projects, clean fill material is placed over the soil that is disturbed during excavation projects. The clean fill material is generally needed to support growth of grass and other landscape plants.

The percent of a chemical absorbed through the skin is likely to be affected by many parameters. Some of the parameters include soil loading, soil moisture content, organic content, pH, and presence of other constituents. The availability of a chemical depends on site-specific fate and transport properties of the chemical species available for eventual absorption of skin. Chemical concentrations, specific properties of the chemical, and soil release kinetics all impact the amount of a chemical that is absorbed. These factors contribute to the uncertainty associated with these estimates and make quantification of the amount of certain chemicals absorbed from soil difficult.

Dioxin TEQ concentrations were calculated for each sample using detected dioxin/furan congeners only. If the non-detected dioxin/furan congeners were included in the sample concentration calculations, dioxin TEQ concentrations would not always be similar, since if the most toxic congener (2,3,7,8-TCDD or 1,2,3,7,8-PeCDD) was not detected in a sample, inclusion of this congener at the detection limit times the TEF could contribute significantly to the dioxin TEQ, even if it was not detected. Therefore, this may result in an underestimation of actual risk if this congener was present in the sample at a concentration below the reporting limit. Additionally, congeners that were B qualified, indicating they were detected in a laboratory or field blank at a concentration similar to that in the sample, were not included in the concentration calculation. There were only a few samples with B-qualified congeners. Congeners that were X qualified, indicating they are presumed present but at an unknown concentration (similar to a tentatively identified compound), were also not included in the concentration calculation. There were a number of samples with X-qualified congeners, which may result in an underestimation of risk if these congeners are present in the samples at a concentration at the X-qualified level. However, including the X-qualified concentrations as detected concentrations would not change the conclusions of the risk assessment.

6.6.3 Uncertainty Associated with Toxicity Assessment

Uncertainty associated with the noncarcinogenic toxicity factors is included in the toxicity tables (Appendix G, Tables 5.1 and 5.2). The USEPA applies several UFs to extrapolate dose points from animal studies to humans. These UFs range between 1 and 3,000. Additional modification factors are used on the basis of USEPA's professional judgment. Therefore, there is a high degree of uncertainty in the noncarcinogenic toxicity criteria based on the available scientific data for each constituent. The noncarcinogenic toxicity factors used in the HHRA are expected to be overestimates of actual toxicity.

CSFs and IURs developed by USEPA represent upper-bound estimates. Carcinogenic risks generated in this assessment should be regarded as an upper-bound estimate on the potential carcinogenic risks. The true ELCR is likely to be less than the predicted value (USEPA, 1989a). Uncertainty is also associated with the application of the MMOA for the carcinogenic PAHs and chromium; this may overestimate or underestimate risks. Generic ADAFs were used in the MMOA calculations, as there are no carcinogenic PAH-specific or chromium-specific ADAFs available. Use of provisional or withdrawn toxicity factors increases the uncertainty of the quantitative hazard and risk estimates. Provisional toxicity values (from California EPA, PPRTV, and ATSDR) were used in the HHRA. The provisional values were used to provide a quantitative estimate rather than a merely qualitative risk discussion; however, USEPA has not fully promulgated these toxicity values.

There is uncertainty associated with the oral to dermal adjustment factors (based on constituent-specific GI absorption factors) used to transform the oral RfDs and CSFs based on administered doses to dermal RfDs and CSFs based on absorbed doses. It is not known if the adjustment factor results in an underestimation or overestimation of the actual toxicity associated with dermal exposure.

The TEFs used to adjust the concentrations of the dioxin/furan congeners to TEQ of dioxin also results in uncertainty in the risk assessment. In particular, although the TEF scheme and TEQ methodology is intended primarily for estimating exposure and risk through ingestion (primarily dietary intakes; USEPA, 2010d), it was also used to estimate exposure and risk through dermal contact.

6.6.4 Uncertainty in Risk Characterization

The uncertainties identified in each component of risk assessment ultimately contribute to uncertainty in risk characterization. The addition of risks and HIs across pathways and constituents contributes to uncertainty based on chemical interactions such as additivity, synergism, potentiation, and susceptibility of exposed receptors.

The use of the Adult Lead Model to evaluate risks associated with exposure to lead in soil by construction workers and industrial workers results in uncertainty in the risk characterization. The Adult Lead Model was developed to evaluate risks to industrial workers, based on standard worker exposure assumptions. Use of this model for other than industrial receptors may result in an underestimate or overestimate of risks to these receptors.

6.7 Summary

This risk assessment was conducted to evaluate the potential human health risks associated with the presence of site-related soil, ash, sediment, and groundwater at Site 66. Potential risks were calculated for a current and future adult and adolescent trespasser, and future adult resident, child resident, lifetime resident, construction, and industrial worker.

Appendix G, Tables 9.1.RME through 9.9.RME and Tables 9.1.CTE through 9.4.CTE summarize the RME and CTE potential hazards and risks to each receptor. Appendix G, Tables 10.1.RME through 10.4.RME, and 10.1.CTE through 10.3.CTE show only the chemicals that contributed HIs greater than 0.1 to total HIs greater than 1, or carcinogenic risks greater than $1x10^{-6}$ to total carcinogenic risks greater than $1x10^{-4}$.

The results of the risk assessment indicate there are no risks or hazards that exceed acceptable risk levels for the current or future adult and adolescent trespasser/visitor exposed to site surface soil, ash, and sediment, or combined surface and subsurface soil ash, and sediment, or the construction worker exposed to combined surface and subsurface soil, ash, sediment, and groundwater. Although the cumulative risk for the construction worker exceeds the acceptable risk level, the target organ hazards do not exceed the acceptable levels, and therefore the hazard to the construction worker is considered to be within acceptable levels. Additionally, exposure to sediment by all potential receptors would result in noncarcinogenic hazards or carcinogenic risks within acceptable risk levels. The following receptors had total calculated RME noncarcinogenic hazards and/or carcinogenic risks that exceeded acceptable levels:

- Future adult resident exposed to combined surface and subsurface , ash, and groundwater (noncarcinogenic hazard exceeds the acceptable HI, associated with groundwater)
- Future child resident exposed to combined surface and subsurface soil, ash, and groundwater (noncarcinogenic hazard exceeds the acceptable HI, associated with groundwater, soil, and ash)
- Future lifetime resident exposed to combined surface and subsurface soil, ash, and groundwater (carcinogenic risk exceeds the acceptable risk level, associated with soil, ash, and groundwater)
- Future industrial worker exposed to combined surface and subsurface soil and ash (carcinogenic risk exceeds the acceptable risk level, primarily associated with combined soil).

Future residential use of the site would result in unacceptable RME and CTE hazards and risks associated with future resident exposure to combined surface and subsurface soil, ash, and groundwater. The RME risk from soil is primarily associated with the carcinogenic PAHs and chromium, and the noncarcinogenic hazard is associated with metals; however, there are no individual COPCs that contribute an HI above 1. The majority of the risks from PAHs are associated with sample locations IS66S015 and IS66DP07 (near the southwestern boundary of the site), with a smaller contribution from IS66SO12 (near the northeastern portion of the fill area) and IS66SO21 (near the east-central portion of the fill area). As discussed in Section 6.4, it was assumed all of the chromium detected in

the soil is chromium VI; however, it is likely that this is not the case, and therefore the risks associated with chromium are likely overestimated. The CTE carcinogenic risk is also above the acceptable risk range; however, the CTE noncarcinogenic hazard does not exceed the acceptable level. The RME carcinogenic risk from ash is associated arsenic and chromium, and the noncarcinogenic hazard is primarily associated with arsenic, with smaller contributions (below 1) from the additional metals. As discussed in Section 6.4, it was assumed all of the chromium detected in the ash is chromium VI; however, it is likely that this is not the case, and therefore the risks associated with chromium are likely overestimated. In addition to these constituents, there is one sample location (IS66S014, located in an ash pile in the central portion of the site) where the concentration of arsenic (108 mg/kg) at this location alone could pose a potentially unacceptable risk to a potential residential receptor. There is also one sample location (IS66DP05, located in the central portion of the site) where the concentration of lead (1420 mg/kg) is elevated compared to the lead concentrations detected at other sample locations.

The CTE carcinogenic risk and noncarcinogenic hazard from ash are also above the acceptable levels. The RME carcinogenic risk from groundwater is associated with arsenic, and the noncarcinogenic hazard is associated with arsenic, cobalt, and iron, with a smaller contribution (below 1) from manganese. The CTE carcinogenic risk and noncarcinogenic hazard from groundwater are also above the acceptable levels. It is extremely unlikely that the surficial groundwater at Site 66 will be used as a future source of potable water, due to the low yield and availability of better water supplies. Additionally, the risk drivers for groundwater, excluding arsenic, were also detected in the background groundwater at concentrations that appear to be higher than or similar to those on site. However, even if they were considered background-related, arsenic alone would pose a hazard above the acceptable HI of 1.

Future industrial use of the site could result in unacceptable RME carcinogenic risks associated with exposure to combined surface and subsurface soil (carcinogenic risks associated with ash alone are within acceptable levels). The risk to the industrial worker is associated with carcinogenic PAHs and chromium. The CTE carcinogenic risk is within acceptable risk levels, as are the RME and CTE noncarcinogenic hazards to the industrial receptor.

Screening for vapor intrusion from groundwater through a future building foundation pathway indicated there are no COPCs from groundwater to indoor air.

To summarize, the risk drivers (COPCs that pose an RME HI greater than 0.1 to a scenario with total RME HI above 1, or pose a RME carcinogenic risk above $1x10^{-6}$ to a scenario with a total RME carcinogenic risk above $1x10^{-4}$) associated with each media include:

- **Combined surface and subsurface soil**

HI > 1:	none
HI between 0.1 and 1:	nitroglycerin, arsenic, chromium, cobalt, iron, mercury, vanadium
CR>10^{-4}:	benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, chromium
CR between 10^{-4} and 10^{-6}:	benzo(k)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene, 4,4'- DDD, arsenic, naphthalene

- **Ash**

HI>1:	arsenic
HI between 0.1 and 1:	aluminum, chromium, cobalt, iron, vanadium
CR>10^{-4}:	arsenic, chromium

- **Groundwater**

HI>1:	arsenic, cobalt, iron
HI between 0.1 and 1:	manganese
CR>10^{-4}:	arsenic
CR between 10^{-4} and 10^{-6}:	heptachlor, naphthalene

TABLE 6-1
Summary of Data Used in Baseline Human Health Risk Assessment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

***Medium* / Station ID**	**Sample Date**	**Sample ID**	**Parameters**
Soil			
Surface Soil			
IS66DP02	04/11/07	IS66SS020001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP03	04/11/07	IS66SS030001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP04	04/11/07	IS66SS040001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP05	04/11/07	IS66SS050001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP06	04/11/07	IS66SS060001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP07	04/12/07	IS66SS070001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP08	04/11/07	IS66SS080001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP09	04/12/07	IS66SS090001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO11	04/12/07	IS66SS110001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO12	04/12/07	IS66SS120001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO13	04/12/07	IS66SS130001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO14	04/12/07	IS66SS140001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO15	04/12/07	IS66SS150001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO15	04/12/07	IS66SS15P0001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO16	04/12/07	IS66SS160001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO17	04/12/07	IS66SS170001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO19	04/12/07	IS66SS190001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO19	04/12/07	IS66SS19P0001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO20	04/12/07	IS66SS200001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66SO21	04/12/07	IS66SS210001	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP22	10/01/10	IS66SS220001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP22	10/01/10	IS66SS22P0001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP23	10/01/10	IS66SS230001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP25	10/01/10	IS66SS250001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP27	09/24/10	IS66SS270001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP28	09/23/10	IS66SS280001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP31	09/23/10	IS66SS310001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP32	09/29/10	IS66SS320001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP32	09/29/10	IS66SS32P0001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP33	09/28/10	IS66SS330001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP34	09/28/10	IS66SS340001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP35	09/29/10	IS66SS350001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP36	09/28/10	IS66SS360001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP37	09/28/10	IS66SS370001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP38	09/21/10	IS66SS380001	SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP38	09/22/10	IS66SS380001-01	VOCs
IS66DP39	09/28/10	IS66SS390001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP40	09/30/10	IS66SS400001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP41	09/30/10	IS66SS410001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66SO42	09/22/10	IS66SS420001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66SO42	09/22/10	IS66SS42P0001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66SO43	09/22/10	IS66SS430001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66SO44	09/22/10	IS66SS440001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66SO45	09/22/10	IS66SS450001	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals

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***Medium* / Station ID**	**Sample Date**	**Sample ID**	**Parameters**
Subsurface Soil			
IS66DP02	04/11/07	IS66SB020205	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP03	04/11/07	IS66SB030306	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP04	04/11/07	IS66SB040912	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP05	04/11/07	IS66SB050812	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP05	04/11/07	IS66SB05P0812	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP06	04/11/07	IS66SB061216	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP07	04/12/07	IS66SB070103	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP08	04/11/07	IS66SB081014	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP09	04/12/07	IS66SB090104	VOCs, SVOCs, Pest/PCBs, Explosives, Metals
IS66DP22	10/01/10	IS66SB221112	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP22	10/01/10	IS66SB22P1112	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP23	10/01/10	IS66SB231516	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP25	10/01/10	IS66SB251011	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP27	09/24/10	IS66SB270910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP28	09/23/10	IS66SB280607	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP31	09/23/10	IS66SB311415	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP32	09/29/10	IS66SB320809	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP32	09/29/10	IS66SB32P0809	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP33	09/28/10	IS66SB331415	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP34	09/28/10	IS66SB340809	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP35	09/29/10	IS66SB351415	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP36	09/28/10	IS66SB360809	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP37	09/28/10	IS66SB371314	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP38	09/21/10	IS66SB381213	SVOCs, Pest/PCBs, Explosives, Metals
IS66DP38	09/22/10	IS66SB381213-01	VOCs
IS66DP39	09/28/10	IS66SB391213	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP40	09/30/10	IS66SB400910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66DP41	09/30/10	IS66SB410607	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
Ash			
IS66ASH01	04/10/07	IS66AH01	Dioxin/Furans
IS66ASH02	04/10/07	IS66AH02	Dioxin/Furans
IS66ASH02	04/10/07	IS66AH02P	Dioxin/Furans
IS66ASH03	04/10/07	IS66AH03	Dioxin/Furans
IS66ASH04	09/21/10	IS66AH04	Metals
IS66ASH04	09/21/10	IS66AH04P	Metals
IS66ASH05	09/21/10	IS66AH05	Metals
IS66ASH06	09/21/10	IS66AH06	Metals
IS66ASH07	09/21/10	IS66AH07	Dioxin/Furans, Metals
IS66ASH08	09/21/10	IS66AH08	Dioxin/Furans, Metals
IS66ASH09	09/21/10	IS66AH09	Dioxin/Furans, Metals
Sediment			
IS66SWSD02	04/10/07	IS66SD02	VOCs, SVOCs, Pest/PCBs, Explosives, Metals, Grainsize
IS66SWSD02	04/10/07	IS66SD02P	VOCs, SVOCs, Pest/PCBs, Explosives, Metals, Grainsize
IS66SWSD03	04/10/07	IS66SD03	VOCs, SVOCs, Pest/PCBs, Explosives, Metals, Grainsize
IS66SWSD04	04/10/07	IS66SD04	VOCs, SVOCs, Pest/PCBs, Explosives, Metals, Grainsize
IS66SWSD05	04/10/07	IS66SD05	VOCs, SVOCs, Pest/PCBs, Explosives, Metals, Grainsize
IS66SD06	10/01/10	IS66SD06	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD06	10/01/10	IS66SD06P	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD07	10/01/10	IS66SD07	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD08	10/01/10	IS66SD08	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD09	10/01/10	IS66SD09	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD10	10/01/10	IS66SD10	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD11	10/01/10	IS66SD11	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD12	10/01/10	IS66SD12	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD13	10/01/10	IS66SD13	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD14	09/30/10	IS66SD14	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
IS66SD15	09/30/10	IS66SD15	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals, Grainsize
Groundwater			
IS66MW02	09/29/10	IS66GW020910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66MW03	09/28/10	IS66GW030910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66MW03	09/28/10	IS66GW03P0910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66MW04	09/28/10	IS66GW040910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals
IS66MW05	09/27/10	IS66GW050910	VOCs, SVOCs, Pest/PCBs, Dioxin/Furans, Explosives, Metals

VOC - Volatile Organic Compounds
SVOC - Semivolatile Organic Compounds
Metals - Inorganic Constituents
Dissolved Metals - Dissolved Inorganic Constituents (Groundwater)
Pest/PCBs - Pesticides and Polychlorinated Biphenyls

TABLE 6-2
Summary of Constituents of Potential Concern for the HHRA
Site 66 Remedial Investigation Report
NSF-IH Indian Head, Maryland

Soil				Groundwater	
Surface Soil	**Soil***	**Ash**	**Sediment**	**Indoor Air**	**Excavation Pit**
Benzo(a)anthracene	Benzo(a)anthracene	Aluminum	Benzo(a)pyrene		Naphthalene
Benzo(a)pyrene	Benzo(a)pyrene	Arsenic	Dibenz(a,h)anthracene		Heptachlor
Benzo(b)fluoranthene	Benzo(b)fluoranthene	Chromium	Arsenic		Arsenic
Benzo(k)fluoranthene	Benzo(k)fluoranthene	Cobalt	Chromium		Cobalt
Chrysene	Chrysene	Iron	Cobalt		Iron
Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	Manganese			Manganese
Dibenzofuran	Dibenzofuran	Vanadium			
Fluoranthene	Fluoranthene				
Indeno(1,2,3-cd)pyrene	Indeno(1,2,3-cd)pyrene				
Naphthalene	Naphthalene				
Pyrene	Pyrene				
Dieldrin	4,4'-DDD				
2,3,7,8-TCDD TEQ	Dieldrin				
Nitroglycerin	Heptachlor epoxide				
Aluminum	2,3,7,8-TCDD TEQ				
Arsenic	Nitroglycerin				
Chromium	Aluminum				
Cobalt	Arsenic				
Iron	Chromium				
Manganese	Cobalt				
Mercury	Iron				
Vanadium	Lead				
	Manganese				
	Mercury				
	Vanadium				
Air (Emissions for Soil)	**Air (Emissions for Soil)**	**Air (Emissions for Ash)**			**Air (Vapors at Showerhead and Excavation Pit)**
Naphthalene	Naphthalene	Chromium			Naphthalene
Chromium	Chromium				

TABLE 6-3
Exposure Pathways Evaluated for the HHRA
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Media	Exposure Route	Current	Future				
		Trespasser/ Visitor	Resident		Construction Worker	Industrial Worker	Trespasser/ Visitor
		Adult/Adolescent	Adult	Child			Adult/Adolescent
Surface Soil	Ingestion	x					
	Dermal	x					
	Inhalation	x					
Ash	Ingestion	x	x	x	x	x	x
	Dermal	x	x	x	x	x	x
	Inhalation	x	x	x	x	x	x
Sediment	Ingestion	x	x	x	x	x	x
	Dermal	x	x	x	x	x	x
	Inhalation						
Soil*	Ingestion		x	x	x	x	x
	Dermal		x	x	x	x	x
	Inhalation		x	x	x	x	x
Groundwater	Ingestion		x	x			
	Dermal		x	x	x		
	Inhalation		x	x	x		

X Quantitative evaluation (if COPCs selected for pathway).

Soil* - Subsurface soil can potentially be brought to the surface following future excavation activities. Exposure to combined surface soil and subsurface soil evaluated as an exposure pathway.

TABLE 6-4
Summary of RME Carcinogenic Risks and Hazard Indices
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Medium	Exposure Route	Carcinogenic Risk	COPCs with Carcinogenic Risks >10^{-4}	COPCs with Carcinogenic Risks >10^{-5} and <10^{-4}	COPCs with Carcinogenic Risks >10^{-6} and <10^{-5}	Hazard Index	COPCs with HI > 1
Current Trespasser/Visitor Adult	Surface Soil	Ingestion	4.E-05		Benzo(a)pyrene	benzo(a)anthracene, arsenic, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene	0.04	
		Inhalation	1.E-08				0.00007	
		Dermal Contact	2.E-05		Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene	0.01	
		Total	7.E-05				0.1	
	Ash	Ingestion	1.E-05			Arsenic	0.1	
		Inhalation	1.E-08				0.000004	
		Dermal Contact	3.E-06			Arsenic, Chromium (VI)	0.02	
		Total	1.E-05				0.1	
	Sediment	Ingestion	8.E-07				0.01	
		Inhalation	NA				NA	
		Dermal Contact	5.E-06			Chromium (VI)	0.01	
		Total	6.E-06				0.02	
		Receptor Total	9.E-05				0.2	
Current Trespasser/Visitor Adolescent	Surface Soil	Ingestion	2.E-05		Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, Chromium (VI), dibenzo(a,h)anthracene	0.06	
		Inhalation	4.E-09				0.00007	
		Dermal Contact	3.E-05		Benzo(a)pyrene	benzo(a)anthracene, arsenic, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene	0.05	
		Total	6.E-05				0.1	
	Ash	Ingestion	6.E-06			Arsenic	0.1	
		Inhalation	5.E-09				0.000004	
		Dermal Contact	4.E-06			Arsenic, Chromium (VI)	0.07	
		Total	9.E-06				0.21	
	Sediment	Ingestion	4.E-07				0.01	
		Inhalation	NA				NA	
		Dermal Contact	6.E-06			Chromium (VI)	0.01	
		Total	6.E-06				0.03	
		Receptor Total	7.E-05				0.3	
Future Resident Adult	Soil*	Ingestion	NA				0.2	
		Inhalation	NA				0.03	
		Dermal Contact	NA				0.06	
		Total	NA				0.3	
	Ash	Ingestion	NA				0.7	
		Inhalation	NA				0.0002	
		Dermal Contact	NA				0.13	
		Total	NA				0.8	
	Sediment	Ingestion	NA				0.01	
		Inhalation	NA				NA	
		Dermal Contact	NA				0.01	
		Total	NA				0.02	
	Shallow Groundwater	Ingestion	NA				6	Arsenic, Cobalt
		Inhalation	NA				0.02	
		Dermal Contact	NA				0.09	
		Total	NA				6	
		Receptor Total	NA				8	

TABLE 6-4
Summary of RME Carcinogenic Risks and Hazard Indices
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Medium	Exposure Route	Carcinogenic Risk	COPCs with Carcinogenic Risks >10^{-4}	COPCs with Carcinogenic Risks >10^{-5} and <10^{-4}	COPCs with Carcinogenic Risks >10^{-6} and <10^{-5}	Hazard Index	COPCs with HI > 1
Future	Soil*	Ingestion	NA				2	
Resident Child		Inhalation	NA				0.03	
		Dermal Contact	NA				0.4	
		Total	NA				2	
	Ash	Ingestion	NA				6	Arsenic
		Inhalation	NA				0.0002	
		Dermal Contact	NA				0.8	
		Total	NA				7	
	Sediment	Ingestion	NA				0.09	
		Inhalation	NA				NA	
		Dermal Contact	NA				0.03	
		Total	NA				0.1	
	Shallow Groundwater	Ingestion	NA				15	Arsenic, Cobalt, Iron
		Inhalation	NA				0.05	
		Dermal Contact	NA				0.3	
		Total	NA				15	
		Receptor Total	NA				24	
Future	Soil*	Ingestion	1.E-03	Benzo(a)pyrene, Dibenzo(a,h)anthracene	benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, arsenic, Chromium (VI)	benzo(k)fluoranthene, 4,4'-DDD	NA	
Resident Child/Adult		Inhalation	2.E-06			Naphthalene, Chromium (VI)	NA	
		Dermal Contact	5.E-04	Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, Chromium (VI)	arsenic, 4,4',-DDD, benzo(k)fluoranthene	NA	
		Total	2.E-03				NA	
	Ash	Ingestion	3.E-04	Arsenic	Chromium (VI)		NA	
		Inhalation	2.E-06			Chromium (VI)	NA	
		Dermal Contact	1.E-04		Arsenic, Chromium (VI)		NA	
		Total	4.E-04				NA	
	Sediment	Ingestion	3.E-06			Arsenic	NA	
		Inhalation	NA				NA	
		Dermal Contact	8.E-06			Chromium (VI)	NA	
		Total	1.E-05				NA	
	Shallow Groundwater	Ingestion	3.E-04	Arsenic		Heptachlor	NA	
		Inhalation	1.E-06			Naphthalene	NA	
		Dermal Contact	1.E-05		Arsenic		NA	
		Total	3.E-04				NA	
		Receptor Total	3.E-03				NA	
Future	Soil*	Ingestion	7.E-06			benzo(a)pyrene	0.2	
Construction Worker		Inhalation	7.E-09				0.004	
		Dermal Contact	2.E-06			benzo(a)pyrene	0.03	
		Total	9.E-06				0.3	
	Ash	Ingestion	5.E-06				0.98	
		Inhalation	2.E-09				0.00002	
		Dermal Contact	6.E-07				0.09	
		Total	6.E-06				1.1	
	Sediment	Ingestion	3.E-08				0.009	
		Inhalation	NA				NA	
		Dermal Contact	5.E-07				0.03	
		Total	5.E-07				0.04	
	Groundwater in Excavation Pit	Ingestion	NA				NA	
		Inhalation	5.E-10				0.0004	
		Dermal Contact	5.E-07				0.1	
		Total	5.E-07				0.1	
		Receptor Total	2.E-05				2	

TABLE 6-4
Summary of RME Carcinogenic Risks and Hazard Indices
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Medium	Exposure Route	Carcinogenic Risk	COPCs with Carcinogenic Risks >10^{-4}	COPCs with Carcinogenic Risks >10^{-5} and <10^{-4}	COPCs with Carcinogenic Risks >10^{-6} and <10^{-5}	Hazard Index	COPCs with HI > 1
Future		Ingestion	7.E-05		Benzo(a)pyrene, Dibenzo(a,h)anthracene	benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, arsenic, Chromium (VI)	0.14	
Industrial Worker	Soil*	Inhalation	3.E-07				0.007	
		Dermal Contact	6.E-05		Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, arsenic, Chromium (VI)	0.07	
		Total	1.E-04				0.2	
	Ash	Ingestion	5.E-05		Arsenic	Chromium (VI)	0.5	
		Inhalation	2.E-09				0.00002	
		Dermal Contact	2.E-05		Chromium (VI)	Arsenic	0.1	
		Total	7.E-05				0.6	
	Sediment	Ingestion	2.E-07				0.002	
		Inhalation	NA				NA	
		Dermal Contact	6.E-07				0.001	
		Total	7.E-07				0.003	
		Receptor Total	2.E-04				0.8	
Future	Soil*	Ingestion	1.E-05			Benzo(a)pyrene, Dibenzo(a,h)anthracene, arsenic	0.03	
Trespasser/Visitor Adult		Inhalation	3.E-08				0.0008	
		Dermal Contact	8.E-06			Benzo(a)pyrene, Dibenzo(a,h)anthracene	0.008	
		Total	2.E-05				0.04	
	Ash	Ingestion	1.E-05			Arsenic	0.1	
		Inhalation	1.E-08				0.000004	
		Dermal Contact	3.E-06			Arsenic, Chromium (VI)	0.02	
		Total	1.E-05				0.1	
	Sediment	Ingestion	8.E-07				0.01	
		Inhalation	NA				NA	
		Dermal Contact	5.E-06			Chromium (VI)	0.01	
		Total	6.E-06				0.02	
		Receptor Total	4.E-05				0.2	
Future	Soil*	Ingestion	7.E-06			Benzo(a)pyrene, Dibenzo(a,h)anthracene	0.04	
Trespasser/Visitor Adolescent		Inhalation	1.E-08				0.0008	
		Dermal Contact	1.E-05			Benzo(a)pyrene, Dibenzo(a,h)anthracene, Chromium (VI)	0.03	
		Total	2.E-05				0.07	
	Ash	Ingestion	6.E-06			Arsenic	0.1	
		Inhalation	5.E-09				0.000004	
		Dermal Contact	4.E-06			Arsenic, Chromium (VI)	0.07	
		Total	9.E-06				0.2	
	Sediment	Ingestion	4.E-07				0.01	
		Inhalation	NA				NA	
		Dermal Contact	6.E-06			Chromium (VI)	0.01	
		Total	6.E-06				0.03	
		Receptor Total	3.E-05				0.3	

RME - reasonable maximum exposure
COPC - constituent of potential concern
HI - hazard index
NA - not applicable
Soil* - combined surface and subsurface soil

TABLE 6-5
Summary of CTE Carcinogenic Risks and Hazard Indices
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

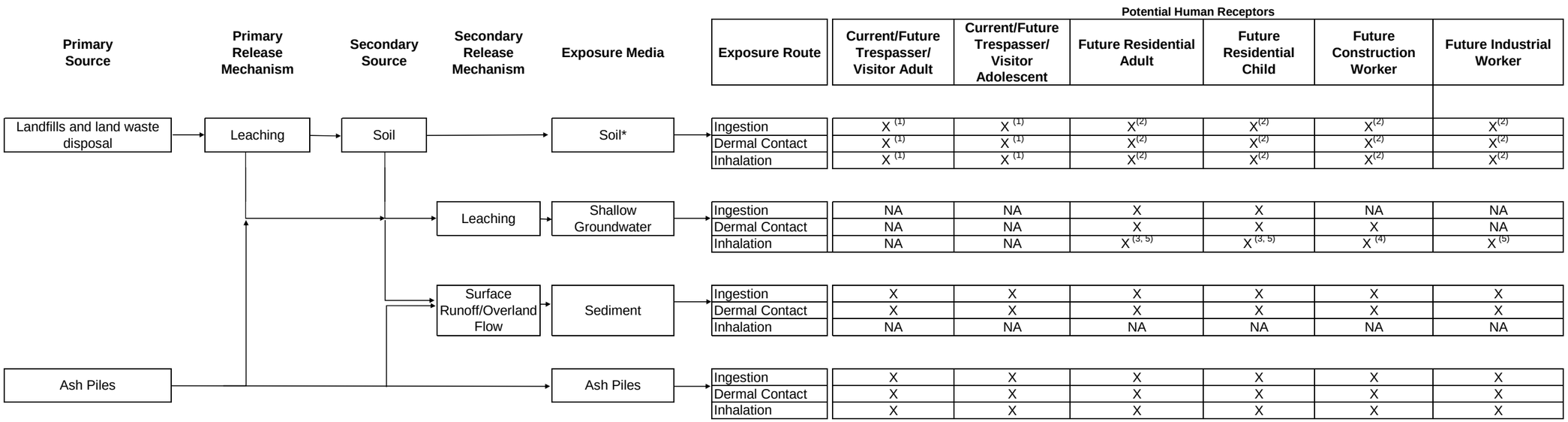
Receptor	Media	Exposure Route	Carcinogenic Risk	COPCs with Carcinogenic Risks >10^{-4}	COPCs with Carcinogenic Risks >10^{-5} and <10^{-4}	COPCs with Carcinogenic Risks >10^{-6} and <10^{-5}	Hazard Index	COPCs with HI > 1
Future Resident Adult	Soil*	Ingestion	NA				0.1	
		Inhalation	NA				0.02	
		Dermal Contact	NA				0.04	
		Total	NA				0.1	
	Ash	Ingestion	NA				0.2	
		Inhalation	NA				0.0001	
		Dermal Contact	NA				0.08	
		Total	NA				0.3	
	Sediment	Ingestion	NA				0.01	
		Inhalation	NA				NA	
		Dermal Contact	NA				0.01	
		Total	NA				0.02	
	Shallow Groundwater	Ingestion	NA				3	Cobalt
		Inhalation	NA				0.01	
		Dermal Contact	NA				0.06	
		Total	NA				3	
		Receptor Total	NA				4	
Future Resident Child	Soil*	Ingestion	NA				1	
		Inhalation	NA				0.02	
		Dermal Contact	NA				0.2	
		Total	NA				1	
	Ash	Ingestion	NA				2	Arsenic
		Inhalation	NA				0.0001	
		Dermal Contact	NA				0.5	
		Total	NA				3	
	Sediment	Ingestion	NA				0.09	
		Inhalation	NA				NA	
		Dermal Contact	NA				0.03	
		Total	NA				0.1	
	Shallow Groundwater	Ingestion	NA				10	Arsenic, Cobalt, Iron
		Inhalation	NA				0.03	
		Dermal Contact	NA				0.2	
		Total	NA				10	
		Receptor Total	NA				14	

TABLE 6-5
Summary of CTE Carcinogenic Risks and Hazard Indices
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Media	Exposure Route	Carcinogenic Risk	COPCs with Carcinogenic Risks $>10^{-4}$	COPCs with Carcinogenic Risks $>10^{-5}$ and $<10^{-4}$	COPCs with Carcinogenic Risks $>10^{-6}$ and $<10^{-5}$	Hazard Index	COPCs with HI > 1
Future	Soil*	Ingestion	4.E-04	Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, indeno(1,2,3-cd)pyrene, Chromium (VI), Dibenzo(a,h)anthracene	benzo(k)fluoranthene, 4,4'-DDD, arsenic	NA	
Resident Child/Adult		Inhalation	2.E-06			Naphthalene, Chromium (VI)	NA	
		Dermal Contact	4.E-04	Benzo(a)pyrene	benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, Chromium (VI)	arsenic, 4,4',-DDD, benzo(k)fluoranthene	NA	
		Total	8.E-04				NA	
	Ash	Ingestion	9.E-05		Arsenic, Chromium (VI)		NA	
		Inhalation	1.E-06			Chromium (VI)	NA	
		Dermal Contact	7.E-05		Chromium (VI)	Arsenic	NA	
		Total	2.E-04				NA	
	Sediment	Ingestion	3.E-06			Arsenic	NA	
		Inhalation	NA				NA	
		Dermal Contact	8.E-06			Chromium (VI)	NA	
		Total	1.E-05				NA	
	Shallow Groundwater	Ingestion	2.E-04	Arsenic			NA	
		Inhalation	4.E-07				NA	
		Dermal Contact	6.E-06			Arsenic	NA	
		Total	2.E-04				NA	
		Receptor Total	1.E-03				NA	
Future	Soil*	Ingestion	1.E-05		Benzo(a)pyrene, Dibenzo(a,h)anthracene	Benzo(a)pyrene, Dibenzo(a,h)anthracene	0.06	
Industrial Worker		Inhalation	5.E-08				0.003	
		Dermal Contact	2.E-06		Benzo(a)pyrene	Benzo(a)pyrene	0.01	
		Total	1.E-05				0.1	
	Ash	Ingestion	8.E-06			Arsenic	0.2	
		Inhalation	1.E-09				0.00001	
		Dermal Contact	7.E-07				0.0	
		Total	9.E-06				0.2	
	Sediment	Ingestion	6.E-08				0.002	
		Inhalation	NA				NA	
		Dermal Contact	2.E-07				0.001	
		Total	3.E-07				0.003	
		Receptor Total	1.E-05				0.07	

CTE - central tendency exposure
COPC - constituent of potential concern
HI - hazard index
NA - not applicable
Soil* - combined surface and subsurface soil

Figure 6-1
Conceptual Site Model - Potential Human Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland



Potential Human Receptors

Exposure Route	Current/Future Trespasser/ Visitor Adult	Current/Future Trespasser/ Visitor Adolescent	Future Residential Adult	Future Residential Child	Future Construction Worker	Future Industrial Worker
Ingestion	X (1)	X (1)	X(2)	X(2)	X(2)	X(2)
Dermal Contact	X (1)	X (1)	X(2)	X(2)	X(2)	X(2)
Inhalation	X (1)	X (1)	X(2)	X(2)	X(2)	X(2)
Ingestion	NA	NA	X	X	NA	NA
Dermal Contact	NA	NA	X	X	X	NA
Inhalation	NA	NA	X (3, 5)	X (3, 5)	X (4)	X (5)
Ingestion	X	X	X	X	X	X
Dermal Contact	X	X	X	X	X	X
Inhalation	NA	NA	NA	NA	NA	NA
Ingestion	X	X	X	X	X	X
Dermal Contact	X	X	X	X	X	X
Inhalation	X	X	X	X	X	X

*Combined surface soil and subsurface soil.
(1) Current trespasser/visitor has potential exposure to surface soil. Future trespasser/visitor has potential exposure to combined soil.
(2) Future exposure to combined surface soil and subsurface soil.
(3) Foster and Chrostowski Shower Model used for groundwater inhalation during showering.
(4) Two-film vollatilization model used to calculate concentration in air resulting from volatilization from shallow groundwater in an open excavation for construction workers.
(5) Qualitative evaluation of volatile cheimcals in groundwater indicates that vapor intrusion is not a complete exposure pathway.
NA - Not Applicable or pathway is incomplete
X - Potentially complete exposure pathway

SECTION 7

Ecological Risk Assessment (Steps 1–3A)

7.1 Introduction

This section presents a SERA and the first step of a baseline ecological risk assessment (BERA) for Site 66. This document was prepared in accordance with ecological risk assessment (ERA) guidance provided in USEPA, 1997, 1998; NAVFAC, 2006; EFACHES, 2001; and Chief of Naval Operations, 1999. The Navy ERA process (Chief of Naval Operations, 1999), which consists of eight steps organized into three tiers, is conceptually similar to the eight-step ERA process outlined in USEPA ERA guidance for the Superfund program. For both sets of guidance, Steps 1 and 2 involve conducting a SERA using very conservative assumptions. If potential risks are identified, then the results of the SERA are used to focus subsequent steps of the ERA process on the areas, chemicals, media, and receptors with the highest risk potential. The BERA represents Steps 3 through 7. The BERA uses more realistic assumptions and site-specific data to refine the risk estimates from the SERA for components that fail the initial screen. Step 8 addresses risk management issues.

This section presents Steps 1 and 2 (the SERA) and Step 3A of the BERA. Data tables and additional supporting information can be found in Appendix H.

7.2 Screening-Level Problem Formulation

The products of screening level problem formulation are the preliminary CSM and the preliminary assessment and measurement endpoints. The purpose of the CSM is to describe how ecological receptors may be exposed to chemical constituents present at the site. Development of the CSM requires the identification and description of major habitats and potential ecological receptors, media of concern, and potential contaminant sources. These elements (sources and receptors) and an understanding of how chemicals move through the local environment (transport mechanisms and exposure routes) are used to build the CSM.

7.2.1 Preliminary Conceptual Site Model

Figure 7-1 and the following text outline the most likely sources of contaminants, transport pathways, exposure media and potential exposure routes, and receptor groups. Exposure, and thus potential for risk, can only occur if each of the following conditions is present (USEPA 1998):

- A source of contamination;
- Release and transport mechanisms available to move the contaminants from the source to an exposure point;
- An exposure point where ecological receptors could contact the affected media; and/or
- An exposure route whereby the contaminant can be taken up by ecological receptors.

Contaminant Sources

Waste materials such as lead flooring, transite roofing, ash/slag, metal debris (sheeting, pipes, copper pieces, rebar), laboratory bottles and empty 5-gallon containers, concrete pads and debris, creosote telephone poles, land clearing debris, and other miscellaneous materials (tires, trash cans, appliances) are present at the site. Results of the SI indicated that chemicals in the surface soil and sediment at the site warrant further consideration for ecological risk.

The SI results suggested that the inorganic chemicals detected in the surface water at the site were likely related to background conditions and did not warrant further consideration for ecological risk. Three pesticide compounds and one explosive compound were detected in one groundwater sample, but not in the surface water. Thus, the compounds are either not migrating to surface water or are not persisting in the surface water, and therefore do not warrant further consideration for ecological risk. No VOCs were detected in the subsurface soil during the SI.

Transport Pathways

A transport pathway describes the mechanisms whereby contaminants may be transported from a source of contamination to ecologically relevant media. The primary mechanisms for contaminant transport from potential source areas to the down gradient stream are believed to include the following:

- Overland transport of contaminants within surface soil via surface runoff;
- Leaching of contaminants from surface soil and/or subsurface soil by infiltrating precipitation and transport; and/or
- Uptake by biota and trophic transfer to upper trophic levels.

Exposure Pathways and Routes

An exposure pathway links a source of contamination with one or more receptors via exposure to one or more media. An exposure route describes the specific mechanism(s) by which a receptor is exposed to a chemical present in an environmental medium. The primary exposure routes expected at Site 66 are as follows:

- Direct contact with surface soil and sediment (lower and upper trophic level receptors groups)
- Ingestion of surface soil and sediment (lower and upper trophic level receptor groups)
- Root uptake from soil and sediment (plants)
- Ingestion of contaminated plant and/or animal tissue (upper trophic level receptors)
- Direct contact and incidental ingestion of shallow subsurface soil (i.e., <5 feet depth or depth to groundwater) associated with burrowing (burrowing animals)

Potential Receptors

The habitat at Site 66 includes mixed deciduous woods with a small stream running north to south through the middle of the site, with small areas of emergent wetlands along the floodplain. There is a small pond at the northern end of the site, from which the stream originates. The site provides habitat for limited aquatic biota, such as small fish, aquatic insects, amphibians, and reptiles. The forested area provides refuge and foraging habitat for some mammal and avian species.

Potential ecological receptors include plants, invertebrates, amphibians, fish, reptiles, birds, and mammals. Soil invertebrates may be exposed to contaminants in the soil through dermal contact and ingestion. Benthic invertebrates may be exposed to contaminants in the sediment through dermal contact and ingestion. Because these organisms are the prey base for other animals, they also represent an exposure source through the bioaccumulation of contaminants in their bodies. Similarly, small mammals, amphibians, fish, and reptiles may accumulate contaminants in their tissue, and are thus a possible exposure source for upper trophic level receptors (i.e., carnivorous birds and mammals).

7.2.2 Assessment and Measurement Endpoints

Endpoints in the SERA define ecological attributes that are to be protected (assessment endpoints) and measurable characteristics of those attributes (measurement endpoints) that can be used to gauge the degree of impact that has or could occur. Assessment endpoints most often relate to attributes of biological populations or communities, and are intended to focus the risk assessment on particular components of the ecosystem that could be adversely affected by exposure to contaminants from the site (USEPA, 1997). Assessment endpoints contain an entity (e.g., carnivorous birds) and an attribute of that entity, such as survival rate.

Because of the complexity of natural systems, it is generally not possible to directly assess the potential impacts to all ecological receptors present within an area. Therefore, receptor species (e.g., green heron) or species groups are often selected as surrogates to evaluate potential risks to larger components of the ecological community (feeding guilds; e.g., carnivorous birds) represented in the assessment endpoints (e.g., survival and reproduction of carnivorous birds). Selection criteria typically include species that:

- Are known to occur, or are likely to occur, at the site
- Have a particular ecological, economic, or aesthetic value
- Are representative of taxonomic groups, life history traits, and/or trophic levels in the habitats present at the site for which complete exposure pathways are likely to exist
- Can be expected to represent potentially sensitive populations at the site because of their toxicological sensitivity or potential exposure magnitude
- Can be evaluated because of the availability of sufficient ecotoxicological information

Based on the habitats and types of contaminants present, the assessment endpoints chosen to evaluate the risk to ecological receptor populations are impacts to growth, survival, and/or reproduction. The assessment endpoints and measurement endpoints for terrestrial receptors and for aquatic receptors are presented in Table 7-1.

Although potentially complete exposure pathways exist for reptiles and amphibians, they were not specifically selected as receptors because use of ambient water quality criteria is protective of the larval stages of amphibians and no COPCs were identified for surface water in the SI. Furthermore, information about the toxicological effects of chemicals on adult amphibians and reptiles via ingestion is limited. Reptiles and amphibians are also unlikely to be more sensitive to chemical exposures than other receptor groups that are evaluated in a risk assessment (A.T. Kearney, 1997).

7.3 Screening-Level Effects Evaluation

7.3.1 Medium-specific Screening Values

The purpose of the screening-level effects evaluation is to establish chemical exposure levels (screening values) that represent conservative thresholds for adverse ecological effects. Typically, one set of screening values is developed for each selected assessment endpoint.

The soil screening values used in this assessment were derived from the following sources: USEPA ecological soil screening levels (Eco-SSLs) (USEPA, 2008); Efroymson et al., 1997a; Efroymson et al., 1997b; USEPA Region IV soil-screening values (USEPA, 2001b), NOAA Screening Quick Reference Tables (Buchman, 2008), and Screening Level Ecological Risk Assessment Protocol for Hazardous Waste Combustion Facilities (USEPA, 1999).

The screening values used to evaluate potential ecological risks from chemicals in sediment were derived from the following sources: USEPA Region III Biological Technical Assistance Group (BTAG) Freshwater Sediment Screening Benchmarks (USEPA, 2006b); NOAA Screening Quick Reference Tables (Buchman, 2008); and *Toxicological Benchmarks for Screening Contaminants of Potential Concern for Effects on Sediment-associated Biota: 1997 Revision* (Jones et al., 1997).

The screening values used to evaluate potential risks from chemicals in groundwater were the USEPA Region III freshwater screening benchmarks (USEPA, 2006b).

7.3.2 Ingestion Screening Values

Toxicity reference values (TRVs) based on ingestion were derived for dietary exposures to the bioaccumulative chemicals at the site. Bioaccumulative chemicals were identified based on USEPA guidance (2000). Toxicological information from the literature for wildlife species most closely related to the receptor species was used, where available, but was supplemented by laboratory studies of non-wildlife species (e.g., laboratory mice) where necessary. The ingestion screening values are expressed as milligrams of the chemical per kilogram body weight of the receptor per day (mg/kg-BW/day) (Table 7-2 for mammals and Table 7-3 for birds).

Allometric scaling as discussed in Sample et al. (1996) was not used to adjust TRVs obtained from the literature for the following reasons. Allometric scaling factors discussed in Sample et al. (1996) are all based on acute toxicity (i.e., LD50s). These factors are derived by regressing the body weight of the test animal against the amount of chemical given in a single dose that resulted in mortality. In application however, these acute relationships are

used to estimate variation in chronic effects. However, the mode of action for an acute exposure is likely to be dramatically different from what would be expected for a chronic exposure. The acute effects are due to comparatively large doses causing severe toxic responses that result in fairly rapid mortality. Chronic exposures/effects are comparatively more subtle and multiple types of effects could result (e.g., reproductive, growth, organ systems, etc.). Each type of chronic effect could have different scaling factors depending on the detoxification and sensitivity characteristics of the animal. Because sufficient information does not exist pertaining to the relationship between acute and chronic effects for different chemicals across different taxa, the use of acute data-based allometric scaling factors may actually increase the level of uncertainty in the TRVs, rather than decreasing it. Therefore, for these reasons, the TRVs used in this risk assessment were not adjusted for body weight differences between test species and surrogate receptor species.

Growth and reproduction were emphasized within the assessment endpoints since they are the most relevant, ecologically, to maintaining viable populations and because they are generally the most studied chronic toxicological endpoints for ecological receptors. If several chronic toxicity studies were available from the literature, the most appropriate study was selected for each receptor species based on study design, study methodology, study duration, study endpoint, and test species (i.e., longer duration studies were selected over shorter duration ones, preference was given to studies using reproduction endpoints, and studies with tests species most similar to receptor species were selected where possible). NOAELs based on growth and reproductions were utilized, where available, as the screening values. When chronic NOAEL values were unavailable, estimates were derived or extrapolated from chronic LOAELs or acute values as follows:

- An uncertainty factor of five was used to convert a reported LOAEL to a NOAEL because Dourson and Stara (1983) conducted a data review of toxicity values and found that 96 percent of the chemicals reviewed had a LOAEL/NOAEL ratio of five or less.
- When values for chronic toxicity were not available, the median lethal dose (LD_{50}) was used. An uncertainty factor of 100 was used to convert the acute LD_{50} to a chronic NOAEL (i.e., the LD_{50} was multiplied by 0.01 to obtain the chronic NOAEL).

7.4 Screening-Level Exposure Estimate

For the initial screening-level risk estimates, maximum concentrations in environmental media were used to conservatively estimate potential chemical exposures to ecological receptors. For conservatism, the maximum detection limit for chemicals that are analyzed for but not detected were also be compared to medium-specific screening values. This was done to ensure that detection limits were similar to or less than chemical concentrations at which potential adverse effects to ecological receptors might occur. For samples with duplicate analyses, the higher of the two concentrations was used in the screening (i.e., when both values are detects or both values are nondetects). In cases where one result is detected and the other is a nondetect, the detected value was used in the assessment.

Validated analytical data were used in the SERA based on the following criteria. Data with rejected (R) values were not be used in the risk assessment. Unqualified data and data qualified as J, L, or K were treated as detected. Data qualified as U or B were treated as nondetected.

For dioxin and furan compounds, some of the congeners were qualified as “X”, meaning estimated maximum possible concentration. These data were qualified because they were present at a high enough concentration to not be noise, but were possibly not the compound identified, and thus are tentatively identified compounds. Thus, X qualified data were treated as “U” qualified data or nondetected in the risk assessment because of this uncertainty.

Upper trophic level receptor exposures to chemicals in site media were determined by estimating the concentration of each chemical in each relevant dietary component. Incidental ingestion of soil or sediment was included when calculating the total exposure, where appropriate.

Body weights, ingestion rates, and dietary composition for each receptor are presented in Tables 7-4 and 7-5. Conservative body weights (i.e., minimums) and ingestion rates (i.e., maximums) were used in calculating food web exposures for the initial assessment (Step 2 of the ERA).

Dietary items for which tissue concentrations were modeled include terrestrial plants, soil invertebrates (earthworms), small mammals, aquatic plants, aquatic invertebrates, and fish/frogs. The methodologies used for these tissue calculations are outlined in the following subsection. For the screening-level exposure estimation, the uptake of chemicals from abiotic media into these food items were conservatively estimated based on maximum or "high-end" (e.g., 90th percentile) bioconcentration factors (BCFs) or bioaccumulation factors (BAFs) from the literature (Tables 7-6 through 7-8). Default factors of 1.0 were used only where data are unavailable for a chemical in the literature. More detailed information regarding development of exposure point concentrations and ingestion exposure calculations is provided below.

7.4.1 Foodweb Exposure Point Concentrations

Maximum measured media concentrations were used as exposure point concentrations for the screening-level exposure estimation and food web modeling. Exposure point concentrations for terrestrial and aquatic prey items (plants, soil invertebrates, small mammals, fish/frogs, and aquatic invertebrates) were estimated using bioaccumulation models and maximum measured media concentrations. The models used to derive these estimates are described below.

Terrestrial Plants

Tissue concentrations in the aboveground vegetative portion of terrestrial plants were estimated by multiplying the maximum measured surface soil concentration for each chemical by chemical-specific soil-to-plant BCFs obtained from the literature (Table 7-6). The BCF values used are based on root uptake from soil and on the ratio between dry-weight soil and dry-weight plant tissue. Literature values based on the ratio between dry-weight soil and wet-weight plant tissue were converted to a dry-weight basis by dividing the wet-weight BCF by the estimated solids content for terrestrial plants (15 percent [0.15]; Sample et al., 1997).

For inorganic chemicals without literature based BCFs, a soil-to-plant BCF of 1.0 was assumed. For organic chemicals without literature based BCFs, soil-to-plant BCFs were estimated using the algorithm provided in Travis and Arms (1988):

$$\log B_v = 1.588 - (0.578)(\log K_{ow})$$

where: B_v = Soil-to-plant BCF (unitless; dry weight basis)
K_{ow} = Octanol-water partitioning coefficient (unitless)

The log K_{ow} values used in the calculations were obtained mostly from USEPA (1995a; 1996b).

Earthworms

Tissue concentrations in soil invertebrates (earthworms) were estimated by multiplying the maximum measured surface soil concentration for each chemical by chemical-specific BCFs or BAFs obtained from the literature (Table 7-6). BCFs are calculated by dividing the concentration of a chemical in the tissues of an organism by the concentration of that same chemical in the surrounding environmental medium (in this case, soil) without accounting for uptake via the diet. BAFs consider both direct exposure to soil and exposure via the diet. Since earthworms consume soil, BAFs are more appropriate values and are used in the food web models when available. BAFs based on depurated analyses (soil was purged from the gut of the earthworm prior to analysis) are given preference over undepurated analyses when selecting BAF values since direct ingestion of soil is accounted for separately in the food web model.

The BCF/BAF values are based on the ratio between dry-weight soil and dry-weight earthworm tissue. Literature values based on the ratio between dry-weight soil and wet-weight earthworm tissue were converted to a dry-weight basis by dividing the wet-weight BCF/BAF by the estimated solids content for earthworms (16 percent [0.16]; USEPA 1993c). For inorganic chemicals without available measured BAFs or BCFs, an earthworm BAF of 1.0 was assumed.

Small Mammals

Whole-body tissue concentrations in small mammals (shrews, voles, and/or mice) were estimated using one of two methodologies. For chemicals with literature-based soil-to-small mammal BCFs, the small mammal tissue concentration were obtained by multiplying the maximum measured surface soil concentration for each chemical by a chemical-specific soil-to-small mammal BCF obtained from the literature. The BCF values used are based on the ratio between dry-weight soil and whole-body dry-weight tissue. Literature values based on the ratio between dry-weight soil and wet-weight tissue were converted to a dry-weight basis by dividing the wet-weight BCF by the estimated solids content for small mammals (32 percent [0.32]; USEPA 1993c). BCFs for shrews are those reported in Sample et al. (1998) for insectivores (or for general small mammals if insectivore values were unavailable), for voles are those reported for herbivores, and for mice are those reported for omnivores. The soil-to-small mammal BAFs used are shown in Table 7-6.

For chemicals without soil-to-small mammal BCF values, an alternate approach was used to estimate whole-body tissue concentrations. Because most chemical exposure for these small mammal species is via the diet, it is assumed that the concentration of each chemical in the small mammal's tissues is equal to the chemical concentration in its diet, that is, a diet to whole-body BAF (wet-weight basis) of one was assumed. The use of a diet to whole-body BAF of one is likely to result in a conservative estimate of chemical concentrations for chemicals that are not known to biomagnify in terrestrial food chains (e.g., aluminum). For chemicals that are known to biomagnify (e.g., PCBs), a diet to whole-body BAF value of one likely results in a realistic estimate of tissue concentrations based on reported literature values.

Aquatic Plants

Tissue concentrations in the aboveground vegetative portion of aquatic plants were estimated using the same methodologies as described above for terrestrial plants except that maximum sediment (not soil) concentrations was used in the calculation. Sediment-to-plant BCFs are presented in Table 7-7.

Aquatic Invertebrates

Tissue concentrations in aquatic invertebrates were estimated by multiplying the maximum measured sediment concentration for each chemical by chemical-specific sediment-to-invertebrate BCFs obtained from the literature (Table 7-7). The BCF values used are based on the ratio between dry-weight sediment and dry-weight invertebrate tissue. BCFs based on depurated analyses (sediment was purged from the gut of the organism prior to analysis) were given preference over undepurated analyses when selecting BCF values since direct ingestion of sediment is accounted for separately in the food web model.

Literature values based on the ratio between dry-weight sediment and wet-weight invertebrate tissue were converted to a dry-weight basis by dividing the wet-weight BCF by the estimated solids content for aquatic invertebrates (21 percent [0.21]; USEPA 1993c). For chemicals without literature based sediment-to-invertebrate BCFs, a BCF of 1.0 was assumed.

Aquatic Vertebrates

Tissue concentrations in whole-body fish and frogs were estimated by multiplying the maximum measured sediment concentration for each chemical by chemical-specific sediment-to-vertebrate BCFs obtained from the literature (Table 7-8). The BCF values used were based on the ratio between dry-weight sediment and dry-weight tissue. Literature values based on the ratio between dry-weight sediment and wet-weight tissue were converted to a dry-weight basis by dividing the wet-weight BCF by the estimated solids content for aquatic vertebrates (25 percent [0.25]; USEPA 1993c). For chemicals without literature based sediment-to-aquatic vertebrate BCFs, a BCF of 1.0 was assumed.

7.4.2 Dietary Intakes

Dietary intakes for each receptor species were calculated using the following formula (modified from USEPA [1993c]):

$$DI_x = \frac{[[\sum_i (FIR)(FC_{xi})(PDF_i)] + [(FIR)(SC_x)(PDS)] + [(WIR)(WC_x)]]}{BW}$$

where: DI_x = Dietary intake for chemical x (mg chemical/kg body weight/day)
FIR = Food ingestion rate (kg/day, dry-weight)
FC_{xi} = Concentration of chemical x in food item i (mg/kg, dry weight)
PDF_i = Proportion of diet composed of food item i (dry weight basis)
SC_x = Concentration of chemical x in soil/sediment (mg/kg, dry weight)
PDS = Proportion of diet composed of soil/sediment (dry weight basis)
WIR = Water ingestion rate (L/day)
WC_x = Concentration of chemical x in water (mg/L)
BW = Body weight (kg, wet weight)

Receptor-specific values that were used as inputs to this equation are provided in Tables 7-4 and 7-5. For conservatism, the model assumes that chemicals are 100 percent bioavailable to the receptor and that each receptor spends 100 percent of its time within the boundaries of the site.

7.4.3 Dioxins and Furans

The dietary intake for each polychlorinated dibenzo-p-dioxin (PCDDs) and polychlorinated dibenzofuran (PCDFs) congener thought to have dioxin-like toxicity were estimated by multiplying the estimated dose of each congener by a TEF. The TEFs from Van den Berg et al. (1998) were used to calculate TEQs for birds, and Van den Berg et al. (2006) for mammals. This results in toxicity equivalence concentrations for each of the congeners. These concentrations were summed to produce an estimated dosage for each receptor. The TEFs used in this assessment are provided in Table 7-9.

7.5 Screening-Level Risk Estimation

The screening-level risk calculation is the final step in the SERA (Step 2). In this step, the maximum exposure concentrations for abiotic media (surface soil, sediment, and groundwater) or exposure doses for upper trophic-level receptor species are compared with the corresponding screening values to derive screening risk estimates. The outcome of this step is a list of COPCs for each media-pathway-receptor combination.

COPCs are selected using the HQ method. HQs are calculated by dividing the chemical concentration in the medium being evaluated by the corresponding medium-specific screening value or by dividing the exposure dose by the corresponding ingestion screening value. For nondetected chemicals, the maximum reporting limit is used as the sample concentration (direct exposure) and as the basis for exposure doses (food web models). Chemicals with HQs greater than or equal to 1 are considered COPCs in the SERA.

HQs exceeding one indicate the potential for risk since the chemical concentration or dose (exposure) exceeds the screening value (effect). However, screening values and exposure estimates are derived using intentionally conservative assumptions such that HQs greater than or equal to one do not necessarily indicate that impacts are occurring. Rather, it identifies chemical-pathway-receptor combinations requiring further evaluation. HQs that are less than one indicate that risks are unlikely (USEPA, 1997), enabling a conclusion of no unacceptable risk to be reached with high confidence.

7.5.1 Surface Soil

Maximum surface soil concentrations were compared to soil screening values to identify preliminary COPCs (Table 7-10). Based on maximum detected concentrations, several inorganics, several pesticides, PAHs, one SVOC, two explosives, and four VOCs were identified as preliminary COPCs for lower trophic level receptors (i.e.,

terrestrial plants and soil dwelling invertebrates). Three of the pesticides, the SVOC, the explosives, and the VOCs were retained as preliminary COPCs because no screening value was available for these compounds. One PCB and 10 SVOCs were also retained as preliminary COPCs because although they were not detected, the maximum reporting limits for these compounds exceeded the screening values.

The direct exposure screening values for aluminum and iron are based on soil pH rather than the detected concentrations of those chemicals in soil. The aluminum SSL states that aluminum is identified as a COPC only at sites where the soil pH is less than 5.5 (USEPA, 2003c). Similarly, the iron SSL states that iron is not expected to be toxic to plants when the soil pH is between 5 and 8 (USEPA, 2003d). Based on these criteria, both aluminum and iron were not identified as preliminary COPCs because the average pH of the soil was 6.1.

Screening values were not available for the dioxin and furan compounds for lower trophic level receptors; however, these compounds were evaluated using the toxicity equivalents approach for upper trophic level receptors as described in Section 7.4.3, which is assumed to be protective of lower trophic level biota.

7.5.2 Sediment

Maximum sediment concentrations were compared to ecological screening values to identify preliminary COPCs (Table 7-11). Based on maximum detected concentrations, several inorganics, several pesticides, PAHs, two SVOCs, two explosives, and three VOCs were identified as preliminary COPCs for lower trophic level receptors (i.e., aquatic plants and sediment dwelling invertebrates). Two of the metals, three of the SVOCs, the explosives, and the VOCs were retained as preliminary COPCs because no screening value was available for these compounds. Six pesticides, 5 PCBs, 14 SVOCs, and 6 VOCs were also retained as preliminary COPCs because although they were not detected, the maximum reporting limits for these compounds exceeded the screening values.

Screening values were not available for the dioxin and furan compounds for lower trophic level receptors; however, these compounds were evaluated using the toxicity equivalents approach for upper trophic level receptors, which is assumed to be protective of lower trophic level biota.

7.5.3 Groundwater

Although ecological receptors are not exposed directly to groundwater, they can be potentially exposed to constituents in groundwater after it discharges to surface water; therefore, the groundwater data were compared with ecological screening values for surface water to evaluate this indirect exposure pathway. Maximum dissolved groundwater concentrations were compared to screening values for surface water in Table 7-12. Based on maximum detected concentrations, several inorganics, one pesticide, one PAH, and one VOC were identified as preliminary COPCs for aquatic receptors. Five inorganics, 7 PCBs, 13 pesticides, 16 SVOCs, and 2 VOCs were also retained as preliminary COPCs because although they were not detected, the maximum reporting limits for these compounds exceeded the screening values.

For the dioxin and furan compounds, a toxicity equivalence concentration for 2,3,7,8-TCDD was calculated using the TEFs and BEFs for the dioxin and furan congeners, as described in USEPA 1995b. The maximum concentrations of the individual detected compounds were converted to TCDD equivalents and compared with the 2,3,7,8-TCDD screening value for freshwater (USEPA, 2006b). Only detected congeners were used in this calculation because using one-half the detection limit for dioxins/furans would artificially inflate the risk estimate. This comparison revealed that the sum of the 2,3,7,8-TCDD equivalents based on maximum detected concentrations was less than the freshwater screening value (Table 7-13). Therefore, dioxin/furan compounds are not considered COPCs for groundwater.

7.5.4 Ash Material

Maximum ash material concentrations were compared to soil screening values to identify preliminary COPCs (Table 7-14). Based on maximum detected concentrations, 11 inorganics were identified as preliminary COPCs for lower trophic level receptors (i.e., terrestrial plants and soil dwelling invertebrates). One inorganic (cyanide) was also retained as a preliminary COPC because although it was not detected, the maximum reporting limit for this inorganic exceeded the screening value.

Screening values were not available for the dioxin and furan compounds for lower trophic level receptors; however, these compounds were evaluated using the toxicity equivalents approach for upper trophic level receptors, which is assumed to be protective of lower trophic level biota.

7.6 Food Web Exposure Screening

Before the dose of detected bioaccumulative chemicals was estimated, the maximum detected soil concentrations were first compared to the avian and mammalian Eco-SSLs (USEPA, 2008). This comparison was used as an initial screening step for food web exposure for the identification of food web COPCs per the methodology recommended by USEPA Region III. Chemicals that are present in surface soils at concentrations below the Eco-SSL values are unlikely to pose unacceptable risk to upper trophic level receptors and therefore site-specific food web modeling was not conducted for them.

7.6.1 Eco-SSL Screening

Arsenic, cadmium, copper, lead, vanadium, and zinc exceeded Eco-SSLs based upon maximum detected concentrations (Table 7-15). However, the magnitude of the maximum HQs for arsenic (2.5), cadmium (3.1) and copper (2.0) were low and there were no exceedances based upon the mean soil concentrations for these three metals. Also, the concentrations exceeded the Eco- SSLs in only 1 of 38 samples. Lead, vanadium, and zinc exceeded either the bird or mammal Eco-SSLs based upon the maximum and mean concentrations. No Eco-SSLs are available for mercury and selenium. Thus, for terrestrial receptors exposed to primarily surface soil, site-specific food web modeling was conducted only for the following inorganics: lead, vanadium, zinc, mercury, and selenium.

The maximum concentrations of 4,4’-DDT and dieldrin exceeded both the mammal and bird SSLs. However, the mean concentrations of 4,4’-DDT did not exceed either SSL. Therefore, site-specific food web modeling was also conducted for dieldrin. The maximum and mean concentrations of total high molecular weight PAHs exceeded the mammal SSL. Therefore, high molecular weight PAHs were identified as a preliminary COPC for mammalian receptors.

7.6.2 Site-Specific Food Web Modeling

Terrestrial Receptors

The HQs resulting from comparison of maximum exposure doses of bioaccumulative chemicals (USEPA, 2000) for each upper trophic level receptor species to ingestion screening values are presented in Table 7-16 for terrestrial receptors. The estimated doses of lead, mercury, selenium, vanadium, zinc, 4,4'-DDE, PCBs, and PAHs exceeded the NOAEL-based screening values for one or more terrestrial receptors (Table 7-16). Therefore, each of these chemicals was retained as preliminary COPCs for upper trophic level receptors.

Semi-Aquatic Receptors

The estimated doses of arsenic, cadmium, chromium, copper, lead, mercury, selenium, vanadium, zinc, and Aroclor-1254 exceeded the NOAEL-based screening values for one or more semi-aquatic receptors (Table 7-17). Therefore, each of these chemicals was retained as preliminary COPCs for upper trophic level receptors.

Ash Exposure

The estimated doses of arsenic, cadmium, chromium, lead, mercury, selenium, vanadium, zinc, and dioxins/furans (expressed as 2,3,7,8-TCDD TEQs) exceeded the NOAEL-based screening values for one or more receptors for exposure to the ash material (Table 7-18). Therefore, each of these chemicals was retained as preliminary COPCs for upper trophic level receptors.

Shallow Subsurface Soil Exposure

The estimated doses of arsenic, cadmium, chromium, lead, mercury, selenium, vanadium, zinc, and Aroclor-1221 exceeded the NOAEL-based screening values for one or more burrowing receptors for exposure to shallow subsurface soil (Table 7-19). Therefore, each of these chemicals was retained as preliminary COPCs for upper trophic level receptors.

7.7 Step 3A—Refinement of Conservative Exposure Assumptions

According to Superfund guidance (USEPA, 1997), Step 3 initiates the problem formulation phase of the BERA. Under Navy guidance (CNO, 1999), the BERA is defined as Tier 2, and the first activity under Tier 2 is Step 3A. In Step 3A, the conservative assumptions employed in Tier 1 are refined and risk estimates are recalculated using the same conceptual site model for the site. The refined risk calculations are described in the following subsections. This step is conducted to assist with the identification of risk drivers (i.e., chemicals that may pose the greatest risk). In some cases, additional information is presented that has bearing on whether a constituent is identified as a potential risk driver.

If re-evaluation of the conservative exposure assumptions supports an acceptable risk finding, then the site may exit the ERA process (CNO, 1999). However, if it is determined that unacceptable risk exists, then the site moves forward in the process and Step 3B is conducted, where the BERA problem formulation is completed based on the conclusions from Step 3A.

7.7.1 Assumptions and Approach

Assumptions and methods that were modified for the calculation of media-specific and food web HQs are listed below, along with justification for each modification. These refinements were used to weigh the evidence of potential risk for each preliminary COPC identified for each media to assess whether they warrant further evaluation or action.

- Average chemical concentrations were used instead of maximum concentrations as the exposure point concentration for direct exposure (lower trophic-level receptors) and for estimating dietary doses to upper trophic level receptors. Average chemical concentrations provide a more realistic estimate of the likely level of chemical exposure such receptors would encounter. The mean concentrations are also appropriate for evaluating potential risks to populations of soil invertebrates and aquatic receptors on a spatial scale equivalent to the entire site. Because some of these receptors are relatively immobile or have a limited home range, individuals are more likely to be impacted by locations with maximum concentrations. However, the evaluation of an average exposure scenario is more instructive with regard to the level of potential impact that might be expected at the population level.
- Midpoints of the receptor body weight and food ingestion rate presented in Table 7-20 were used to develop exposure estimates for higher trophic-level receptors, rather than minimum body weights and maximum ingestion rates. Because these represent the characteristics of a greater proportion of the individuals in a population, midpoint exposure parameters are often more realistic.
- Central tendency estimates were used to develop exposure estimates for bioaccumulation factors used in the food web exposure estimation. Soil-to-plant, soil-to-invertebrate, and soil-to-small mammal BCFs/BAFs used in Step 3A are presented in Table 7-21. Sediment-to-invertebrate and sediment-to-fish BAFs are presented in Table 7-22. Sediment-to-plant and sediment-to-frog BAFs are presented in Table 7-23.
- Ingestion-based (food web) COPCs were based upon a comparison of mean exposure doses with ingestion TRVs based upon the NOAEL, the Maximum Acceptable Toxicant Concentration (MATC), and the LOAEL. The MATC is the geometric mean of the NOAEL and LOAEL. An exceedance of the MATC was generally considered an unacceptable effect at the refined screening step although chemicals that exceed the MATC, but not the LOAEL, were discussed for possible risk management considerations.
- Chemicals that were not detected but were retained as preliminary COPCs because the maximum reporting limit exceeded the screening value were dropped from further consideration in Step 3A because it is unlikely that the concentrations of these chemicals are present at environmentally significant levels.
- Additional information considered in the more realistic evaluations also included the size of the site, the type and quality of the habitat present on the site and the surrounding area, and potential receptors likely to be present, and the frequency and magnitude of screening value exceedances.

7.7.2 Refined Risk Calculations

Surface Soil

The refined risk calculations for surface soil are presented in Table 7-24. Preliminary COPCs eliminated after consideration of average site concentrations included: arsenic, cobalt, lead, manganese, nickel, selenium, zinc, 4,4'-DDD, 4,4'-DDE, 4,4'-DDT, methoxychlor, and low molecular weight PAHs. All of these preliminary COPCs except for manganese exceeded the screening values at seven or fewer locations out of the 38 sample locations. Manganese exceeded the screening values at 13 of the 38 sample locations. Pesticides exceeded the screening values at only two locations (IS66SO16 and IS66DP41). Low molecular weight PAHs also only exceeded the screening value at two locations (IS66SO12 and IS66DP41). Thus, these preliminary COPCs were eliminated in Step 3A because the mean concentrations were below the screening values and they also have a low frequency of exceendence with isolated areas of potential risk.

Four inorganics (chromium, cyanide, mercury, and vanadium) exceeded screening values based on detected mean concentrations and were identified as refined COPCs. The mean concentrations of atrazine and high molecular weight PAHs also exceeded the screening values, although both only exceeded the screening values at 3 of the 38 sample locations. No other chemicals in the surface soil exceeded the screening values based on mean detected concentrations.

Three pesticides, three SVOCs, two explosives, and four VOCs were detected, but no screening values were available for these chemicals. The pesticides were detected infrequently and at similar concentrations as the other pesticides for which screening values were available. Similarly, the three SVOCs were detected infrequently and at similar concentrations as like compounds. Therefore, the three pesticide and three SVOCs were not considered risk-driving COPCs surface soil.

One of the explosives compounds (nitroglycerin) were detected in only 1 of 38 samples. The other explosive compound (perchlorate) was detected in most of the samples; however, the mean concentration of 2.96 was much lower than the screening values for other explosive compounds. Therefore, neither of these explosives were considered risk-driving COPCs for surface soil.

Three of the four VOCs without screening values were detected in only 1 of 38 samples and the other (acetone) is a common laboratory contaminant. Therefore, none of the four VOCs without screening values were considered risk-driving COPCs for surface soil.

Sediment

The refined risk calculations for surface soil are presented in Table 7-25. Preliminary COPCs eliminated after consideration of average site concentrations included: antimony, arsenic, cadmium, copper, iron, manganese, nickel, vanadium, zinc, alpha-Chlordane, Aroclor-1260, endosulfan I, endrin aldehyde, endrin ketone, and methoxychlor. All of these preliminary COPCs exceeded the screening values at five or less of the 14 samples locations, with many exceeding at only one location. Most of the exceedences were at sample locations IS66SD14 and IS66SD02, which also correspond to locations with some of the highest concentrations of the potential risk-driving COPCs. Thus these preliminary COPCs were eliminated in Step 3A because the mean concentrations were below the screening values and they also have a low frequency of exceendence with isolated areas of potential risk. The locations where these preliminary COPCs exceeded the screening values will be included in any additional risk studies or remedial action; therefore, any potential risk from the preliminary COPCs will also be addressed.

Four inorganics exceeded screening values based on detected mean concentrations (i.e., cyanide, lead, mercury, and silver). The magnitude and frequency of the exceedences were small, with HQs ranging from 1.4 (silver) to 2.9 (cyanide); these metals are considered potential risk-driving COPCs for sediment.

The mean concentrations of four pesticides (4,4'-DDT, 4,4'-DDE, and 4,4'-DDD, and dieldrin) and 1 PCB (Aroclor-1254) also exceeded the screening values, although dieldrin and Aroclor-1254 only exceeded the screening values at 1 of the 14 sample locations. The DDT-related compounds were detected at most of the sampling locations.

PAHs were detected at most of the sampling locations at mean detected concentrations greater than the screening values. Atrazine was the only other SVOC detected at a mean concentration greater than the screening values, although it exceeded screening at only one location. No other chemicals in the sediment exceeded the screening values based on mean detected concentrations.

Two inorganics, three SVOCs, two explosives, and three VOCs were detected, but no screening values were available for these chemicals. The two inorganics were detected at relatively low mean concentrations (beryllium at 0.47 mg/kg and thallium at 0.28 mg/kg). The SVOCs were detected infrequently and at similar concentrations as other SVOCs for which screening values were available. Therefore, the two inorganics and three SVOCs were not considered risk-driving COPCs for sediment.

The two explosives compounds were detected at only one sample location and the mean concentrations were lower than the screening values for other explosive compounds. In general, explosive compounds have one or more nitro groups on the parent molecule. Nitro compounds are reduced to amino compounds and bind to organic matter when released to soil and sediment (Roberts and Hartley, 1992). In general, the fate and transport information for nitro compounds suggest that these compounds have limited persistence in aquatic environments. Therefore, neither of these explosives was considered risk-driving COPCs for sediment.

The VOCs without screening values were detected infrequently and are common laboratory contaminants. Therefore, none of the VOCs without screening values were considered risk-driving COPCs for sediment.

Groundwater

Three inorganics (barium, iron, and manganese) exceeded screening values based on detected mean concentrations (Table 7-26). These metals are considered refined COPCs for but may be related to local geologic conditions, rather than to past site activities. Additionally, since no COPCs were identified for surface water during the site investigation and there is no direct exposure to groundwater and dilution would occur upon discharge to surface water, they are not considered risk-driving COPCs for groundwater.

Only one pesticide (heptachlor) was detected in the groundwater and only in one sample. However, since no COPCs were identified for surface water during the site investigation and heptachlor was not detected in surface water, it is not considered a risk-driving COPC for groundwater.

Ash Material

Mean ash material concentrations were compared to soil screening values to identify refined COPCs (Table 7-27). Based on mean detected concentrations, 9 inorganics were identified as refined or potential-risk driving COPCs for lower trophic level receptors (i.e., terrestrial plants and soil dwelling invertebrates).

7.7.3 Site-Specific Food Web Modeling

Terrestrial Receptors

The HQs resulting from comparison of mean exposure doses of bioaccumulative chemicals for each upper trophic level receptor species to ingestion screening values are presented in Table 7-28 for terrestrial receptors. The estimated doses of mercury and vanadium exceeded the NOAEL-based screening values, but neither exceeded the LOAEL-based screening values (Table 7-28). Therefore, no refined COPCs were identified for terrestrial upper trophic level receptors.

Semi-Aquatic Receptors

The estimated mean doses of mercury and zinc exceeded the NOAEL-based screening values for one or more semi-aquatic receptors (Table 7-29). However, only mercury also exceeded the LOAEL-based screening value. Therefore, mercury was retained as refined or potential risk-driving COPCs for semi-aquatic upper trophic level receptors.

Ash Exposure

The estimated doses of arsenic, mercury, selenium, and vanadium exceeded the NOAEL-based screening values for one or more receptors for exposure to the ash material (Table 7-30). Arsenic and selenium also exceeded the

LOAEL-based screening value. Therefore, arsenic and selenium were retained as refined or potential risk-driving COPCs for terrestrial upper trophic level receptor exposure to the ash material.

Shallow Subsurface Soil Exposure

None of the estimated mean doses of chemicals exceeded the NOAEL-based screening values for burrowing receptor exposure to shallow subsurface soil (Table 7-31). Therefore, no refined or potential risk-driving COPCs were identified for upper trophic level receptor exposure to shallow subsurface soil.

7.8 Comparison to Background Data

7.8.1 Surface Soil

Concentrations of the thirteen inorganic chemicals of concern that were measured above soil screening values were compared to the same inorganics detected in NSF-IH background samples collected for the Background Soil Investigation Report for Indian Head and Stump Neck Annex (Tetra Tech NUS, 2002a). The table below compares the concentrations of the metals for which background concentrations for IHDIV (Tetra Tech NUS, 2002a) were available.

Chemical	Average Site Concentration (mg/kg)	Average Background Concentration (mg/kg)	Ratio (Site/Background)
Chromium	14.2	13.6	1.04
Cyanide	0.18	0.66	0.27
Mercury	0.79	0.06	13.2
Vanadium	33.7	23.3	1.45

The average site concentrations of chromium and cyanide were similar to or less than the average background concentrations for these inorganics. The site/background ratio for vanadium was less than 1.5. This suggests that, since these COPCs were not substantially higher than background soil concentrations, it is unlikely that their concentrations are site-related. As such, chromium, cyanide, and vanadium are not considered risk-driving COPCs. Mercury was retained as a potential risk-driving COPC for surface soil.

7.8.2 Sediment

Concentrations of the refined inorganic COPCs in sediment were compared to the same inorganics detected in NSF-IH background sediment samples collected from freshwater streams believed not to have been impacted by facility operations (i.e., four locations on Stump Neck Annex, three on NSF-IH, two from a nearby State Park and one from a nearby State Forest) (Tetra Tech NUS, 2002b). No background data were available for cyanide, so the background soil value was used as a surrogate value.

Chemical	Average Site Concentration (mg/kg)	Average Background Concentration (mg/kg)	Ratio (Site/Background)
Cyanide	0.29	0.66*	0.44
Lead	52.1	23.1	2.25
Mercury	0.29	0.07	4.14
Silver	1.37	0.62	2.21

*soil background value

The average site concentration of cyanide was less than the average background concentration. This suggests that, since this COPC is similar to background sediment concentrations, it is unlikely that the concentrations are site-related and as such is not considered a risk-driving COPC. Lead, mercury, and silver were retained as potential risk-driving COPCs in onsite sediment.

7.9 Uncertainty

Uncertainties are present in all risk assessments because of the limitations of the available data and the need to make certain assumptions and extrapolations based on incomplete information. Since very conservative assumptions were used in the exposure and effects assessments, these uncertainties are more likely to result in an overestimation of the likelihood and magnitude of risks to ecological receptors rather than an underestimation. The uncertainty in this risk assessment is mainly attributable to the following factors:

- **Detection Limits:** Detection limits for some analytes exceeded applicable screening values in some media. Although these analytes were not detected, they were retained as preliminary COPCs for conservatism. This likely overstates the number of actual COPCs.
- **Selection of COPCs:** Chemicals without available screening values were retained as preliminary COPCs. This likely overstates the number of actual COPCs.
- **Receptor Species Selection:** Amphibian and reptilian species were not selected as potential receptors in the ERA, although exposure pathways to these organisms were likely to be complete. This represents an uncertainty in the risk assessment, although the other assessment endpoints are assumed to be protective of these receptor groups.
- **Food Web Exposure Modeling:** Chemical concentrations in terrestrial food items (plants and earthworms) were modeled from measured media concentrations and were not directly measured. The use of generic, literature-derived exposure models and bioaccumulation factors introduces some uncertainty into the resulting estimates. The values selected and methodology employed were intended to provide a conservative estimate of potential food web exposure concentrations.

  Another source of uncertainty is the use of default assumptions for exposure parameters such as bioconcentration and bioaccumulation factors (BCFs/BAFs). Although BCFs or BAFs for many bioaccumulative chemicals were readily available from the literature and were used in the SERA, the use of a default factor of 1.0 to estimate the concentration of some chemicals in receptor prey items is a source of uncertainty. However, for most chemicals, the assumption that the chemical body burden in the prey item is at the same concentration as in soil or sediment is conservative and would overestimate risk.

  The exposure parameters used for the receptors were unrealistically conservative. The use of maximum ingestion rates and minimum body weights result in a conservative estimate of exposure. In addition, area use factors were assumed to equal one. This is a conservative assumption since a significant percentage of each upper trophic level receptor species time could be spent foraging offsite in unimpacted areas or areas where chemical concentrations are expected to be significantly lower.
- **Chemical Mixtures:** Information on the ecotoxicological effects of chemical interactions is generally lacking, which required (as is standard for ecological risk assessments) that the chemicals be evaluated on a compound-by-compound basis during the comparison to screening value. This could result in an underestimation of risk (if there are additive or synergistic effects among chemicals) or an overestimation of risks (if there are antagonistic effects among chemicals).
- **Mean Versus Maximum Media Concentrations:** As is typical in a screening-level risk assessment, a finite number of samples is used to develop the exposure estimates. The maximum measured concentration provides a conservative estimate for immobile biota or those with a limited home range. The most realistic exposure estimates for mobile species with relatively large home ranges and for species populations (even those that are immobile or have limited home ranges) are those based on the mean constituent concentrations in each medium to which these receptors are exposed. This is reflected in the wildlife dietary exposure models contained in the *Wildlife Exposure Factors Handbook* (USEPA, 1993c), which specifies the use of average media concentrations.
- **Evaluation of Groundwater:** Although ecological receptors are not directly exposed to groundwater, groundwater concentrations were compared directly to surface water screening values without the

application of any dilution factors. Since significant dilution is likely to occur prior to and upon discharge to a surface water body, this procedure results in a very conservative assessment.

7.10 Ecological Risk Conclusions

- Mercury, atrazine, and high molecular weight PAHs in surface soil pose potential risks to soil invertebrates or terrestrial plants.
- Lead, mercury, silver, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, Aroclor-1254, and PAHs in sediment pose potential risks to benthic invertebrates or aquatic plants.
- Several inorganics in the ash material pose potential risks to soil invertebrates or terrestrial plants.
- Mercury in sediment poses a potential risk to upper trophic level semi-aquatic receptors.
- Arsenic and selenium in the ash material pose potential risks to upper trophic level terrestrial receptors.

TABLE 7-1
Measurement Endpoints for Site 66
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Assessment Endpoints		Measurement Endpoints
Terrestrial Receptors		
Impact on growth and survival of the soil invertebrate community.	⇨	Comparison of hazard quotients (HQs) for soil invertebrates to a target HQ of 1. Medium-specific HQs are calculated by dividing the soil concentration by a soil benchmark that is intended to be protective of soil invertebrates.
Impact on growth and survival of the plant community.	⇨	Comparison of HQs for terrestrial plants to a target HQ of 1. Medium-specific HQs are calculated by dividing the soil concentration by a soil benchmark that is intended to be protective of terrestrial plants.
Impact on growth, survival, and reproduction of terrestrial insectivorous birds.	⇨	Comparison of HQs for American woodcock to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated level of exposure (dose) by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, and reproduction of terrestrial carnivorous birds.	⇨	Comparison of HQs for Eastern screech owl to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated level of exposure (dose) by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, and reproduction of terrestrial insectivorous mammals.	⇨	Comparison of HQs for short-tailed shrew to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated level of exposure (dose) by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, and reproduction of terrestrial carnivorous mammals.	⇨	Comparison of HQs for red fox to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated level of exposure (dose) by a screening toxicity value that is associated with no adverse effects.
Aquatic and Semi-aquatic Receptors		
Impact on the growth and survival of the benthic invertebrate community.	⇨	Comparison of HQs for benthic invertebrates to a target HQ of 1. Media-specific HQs are calculated by dividing the sediment concentration by a sediment screening value that is intended to be protective of benthic invertebrates.
Impact on the growth and survival of the aquatic plant community.	⇨	Comparison of HQs for aquatic plants to a target HQ of 1. Media-specific HQs are calculated by dividing the sediment concentration by a sediment screening value that is intended to be protective of aquatic plants.
Impact on growth, survival, and reproduction of insectivorous aquatic birds.	⇨	Comparison of HQs for spotted sandpiper to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated maximum level of exposure by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, and reproduction of carnivorous aquatic birds.	⇨	Comparison of HQs for great blue heron to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated maximum level of exposure by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, and reproduction of semi-aquatic omnivorous mammals.	⇨	Comparison of HQs for raccoon to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated maximum level of exposure by a screening toxicity value that is associated with no adverse effects.
Impact on growth, survival, or reproduction of burrowing semi-aquatic mammals.	⇨	Comparison of HQs for muskrat to a target HQ of 1. Receptor-specific HQs are calculated by dividing an estimated maximum level of exposure by a screening toxicity value that is associated with no adverse effects.

TABLE 7-2
Ingestion Screening Values for Mammals
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Inorganics								
Arsenic	mouse	0.03	3 generations	oral in water	reproduction	1.26	0.25	Sample et al. 1996
Arsenic	dog	10.0	2 years	oral in diet	systemic	6.00	1.20	ATSDR 1993a
Cadmium	rat	0.303	6 weeks	oral (gavage)	reproduction	10.0	1.00	Sample et al. 1996
Cadmium	dog	10.0	3 months	oral in diet	reproduction	3.75	0.75	ATSDR 1999a
Chromium	rat	0.35	3 months	oral in water	mortality	131	26.3	Sample et al. 1996
Chromium	rat	0.35	1 year	oral in water	body weight/intake	16.4	3.28	Sample et al. 1996
Copper	mouse	0.03	1 month + GD 0-19	oral in diet	developmental	104	78.0	ATSDR 1990a
Copper	mink	1.00	357 days	oral in diet	reproduction	15.1	11.7	Sample et al. 1996
Lead	rat	0.35	3 generations	oral in diet	reproduction	80.0	8.00	Sample et al. 1996
Mercury	rat	0.35	3 generations	oral in diet	reproduction	0.16	0.032	Sample et al. 1996
Mercury	mink	1.00	93 days	oral in diet	survival/weight loss	0.25	0.15	Sample et al. 1996
Nickel	rat	0.35	3 generations	oral in diet	reproduction	80.0	40.0	Sample et al. 1996
Nickel	dog	10.0	2 years	oral in diet	systemic	62.5	25.0	ATSDR 1997a
Selenium	rat	0.35	1 year	oral in water	reproduction	0.33	0.20	Sample et al. 1996
Silver	rat	0.35	2 weeks	oral in water	survival	45.3	9.06	ATSDR 1990b
Zinc	rat	0.35	GD 1-16	oral in diet	reproduction	320	160	Sample et al. 1996
Zinc	mink	1.00	25 weeks	oral	reproduction	104	20.8	ATSDR 1994a
Pesticides/PCBs								
4,4'-DDD	rat	0.35	2 years	oral in diet	reproduction	4.00	0.80	Sample et al. 1996
4,4'-DDD	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994b
4,4'-DDE	rat	0.35	2 years	oral in diet	reproduction	4.00	0.80	Sample et al. 1996
4,4'-DDE	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994b
4,4'-DDT	rat	0.35	2 years	oral in diet	reproduction	4.00	0.80	Sample et al. 1996
4,4'-DDT	dog	10.0	2 generations	oral in diet	reproduction	5.00	1.00	ATSDR 1994b
Aldrin	rat	0.35	3 generations	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
alpha-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
alpha-Chlordane	mouse	0.03	6 generations	oral in diet	reproduction	9.16	4.58	Sample et al. 1996
Aroclor-1016	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1016	mink	1.00	18 months	oral in diet	reproduction	3.43	1.37	Sample et al. 1996

TABLE 7-2
Ingestion Screening Values for Mammals
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Aroclor-1221	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1221	mink	1.00	7 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
Aroclor-1232	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1232	mink	1.00	7 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
Aroclor-1242	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1242	mink	1.00	7 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
Aroclor-1248	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1248	mink	1.00	4.5 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
Aroclor-1254	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1254	mink	1.00	4.5 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
Aroclor-1260	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
Aroclor-1260	mink	1.00	4.5 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
PCBs (total)	oldfield mouse	0.014	12 months	oral in diet	reproduction	0.68	0.14	Sample et al. 1996
PCBs (total)	mink	1.00	4.5 months	oral in diet	reproduction	0.69	0.14	Sample et al. 1996
beta-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
delta-BHC	rat	0.35	4 generations	oral in diet	reproduction	3.20	1.60	Sample et al. 1996
Dieldrin	rat	0.35	3 generations	oral in diet	reproduction	0.20	0.04	Sample et al. 1996
Dieldrin	dog	10	15.7 months	oral in diet	systemic	0.14	0.03	ATSDR 1993b
Endosulfan I	rat	0.35	30 days	oral (gavage)	fertility	7.50	1.50	Sample et al. 1996
Endosulfan I	dog	10.0	2 years	oral in diet	systemic	5.00	1.00	ATSDR 1993c
Endosulfan II	rat	0.35	30 days	oral (gavage)	fertility	7.50	1.50	Sample et al. 1996
Endosulfan II	dog	10.0	2 years	oral in diet	systemic	5.00	1.00	ATSDR 1993c
Endrin	mouse	0.03	120 days	oral in diet	reproduction	0.92	0.18	Sample et al. 1996
gamma-BHC (Lindane)	rat	0.35	3 generations	oral in diet	reproduction	40.0	8.00	Sample et al. 1996
gamma-Chlordane	mouse	0.03	6 generations	oral in diet	reproduction	9.16	4.58	Sample et al. 1996
Heptachlor	mouse	0.03	70 days	oral in diet	reproduction	1.63	0.33	ATSDR 1993d
Heptachlor	mink	1.00	181 days	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
Heptachlor epoxide	mouse	0.03	70 days	oral in diet	reproduction	1.63	0.33	ATSDR 1993d
Heptachlor epoxide	mink	1.00	181 days	oral in diet	reproduction	1.00	0.20	Sample et al. 1996
Methoxychlor	rat	0.35	11 months	oral in diet	reproduction	8.00	4.00	Sample et al. 1996

TABLE 7-2
Ingestion Screening Values for Mammals
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Toxaphene	rat	0.35	3 generations	oral in diet	reproduction	40.0	8.00	Sample et al. 1996
Semivolatile Organics								
4-Bromophenyl-phenylether	--	--	--	--	--	NA	NA	--
4-Chlorophenyl-phenylether	--	--	--	--	--	NA	NA	--
Acenaphthene	mouse	0.03	13 weeks	oral (gavage)	reproduction	700	350	ATSDR 1995a
Acenaphthylene	mouse	0.03	13 weeks	oral (gavage)	reproduction	700	350	ATSDR 1995a
Anthracene	mouse	0.03	13 weeks	oral (gavage)	reproduction	5,000	1,000	ATSDR 1995a
Benzo(a)anthracene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Benzo(a)pyrene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Benzo(b)fluoranthene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Benzo(g,h,i)perylene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Benzo(k)fluoranthene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Chrysene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Dibenz(a,h)anthracene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Fluoranthene	mouse	0.03	13 weeks	oral (gavage)	reproduction	2,500	500	ATSDR 1995a
Fluorene	mouse	0.03	13 weeks	oral (gavage)	reproduction	2,500	500	ATSDR 1995a
Hexachlorobenzene	rat	0.35	4 generations	oral in diet	reproduction	2.00	1.00	ATSDR 1996b
Hexachlorobenzene	dog	10.0	1 year	oral	systemic	12.0	1.20	ATSDR 1996b
Hexachlorobutadiene	rat	0.35	GD 1-22; LD 1-21	oral in diet	developmental	20.0	2.00	ATSDR 1994c
Hexachlorocyclopentadiene	mouse	0.03	GD 6-15	oral (gavage)	developmental	375	75.0	ATSDR 1999b
Hexachloroethane	rat	0.35	GD 6-16	oral (gavage)	reproduction	500	100	ATSDR 1997b
Indeno(1,2,3-cd)pyrene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Pentachlorophenol	rat	0.35	2 generations	oral in diet	developmental	25.0	5.00	ATSDR 1994d
Phenanthrene	mouse	0.03	13 weeks	oral (gavage)	reproduction	2,500	500	ATSDR 1995a
Pyrene	mouse	0.03	GD 7-16	oral (gavage)	reproduction	10.0	2.00	Sample et al. 1996
Volatile Organics								
1,1,2,2-Tetrachloroethane	rat	0.35	78 weeks	oral (gavage)	reproduction	380	76.0	ATSDR 1996a
1,2,4-Trichlorobenzene	rat	0.35	3 generations	oral in water	reproduction	106	53.0	Coulston and Kolbye 1994
1,2-Dichlorobenzene	rat	0.35	chronic	oral (gavage)	liver/kidney	429	85.7	Coulston and Kolbye 1994
1,3-Dichlorobenzene	rat	0.35	chronic	oral (gavage)	liver/kidney	429	85.7	Coulston and Kolbye 1994

TABLE 7-2
Ingestion Screening Values for Mammals
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
1,4-Dichlorobenzene	rat	0.35	GD 6-15	oral (gavage)	developmental	500	250	ATSDR 1998a
Dioxins/Furans								
Dioxin/furan (TEQ) - Mammal	rat	0.35	3 generations	oral in diet	reproduction	0.00001	0.000001	Sample et al. 1996

Notes:

Where two values are presented for the same chemical, the more appropriate test organism was used for a given receptor (e.g., arsenic: mouse for deer mouse and shrew, dog for red fox)

TABLE 7-3
Ingestion Screening Values for Birds
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Inorganics								
Arsenic	brown-headed cowbird	0.049	7 months	oral in diet	survival	7.38	2.46	Sample et al. 1996
Arsenic	mallard	1.00	128 days	oral in diet	survival	12.8	5.14	Sample et al. 1996
Cadmium	mallard	1.15	90 days	oral in diet	reproduction	20.0	1.45	Sample et al. 1996
Chromium	American black duck	1.25	10 months	oral in diet	reproduction	5.00	1.00	Sample et al. 1996
Copper	chicken (chicks)	0.534	10 weeks	oral in diet	growth/survival	61.7	47.0	Sample et al. 1996
Lead	Japanese quail	0.15	12 weeks	oral in diet	reproduction	11.3	1.13	Sample et al. 1996
Lead	American kestrel	0.13	7 months	oral in diet	reproduction	19.3	3.85	Sample et al. 1996
Mercury	red-tailed hawk	1.10	12 weeks	oral in diet	survival/neurological	1.20	0.49	USEPA 1995b
Mercury	Japanese quail	0.15	1 year	oral in diet	reproduction	0.90	0.45	Sample et al. 1996
Mercury	mallard	1.00	3 generations	oral in diet	reproduction	0.078	0.026	USEPA 1997b
Nickel	mallard	0.782	90 days	oral in diet	growth/survival	107	77.4	Sample et al. 1996
Selenium	black-crowned night-heron	0.88	94 days	oral in diet	reproduction	9.00	1.80	Sample et al. 1996
Selenium	mallard	1.00	100 days	oral in diet	reproduction	0.80	0.40	Sample et al. 1996
Selenium	screech owl	0.20	13.7 weeks	oral in diet	reproduction	1.50	0.44	Sample et al. 1996
Silver	mallard	1.10	14 days	oral in diet	survival	178	35.6	USEPA 1999
Silver	chicken (chicks)	0.80	not specified	oral in diet	growth	35.0	7.00	Eisler 1996
Zinc	chicken	1.94	44 weeks	oral in diet	reproduction	131	14.5	Sample et al. 1996
Pesticides/PCBs								
4,4'-DDD	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b
4,4'-DDD	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
4,4'-DDD	mallard	1.00	2 years	oral in diet	reproduction	0.60	0.12	USEPA 1995b
4,4'-DDD	bald eagle	4.74	112 days	oral in diet	survival	3.00	0.30	USEPA 1995b
4,4'-DDE	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b
4,4'-DDE	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
4,4'-DDE	mallard	1.00	2 years	oral in diet	reproduction	0.60	0.12	USEPA 1995b
4,4'-DDE	bald eagle	4.74	112 days	oral in diet	survival	3.00	0.30	USEPA 1995b
4,4'-DDT	Japanese quail	0.11	3 generations	oral in diet	reproduction	5.00	0.50	USEPA 1995b

TABLE 7-3
Ingestion Screening Values for Birds
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NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
4,4'-DDT	barn owl	0.47	2 years	oral in diet	reproduction	0.40	0.08	Blus 1996
4,4'-DDT	mallard	1.00	2 years	oral in diet	reproduction	1.50	0.60	USEPA 1995b
4,4'-DDT	bald eagle	4.74	112 days	oral in diet	survival	3.00	0.30	USEPA 1995b
Aldrin	ring-necked pheasant	1.14	5 days	oral in diet	survival	0.35	0.07	Hill et al. 1975
Aldrin	mallard	1.00	5 days	oral in diet	survival	0.78	0.16	Hill et al. 1975
alpha-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
alpha-Chlordane	red-winged blackbird	0.064	84 days	oral in diet	survival	10.7	2.14	Sample et al. 1996
alpha-Chlordane	northern bobwhite	0.19	not specified	oral in diet	reproduction	5.95	1.19	Wiemeyer 1996
alpha-Chlordane	mallard	1.00	not specified	oral in diet	reproduction	4.00	0.80	Wiemeyer 1996
Aroclor-1016	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1016	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1016	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1221	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1221	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1221	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1232	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1232	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1232	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1242	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1242	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1242	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1248	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1248	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1248	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1254	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1254	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1254	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b
Aroclor-1260	ring-necked pheasant	1.00	17 weeks	oral	reproduction	1.80	0.36	Sample et al. 1996
Aroclor-1260	screech owl	0.181	2 generations	oral in diet	reproduction	2.05	0.41	Sample et al. 1996
Aroclor-1260	mallard	1.00	1 month	oral in diet	reproduction	7.50	1.50	USEPA 1995b

TABLE 7-3
Ingestion Screening Values for Birds
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
beta-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
delta-BHC	Japanese quail	0.15	90 days	oral in diet	reproduction	2.25	0.56	Sample et al. 1996
Dieldrin	barn owl	0.466	2 years	oral in diet	reproduction	0.39	0.08	Sample et al. 1996
Endosulfan I	gray partridge	0.40	4 weeks	oral in diet	reproduction	50.0	10.0	Sample et al. 1996
Endosulfan II	gray partridge	0.40	4 weeks	oral in diet	reproduction	50.0	10.0	Sample et al. 1996
Endrin	mallard	1.15	>200 days	oral in diet	reproduction	1.50	0.30	Sample et al. 1996
Endrin	screech owl	0.181	>83 days	oral in diet	reproduction	0.10	0.02	Sample et al. 1996
gamma-BHC (Lindane)	mallard	1.00	8 weeks	oral (gavage)	reproduction	20.0	4.00	Sample et al. 1996
gamma-Chlordane	red-winged blackbird	0.064	84 days	oral in diet	survival	10.7	2.14	Sample et al. 1996
gamma-Chlordane	northern bobwhite	0.19	not specified	oral in diet	reproduction	5.95	1.19	Wiemeyer 1996
gamma-Chlordane	mallard	1.00	not specified	oral in diet	reproduction	4.00	0.80	Wiemeyer 1996
Heptachlor	ring-necked pheasant	1.14	5 days	oral in diet	survival	1.38	0.28	Hill et al. 1975
Heptachlor	mallard	1.00	5 days	oral in diet	survival	2.40	0.48	Hill et al. 1975
Heptachlor epoxide	ring-necked pheasant	1.14	5 days	oral in diet	survival	1.38	0.28	Hill et al. 1975
Heptachlor epoxide	mallard	1.00	5 days	oral in diet	survival	2.40	0.48	Hill et al. 1975
Methoxychlor	chicken	1.50	16 weeks	oral in diet	reproduction	1,775	355	Wiemeyer 1996
Toxaphene	American black duck	1.00	2 seasons	oral in diet	reproduction	5.00	1.00	Wiemeyer 1996

TABLE 7-3
Ingestion Screening Values for Birds
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
Semivolatile Organics								
4-Bromophenyl-phenylether	--	--	--	--	--	NA	NA	--
4-Chlorophenyl-phenylether	--	--	--	--	--	NA	NA	--
Acenaphthene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Acenaphthylene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Anthracene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Benzo(a)anthracene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Benzo(a)pyrene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Benzo(b)fluoranthene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Benzo(g,h,i)perylene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Benzo(k)fluoranthene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Chrysene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Dibenz(a,h)anthracene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Fluoranthene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Fluorene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Hexachlorobenzene	Japanese quail	0.15	90 days	oral in diet	reproduction	0.565	0.113	Coulston and Kolbye 1994; TERRETOX 2002
Hexachlorobutadiene	Japanese quail	0.15	90 days	oral in diet	reproduction	17.0	3.39	Coulston and Kolbye 1994; TERRETOX 2002
Hexachlorocyclopentadiene	--	--	--	--	--	NA	NA	--
Hexachloroethane	--	--	--	--	--	NA	NA	--
Indeno(1,2,3-cd)pyrene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Pentachlorophenol	chicken	1.50	8 weeks	oral in diet	systemic/growth	8.52	4.26	Eisler 1989
Phenanthrene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Pyrene	chicken	1.50	35 days	oral in diet	reproduction	35.5	7.10	Rigdon and Neal 1963
Volatile Organics								
1,1,2,2-Tetrachloroethane	--	--	--	--	--	NA	NA	--
1,2,4-Trichlorobenzene	northern bobwhite	0.19	14 days	oral	survival	161	32.2	TERRETOX 2002
1,2-Dichlorobenzene	northern bobwhite	0.19	14 days	oral	survival	161	32.2	TERRETOX 2002
1,3-Dichlorobenzene	northern bobwhite	0.19	14 days	oral	survival	161	32.2	TERRETOX 2002

TABLE 7-3
Ingestion Screening Values for Birds
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NSF-IH, Indian Head, Maryland

Chemical	Test Organism	Body Weight (kg)	Duration	Exposure Route	Effect/Endpoint	LOAEL (mg/kg/d)	NOAEL (mg/kg/d)	Reference
1,4-Dichlorobenzene	northern bobwhite	0.19	14 days	oral	survival	161	32.2	TERRETOX 2002
Dioxins/Furans								
Dioxin/furan (TEQ) - Bird	ring-necked pheasant	1.00	10 weeks	injection	reproduction	0.00014	0.000014	Sample et al. 1996

Notes:

Where two values are presented for the same chemical, the more appropriate test organism was used for a given receptor (e.g., arsenic: cowbird for robin, mallard for spotted sandpiper)

TABLE 7-4
Exposure Parameters for Upper Trophic Level Ecological Receptors - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Body Weight (kg)		Water Ingestion Rate (L/day)		Food Ingestion Rate (kg/day - dry)	
	Value	Reference	Value	Reference	Value	Reference
Birds						
American woodcock	0.145	Dunning 1993	0.0233	allometric equation[1]	0.0292	USEPA 1993
Great blue heron	2.10	Butler 1992	0.1090	allometric equation[1]	0.4389	allometric equation[3]
Eastern screech owl	0.145	Dunning 1993	0.0216	allometric equation[1]	0.0219	allometric equation[3]
Spotted sandpiper	0.029	Dunning 1993	0.0089	allometric equation[1]	0.0093	allometric equation[3]
Mammals						
Muskrat	0.750	USEPA 1993	0.1426	allometric equation[2]	0.0765	USEPA 1993a
Raccoon	4.23	Silva and Downing 1995	0.6092	allometric equation[2]	0.1166	Conover 1989
Red fox	3.17	Silva and Downing 1995	0.4115	allometric equation[2]	0.1476	Sample and Suter 1994
Short-tailed shrew	0.013	USEPA 1993	0.0048	USEPA 1993a	0.0019	USEPA 1993

[1] All birds equation: $0.059\ (BW)^{0.67}$ (maximum body weight used: woodcock - 0.25 kg; heron - 2.5 kg; owl - 0.223 kg; sandpiper -0.0598 kg)

[2] All mammals equation: $0.099\ (BW)^{0.90}$ (maximum body weight used: muskrat - 1.5 kg; raccoon - 7.53 kg; fox - 4.87kg)

[3] All birds equation: $(0.638*((BW*1000)^{0.685}))/1000$ (maximum body weight used: heron - 2.5 kg; owl - 0.223 kg; sandpiper -0.0598 kg)

TABLE 7-5
Exposure Parameters for Upper Trophic Level Ecological Receptors - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Dietary Composition (percent)							Soil/ Sediment Ingestion (percent)	
	Terr. Plants	Soil Invert.	Small Mammals	Fish/ Frogs	Aquatic Plants	Benthic Invert.	Reference	Value	Reference
Birds									
American woodcock	0	89.6	0	0	0	0	USEPA 1993	10.4	Beyer et al. 1994
Great blue heron	0	0	0	100	0	0	USEPA 1993a; Quinney and Smith 1980	0	Sample and Suter 1994
Eastern screech owl	0	28	70	0	0	0	Johnsgard 1988	2	Assumed based on diet
Spotted sandpiper	0	0	0	0	0	82.0	USEPA 1993	18.0	Beyer et al. 1994
Mammals									
Muskrat	0	0	0	0	90.6	0.0	USEPA 1993a	9.4	Beyer et al. 1994 (raccoon)
Raccoon	0	0	0	25.0	40.6	25	Assumed 100% aquatic diet for conservatism	9.4	Beyer et al. 1994
Red fox	7.0	2.8	87.4	0	0	0	USEPA 1993	2.8	Beyer et al. 1994
Short-tailed shrew	4.7	82.3	0	0	0	0	USEPA 1993; Sample and Suter 1994	13.0	Sample and Suter 1994

TABLE 7-6
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Inorganics						
Arsenic	0.038	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Cadmium	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Chromium	Regression	USEPA 2007	0.306	USEPA 2007	Regression	USEPA 2007
Copper	Regression	USEPA 2007	0.515	USEPA 2007	Regression	USEPA 2007
Lead	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Mercury	5.0	Bechtel Jacobs 1998	20.63	Sample et al. 1998a	0.130	Sample et al. 1998b
Nickel	Regression	USEPA 2007	4.730	Sample et al. 1998a	Regression	USEPA 2007
Selenium	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Silver	0.014	USEPA 2007	2.05	Sample et al. 1998a	0.004	USEPA 2007
Zinc	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Pesticides/PCBs						
4,4'-DDD	0.2024	USEPA 2007	Regression	USEPA 2007	--	see text
4,4'-DDE	0.1093	USEPA 2007	Regression	USEPA 2007	--	see text
4,4'-DDT	0.1354	USEPA 2007	Regression	USEPA 2007	--	see text
Aldrin	0.4100	USEPA 2007	14.70	USEPA 2007 (diedrin value)	--	see text
alpha-BHC	1.7352	USEPA 2007	1.00	--	--	see text
alpha-Chlordane	0.1648	USEPA 2007	4.00	Edwards and Bohlen 1992	--	see text
Aroclor-1016	0.3229	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1221	0.7485	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1232	0.5151	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1242	0.3229	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1248	0.1844	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1254	0.1393	USEPA 2007	15.9	Sample et al. 1998a	--	see text
Aroclor-1260	0.1053	USEPA 2007	15.9	Sample et al. 1998a	--	see text
beta-BHC	1.7190	USEPA 2007	1.00	--	--	see text
delta-BHC	1.3111	USEPA 2007	1.00	--	--	see text
Dieldrin	0.4100	USEPA 2007	14.70	USEPA 2007	--	see text
Endosulfan I	1.6872	USEPA 2007	1.00	--	--	see text
Endosulfan II	0.8856	USEPA 2007	1.00	--	--	see text
Endrin	0.4100	USEPA 2007 (dieldrin value)	14.70	USEPA 2007 (diedrin value)	--	see text
gamma-BHC (Lindane)	1.8524	USEPA 2007	1.00	--	--	see text
gamma-Chlordane	0.1648	USEPA 2007	4.00	Edwards and Bohlen 1992	--	see text
Heptachlor	0.1743	USEPA 2007	3.00	Edwards and Bohlen 1992	--	see text
Heptachlor epoxide	0.5656	USEPA 2007	8.39	USEPA 1999	--	see text
Methoxychlor	0.5249	USEPA 2007	1.00	--	--	see text
Toxaphene	0.3545	USEPA 2007	1.00	--	--	see text

TABLE 7-6
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 2
Site 66 Remedial Investigation Report
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Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Semivolatile Organics						
4-Bromophenyl-phenylether	0.5656	USEPA 2007	1.00	--	--	see text
4-Chlorophenyl-phenylether	0.5926	USEPA 2007	1.00	--	--	see text
Acenaphthene	Regression	USEPA 2007	3.04	USEPA 2007	--	see text
Acenaphthylene	Regression	USEPA 2007	1.47	USEPA 2007	--	see text
Anthracene	Regression	USEPA 2007	2.42	USEPA 2007	--	see text
Benzo(a)anthracene	Regression	USEPA 2007	1.59	USEPA 2007	--	see text
Benzo(a)pyrene	Regression	USEPA 2007	1.33	USEPA 2007	--	see text
Benzo(b)fluoranthene	0.3100	USEPA 2007	2.60	USEPA 2007	--	see text
Benzo(g,h,i)perylene	Regression	USEPA 2007	2.94	USEPA 2007	--	see text
Benzo(k)fluoranthene	Regression	USEPA 2007	2.60	USEPA 2007	--	see text
Chrysene	Regression	USEPA 2007	2.29	USEPA 2007	--	see text
Dibenz(a,h)anthracene	0.1300	USEPA 2007	2.31	USEPA 2007	--	see text
Fluoranthene	0.5000	USEPA 2007	3.04	USEPA 2007	--	see text
Fluorene	Regression	USEPA 2007	9.57	USEPA 2007	--	see text
Hexachlorobenzene	0.2463	USEPA 2007	1.69	Beyer 1996	--	see text
Hexachlorobutadiene	0.6754	USEPA 2007	1.00	--	--	see text
Hexachlorocyclopentadiene	0.3929	USEPA 2007	1.00	--	--	see text
Hexachloroethane	1.4395	USEPA 2007	1.00	--	--	see text
Indeno(1,2,3-cd)pyrene	0.1100	USEPA 2007	2.86	USEPA 2007	--	see text
Pentachlorophenol	0.5200	USEPA 2007	14.63	USEPA 2007	--	see text
Phenanthrene	Regression	USEPA 2007	1.72	USEPA 2007	--	see text
Pyrene	0.7200	USEPA 2007	1.75	USEPA 2007	--	see text
Volatile Organics						
1,1,2,2-Tetrachloroethane	6.4770	USEPA 2007	1.00	--	--	see text
1,2,4-Trichlorobenzene	1.4261	USEPA 2007	0.56	Beyer 1996	--	see text
1,2-Dichlorobenzene	2.4516	USEPA 2007	1.00	--	--	see text
1,3-Dichlorobenzene	2.2964	USEPA 2007	1.00	--	--	see text
1,4-Dichlorobenzene	2.4746	USEPA 2007	1.00	--	--	see text

TABLE 7-6
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 2
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NSF-IH, Indian Head, Maryland

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Dioxin/Furans						
2,3,7,8-TCDD	5.60E-03	USEPA 1999	1.59E+00	USEPA 1999	7.81E-05	USEPA 1999
1,2,3,7,8-PCDD	5.20E-03	USEPA 1999	1.46E+00	USEPA 1999	7.19E-05	USEPA 1999
1,2,3,4,7,8-HxCDD	1.70E-03	USEPA 1999	4.90E-01	USEPA 1999	2.42E-05	USEPA 1999
1,2,3,6,7,8-HxCDD	6.70E-04	USEPA 1999	1.90E-01	USEPA 1999	9.37E-06	USEPA 1999
1,2,3,7,8,9-HxCDD*	7.80E-04	USEPA 1999	2.20E-01	USEPA 1999	1.09E-05	USEPA 1999
1,2,3,4,6,7,8-HpCDD	2.90E-04	USEPA 1999	8.10E-02	USEPA 1999	3.98E-06	USEPA 1999
OCDD*	6.70E-05	USEPA 1999	1.90E-02	USEPA 1999	9.37E-07	USEPA 1999
2,3,7,8-TCDF	4.50E-03	USEPA 1999	1.27E+00	USEPA 1999	6.25E-05	USEPA 1999
1,2,3,7,8-PCDF	1.10E-03	USEPA 1999	3.20E-01	USEPA 1999	1.72E-05	USEPA 1999
2,3,4,7,8-PCDF	9.00E-03	USEPA 1999	2.54E+00	USEPA 1999	1.25E-04	USEPA 1999
1,2,3,4,7,8-HxCDF	4.30E-04	USEPA 1999	1.21E-01	USEPA 1999	5.94E-06	USEPA 1999
1,2,3,6,7,8-HxCDF*	1.10E-03	USEPA 1999	3.00E-01	USEPA 1999	1.48E-05	USEPA 1999
2,3,4,6,7,8-HxCDF*	3.80E-03	USEPA 1999	1.07E+00	USEPA 1999	5.23E-05	USEPA 1999
1,2,3,7,8,9-HxCDF*	3.50E-03	USEPA 1999	1.00E+00	USEPA 1999	4.92E-05	USEPA 1999
1,2,3,4,6,7,8-HpCDF*	6.20E-05	USEPA 1999	1.70E-02	USEPA 1999	8.59E-07	USEPA 1999
1,2,3,4,7,8,9-HpCDF*	2.20E-03	USEPA 1999	6.20E-01	USEPA 1999	3.05E-05	USEPA 1999
OCDF*	9.00E-05	USEPA 1999	2.50E-02	USEPA 1999	1.25E-06	USEPA 1999

TABLE 7-7
Sediment Bioaccumulation Factors For Benthic Invertebrates and Plants - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Invertebrate BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Arsenic	1.103	Bechtel Jacobs 1998a	0.690	Bechtel Jacobs 1998b
Cadmium	3.250	Bechtel Jacobs 1998a	3.073	Bechtel Jacobs 1998b
Chromium	0.084	Bechtel Jacobs 1998a	0.186	Bechtel Jacobs 1998b
Copper	0.625	Bechtel Jacobs 1998a	7.957	Bechtel Jacobs 1998b
Lead	0.468	Bechtel Jacobs 1998a	0.326	Bechtel Jacobs 1998b
Mercury	5.000	Bechtel Jacobs 1998a	2.868	Bechtel Jacobs 1998b
Nickel	1.411	Bechtel Jacobs 1998a	0.214	Bechtel Jacobs 1998b
Selenium	3.012	Bechtel Jacobs 1998a	1.000	--
Silver	0.037	Bechtel Jacobs 1998a	0.180	Hirsch 1998
Zinc	1.820	Bechtel Jacobs 1998a	4.759	Bechtel Jacobs 1998b
Pesticides/PCBs				
4,4'-DDD	0.0151	Travis and Arms 1988	0.350	Oliver and Niimi 1988
4,4'-DDE	0.0216	Travis and Arms 1988	3.360	Oliver and Niimi 1988
4,4'-DDT	0.0237	Travis and Arms 1988	2.280	Oliver and Niimi 1988
Aldrin	0.0431	Travis and Arms 1988	1.000	--
alpha-BHC	0.2633	Travis and Arms 1988	1.000	--
alpha-Chlordane	0.0172	Travis and Arms 1988	1.000	--
Aroclor-1016	0.0224	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1221	0.0744	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1232	0.0437	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1242	0.0224	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1248	0.0101	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1254	0.0068	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
Aroclor-1260	0.0045	Travis and Arms 1988	21.89	Bechtel Jacobs 1998b
beta-BHC	0.2633	Travis and Arms 1988	1.000	--
delta-BHC	0.1653	Travis and Arms 1988	1.000	--
Dieldrin	0.3089	Travis and Arms 1988	4.520	Standley 1997
Endosulfan I	0.3436	Travis and Arms 1988	1.000	--
Endosulfan II	0.3131	Travis and Arms 1988	1.000	--
Endrin	0.7948	Travis and Arms 1988	1.000	--
gamma-BHC (Lindane)	0.3173	Travis and Arms 1988	1.000	--
gamma-Chlordane	0.0172	Travis and Arms 1988	1.000	--
Heptachlor	0.0548	Travis and Arms 1988	1.000	--
Heptachlor epoxide	0.3673	Travis and Arms 1988	1.000	--
Methoxychlor	0.1447	Travis and Arms 1988	1.000	--
Toxaphene	0.1217	Travis and Arms 1988	1.000	--
Semivolatile Organics				
4-Bromophenyl-phenylether	0.0578	Travis and Arms 1988	1.000	--
4-Chlorophenyl-phenylether	0.1697	Travis and Arms 1988	1.000	--
Acenaphthene	0.2564	Travis and Arms 1988	2.040	Maruya et al. 1997
Acenaphthylene	0.1653	Travis and Arms 1988	2.040	Acenaphthene value
Anthracene	0.1051	Travis and Arms 1988	0.271	Maruya et al. 1997

TABLE 7-7
Sediment Bioaccumulation Factors For Benthic Invertebrates and Plants - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Invertebrate BAF (dry weight)	
	Value	Reference	Value	Reference
Benzo(a)anthracene	0.0222	Travis and Arms 1988	1.400	Maruya et al. 1997
Benzo(a)pyrene	0.0135	Travis and Arms 1988	0.191	Maruya et al. 1997
Benzo(b)fluoranthene	0.0174	Travis and Arms 1988	0.160	Maruya et al. 1997
Benzo(g,h,i)perylene	0.0061	Travis and Arms 1988	0.295	Maruya et al. 1997
Benzo(k)fluoranthene	0.0112	Travis and Arms 1988	0.421	Maruya et al. 1997
Chrysene	0.0289	Travis and Arms 1988	0.335	Maruya et al. 1997
Dibenz(a,h)anthracene	0.0068	Travis and Arms 1988	0.271	Anthracene value
Fluoranthene	0.0617	Travis and Arms 1988	0.312	Maruya et al. 1997
Fluorene	0.1790	Travis and Arms 1988	1.130	Maruya et al. 1997
Hexachlorobenzene	0.0367	Travis and Arms 1988	0.860	Oliver and Niimi 1988
Hexachlorobutadiene	0.0705	Travis and Arms 1988	0.610	Oliver and Niimi 1988
Hexachlorocyclopentadiene	0.0467	Travis and Arms 1988	1.000	--
Hexachloroethane	0.2399	Travis and Arms 1988	1.000	--
Indeno(1,2,3-cd)pyrene	0.0061	Travis and Arms 1988	0.355	Maruya et al. 1997
Pentachlorophenol	0.0492	Travis and Arms 1988	1.000	--
Phenanthrene	0.1154	Travis and Arms 1988	0.652	Maruya et al. 1997
Pyrene	0.0687	Travis and Arms 1988	0.803	Maruya et al. 1997
Volatile Organics				
1,1,2,2-Tetrachloroethane	1.7899	Travis and Arms 1988	1.000	--
1,2,4-Trichlorobenzene	0.2186	Travis and Arms 1988	0.480	Oliver and Niimi 1988
1,2-Dichlorobenzene	0.5475	Travis and Arms 1988	1.000	--
1,3-Dichlorobenzene	0.3673	Travis and Arms 1988	1.000	--
1,4-Dichlorobenzene	0.5055	Travis and Arms 1988	1.000	--
Dioxin/Furans				
2,3,7,8-TCDD	2.67E-02	USEPA 1999	1.28E+00	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,7,8-PCDD	2.48E-02	USEPA 1999	6.44E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,4,7,8-HxCDD	8.10E-03	USEPA 1999	1.65E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,6,7,8-HxCDD	3.19E-03	USEPA 1999	1.72E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,7,8,9-HxCDD*	3.71E-03	USEPA 1999	9.54E-02	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,4,6,7,8-HpCDD	1.38E-03	USEPA 1999	3.01E-02	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
OCDD*	3.19E-04	USEPA 1999	1.32E-02	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
2,3,7,8-TCDF	2.14E-02	USEPA 1999	5.67E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,7,8-PCDF	5.24E-03	USEPA 1999	4.50E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
2,3,4,7,8-PCDF	4.29E-02	USEPA 1999	1.41E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,4,7,8-HxCDF	2.05E-03	USEPA 1999	1.12E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,6,7,8-HxCDF*	5.24E-03	USEPA 1999	1.04E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
2,3,4,6,7,8-HxCDF*	1.81E-02	USEPA 1999	1.15E-01	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,7,8,9-HxCDF*	1.67E-02	USEPA 1999	9.54E-02	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,4,6,7,8-HpCDF*	2.95E-04	USEPA 1999	2.58E-02	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
1,2,3,4,7,8,9-HpCDF*	1.05E-02	USEPA 1999	6.92E-03	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)
OCDF*	4.29E-04	USEPA 1999	7.91E-03	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)

TABLE 7-8
Sediment Bioaccumulation Factors For Frogs and Fish - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Frog BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Arsenic	0.126	Pascoe et al. 1996	0.126	Pascoe et al. 1996
Cadmium	0.164	Pascoe et al. 1996	0.164	Pascoe et al. 1996
Chromium	0.038	Krantzberg and Boyd 1992	0.038	Krantzberg and Boyd 1992
Copper	0.100	Krantzberg and Boyd 1992	0.100	Krantzberg and Boyd 1992
Lead	0.070	Krantzberg and Boyd 1992	0.070	Krantzberg and Boyd 1992
Mercury	4.580	Cope et al. 1990	4.580	Cope et al. 1990
Nickel	1.000	--	1.000	--
Selenium	1.000	--	1.000	--
Silver	1.000	--	1.000	--
Zinc	0.147	Pascoe et al. 1996	0.147	Pascoe et al. 1996
Pesticides/PCBs				
4,4'-DDD	2.250	Oliver and Niimi 1988	2.250	Oliver and Niimi 1988
4,4'-DDE	26.20	Oliver and Niimi 1988	26.20	Oliver and Niimi 1988
4,4'-DDT	8.800	Oliver and Niimi 1988	8.800	Oliver and Niimi 1988
Aldrin	1.000	--	1.000	--
alpha-BHC	1.000	--	1.000	--
alpha-Chlordane	1.000	--	1.000	--
Aroclor-1016	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1221	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1232	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1242	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1248	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1254	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
Aroclor-1260	12.94	Oliver and Niimi 1988	12.94	Oliver and Niimi 1988
beta-BHC	1.000	--	1.000	--
delta-BHC	1.000	--	1.000	--
Dieldrin	1.000	--	1.000	--
Endosulfan I	1.000	--	1.000	--
Endosulfan II	1.000	--	1.000	--

TABLE 7-8
Sediment Bioaccumulation Factors For Frogs and Fish - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Frog BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Endrin	1.000	--	1.000	--
gamma-BHC (Lindane)	6.200	Oliver and Niimi 1988	6.200	Oliver and Niimi 1988
gamma-Chlordane	1.000	--	1.000	--
Heptachlor	1.000	--	1.000	--
Heptachlor epoxide	1.000	--	1.000	--
Methoxychlor	1.000	--	1.000	--
Toxaphene	1.000	--	1.000	--
Semivolatile Organics				
4-Bromophenyl-phenylether	1.000	--	1.000	--
4-Chlorophenyl-phenylether	1.000	--	1.000	--
Acenaphthene	1.000	--	1.000	--
Acenaphthylene	1.000	--	1.000	--
Anthracene	1.000	--	1.000	--
Benzo(a)anthracene	1.000	--	1.000	--
Benzo(a)pyrene	1.000	--	1.000	--
Benzo(b)fluoranthene	1.000	--	1.000	--
Benzo(g,h,i)perylene	1.000	--	1.000	--
Benzo(k)fluoranthene	1.000	--	1.000	--
Chrysene	1.000	--	1.000	--
Dibenz(a,h)anthracene	1.000	--	1.000	--
Fluoranthene	1.000	--	1.000	--
Fluorene	1.000	--	1.000	--
Hexachlorobenzene	0.940	Oliver and Niimi 1988	0.940	Oliver and Niimi 1988
Hexachlorobutadiene	0.384	Parkerton et al. 1993	0.384	Parkerton et al. 1993
Hexachlorocyclopentadiene	1.000	--	1.000	--
Hexachloroethane	1.000	--	1.000	--
Indeno(1,2,3-cd)pyrene	1.000	--	1.000	--
Pentachlorophenol	1.000	--	1.000	--
Phenanthrene	1.000	--	1.000	--
Pyrene	1.000	--	1.000	--

TABLE 7-8
Sediment Bioaccumulation Factors For Frogs and Fish - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Frog BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Volatile Organics				
1,1,2,2-Tetrachloroethane	1.000	--	1.000	--
1,2,4-Trichlorobenzene	0.074	Parkerton et al. 1993	0.074	Parkerton et al. 1993
1,2-Dichlorobenzene	0.085	Parkerton et al. 1993	0.085	Parkerton et al. 1993
1,3-Dichlorobenzene	0.085	Parkerton et al. 1993	0.085	Parkerton et al. 1993
1,4-Dichlorobenzene	0.085	Parkerton et al. 1993	0.085	Parkerton et al. 1993
Dioxin/Furans				
2,3,7,8-TCDD	0.263	Fish BAF used	0.263	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8-PCDD	0.045	Fish BAF used	0.045	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8-HxCDD	0.010	Fish BAF used	0.010	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,6,7,8-HxCDD	0.013	Fish BAF used	0.013	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8,9-HxCDD*	0.007	Fish BAF used	0.007	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,6,7,8-HpCDD	0.010	Fish BAF used	0.010	USEPA 2008 (Mean of forage fish BSAFs)
OCDD*	0.007	Fish BAF used	0.007	USEPA 2008 (Mean of forage fish BSAFs)
2,3,7,8-TCDF	0.149	Fish BAF used	0.149	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8-PCDF	0.405	Fish BAF used	0.405	USEPA 2008 (Mean of forage fish BSAFs)
2,3,4,7,8-PCDF	0.135	Fish BAF used	0.135	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8-HxCDF	0.008	Fish BAF used	0.008	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,6,7,8-HxCDF*	0.106	Fish BAF used	0.106	USEPA 2008 (Mean of forage fish BSAFs)
2,3,4,6,7,8-HxCDF*	0.012	Fish BAF used	0.012	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8,9-HxCDF*	0.004	Fish BAF used	0.004	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,6,7,8-HpCDF*	0.017	Fish BAF used	0.017	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8,9-HpCDF*	0.017	Fish BAF used	0.017	USEPA 2008 (Mean of forage fish BSAFs)
OCDF*	0.002	Fish BAF used	0.002	USEPA 2008 (Mean of forage fish BSAFs)

TABLE 7-9
Toxicity Equivalence Factors Used for Dioxin and Furan Compounds
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Mammalian TEF[1]	Avian TEF[2]
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	<0.001
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	0.01
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	0.01
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.05
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	0.1
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	0.01
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	0.1
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	0.1
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	0.1
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	1
1,2,3,7,8-Pentachlorodibenzofuran	0.03	0.1
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	0.1
2,3,4,7,8-Pentachlorodibenzofuran	0.3	1
2,3,7,8-TCDD (dioxin)	1	1
2,3,7,8-Tetrachlorodibenzofuran	0.1	1
Octachlorodibenzo-p-dioxin	0.0003	0.0001
Octachlorodibenzofuran	0.0003	0.0001

1 - TEFs from Van den Berg et al (2006)
2 - TEFs from Van den Berg et al (1998)

TABLE 7-10
Screening Statistics - Site 66 Surface Soil - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Inorganics (MG/KG)								
Aluminum	38 / 38	--	17,600	IS66SS410001	5.5 < pH	38 / 38	See text	NO
Antimony	2 / 37	3.50	0.11	IS66SS310001	78.0	0 / 37	0.0014	NO
Arsenic	36 / 38	1.10	108	IS66SS140001	18.0	4 / 38	6.00	YES
Barium	38 / 38	--	200	IS66SS150001	330	0 / 38	0.61	NO
Beryllium	24 / 38	0.57	2.90	IS66SS110001	40.0	0 / 38	0.073	NO
Cadmium	2 / 38	0.59	1.10	IS66SS340001	32.0	0 / 38	0.034	NO
Calcium [2]	38 / 38	--	15,900	IS66SS080001	NSV	-- / --	NSV	NO
Chromium	38 / 38	--	28.1	IS66SS340001	0.40	38 / 38	70.3	YES
Cobalt	38 / 38	--	17.9	IS66SS110001	13.0	2 / 38	1.38	YES
Copper	38 / 38	--	56.9	IS66SS150001	70.0	0 / 38	0.81	NO
Cyanide	10 / 38	0.64	0.57	IS66SS210001	0.10	7 / 38	5.7	YES
Iron	38 / 38	--	35,500	IS66SS040001	5 < pH < 8	38 / 38	See text	NO
Lead	38 / 38	--	305	IS66SS150001	120	6 / 38	2.54	YES
Magnesium [2]	37 / 38	237	2,310	IS66SS080001	NSV	-- / --	NSV	NO
Manganese	38 / 38	--	521	IS66SS150001	220	13 / 38	2.37	YES
Mercury	27 / 38	0.45	22.1	IS66SS200001	0.10	7 / 38	221	YES
Nickel	38 / 38	--	90.4	IS66SS020001	38.0	1 / 38	2.38	YES
Potassium [2]	38 / 38	--	1,200	IS66SS390001	NSV	-- / --	NSV	NO
Selenium	22 / 38	1.30	3.40	IS66SS150001	0.52	5 / 38	6.54	YES
Silver	25 / 38	0.58	0.55	IS66SS200001	560	0 / 38	9.82E-04	NO
Sodium [2]	13 / 38	243	204	IS66SS340001	NSV	-- / --	NSV	NO
Thallium	20 / 38	1.60	0.32	IS66SS340001	1.00	0 / 38	0.32	NO
Vanadium	38 / 38	--	115	IS66SS140001	2.00	38 / 38	57.5	YES
Zinc	38 / 38	--	373	IS66SS160001	120	7 / 38	3.11	YES

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TABLE 7-10
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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Pesticide/Polychlorinated Biphenyls (UG/KG)								
4,4'-DDD	7 / 38	6.70	640	IS66SS410001	100	1 / 38	6.40	YES
4,4'-DDE	27 / 38	6.70	250	IS66SS150001	100	2 / 38	2.50	YES
4,4'-DDT	25 / 38	7.20	460	IS66SS410001	100	2 / 38	4.60	YES
Aldrin	1 / 38	4.10	5.20	IS66SS150001	100	0 / 38	0.052	NO
alpha-BHC	2 / 38	4.10	3.20	IS66SS120001	100,000	0 / 38	3.20E-05	NO
alpha-Chlordane	9 / 38	4.10	23.0	IS66SS050001	100	0 / 38	0.23	NO
Aroclor-1016	0 / 38	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1221	0 / 38	160	--	--	100	-- / --	1.60	YES
Aroclor-1232	0 / 38	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1242	0 / 38	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1248	0 / 38	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1254	0 / 38	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1260	0 / 38	80.0	--	--	100	-- / --	0.80	NO
beta-BHC	14 / 38	3.50	9.60	IS66SS150001	100,000	0 / 38	9.60E-05	NO
delta-BHC	1 / 38	4.10	0.53	IS66SS050001	100,000	0 / 38	5.30E-06	NO
Dieldrin	15 / 38	7.20	71.0	IS66SS410001	100	0 / 38	0.71	NO
Endosulfan I	7 / 38	4.10	5.10	IS66SS410001	NSV	-- / --	NSV	YES
Endosulfan II	6 / 38	7.20	23.0	IS66SS150001	NSV	-- / --	NSV	YES
Endosulfan sulfate	5 / 38	7.20	38.0	IS66SS150001	NSV	-- / --	NSV	YES
Endrin	2 / 38	8.00	1.20	IS66SS120001	100	0 / 38	0.012	NO
Endrin aldehyde	9 / 38	7.20	52.0	IS66SS150001	100	0 / 38	0.52	NO
Endrin ketone	11 / 38	7.20	78.0	IS66SS150001	100	0 / 38	0.78	NO
gamma-BHC (Lindane)	1 / 38	4.10	0.35	IS66SS420001	100	0 / 38	0.0035	NO
gamma-Chlordane	11 / 38	4.10	12.0	IS66SS150001	224	0 / 38	0.054	NO
Heptachlor	2 / 38	4.10	0.95	IS66SS020001	1,000	0 / 38	9.50E-04	NO
Heptachlor epoxide	2 / 38	4.10	3.30	IS66SS150001	100	0 / 38	0.033	NO
Methoxychlor	8 / 38	37.0	230	IS66SS150001	100	1 / 38	2.30	YES
Toxaphene	0 / 38	410	--	--	NSV	-- / --	NSV	NO

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Semivolatile Organic Compounds (UG/KG)								
1,1-Biphenyl	0 / 38	1,800	--	--	600	-- / --	3.00	YES
2,2'-Oxybis(1-chloropropane)	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	3 / 38	4,400	4.50	IS66SS280001	100	0 / 38	0.045	NO
2,4,6-Trichlorophenol	8 / 38	1,800	15.0	IS66SS250001	100	0 / 38	0.15	NO
2,4-Dichlorophenol	3 / 38	1,800	14.0	IS66SS250001	100	0 / 38	0.14	NO
2,4-Dimethylphenol	0 / 37	1,800	--	--	100	-- / --	18.0	YES
2,4-Dinitrophenol	0 / 38	4,400	--	--	20,000	-- / --	0.22	NO
2,4-Dinitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
2,6-Dinitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
2-Chloronaphthalene	0 / 38	1,800	--	--	1,000	-- / --	1.80	YES
2-Chlorophenol	0 / 38	1,800	--	--	100	-- / --	18.0	YES
2-Methylnaphthalene	5 / 38	800	710	IS66SS150001	LPAH	-- / --	--	YES
2-Methylphenol	0 / 38	1,800	--	--	100	-- / --	18.0	YES
2-Nitroaniline	0 / 38	4,400	--	--	NSV	-- / --	NSV	NO
2-Nitrophenol	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
3- and 4-Methylphenol	0 / 20	77.0	--	--	NSV	-- / --	NSV	NO
3,3'-Dichlorobenzidine	0 / 30	1,800	--	--	NSV	-- / --	NSV	NO
3-Nitroaniline	0 / 38	4,400	--	--	NSV	-- / --	NSV	NO
4,6-Dinitro-2-methylphenol	0 / 38	4,400	--	--	NSV	-- / --	NSV	NO
4-Bromophenyl-phenylether	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
4-Chloro-3-methylphenol	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
4-Chloroaniline	0 / 36	1,800	--	--	NSV	-- / --	NSV	NO
4-Chlorophenyl-phenylether	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
4-Methylphenol	0 / 18	1,800	--	--	100	-- / --	18.0	YES
4-Nitroaniline	0 / 38	4,400	--	--	NSV	-- / --	NSV	NO
4-Nitrophenol	0 / 38	4,400	--	--	100	-- / --	44.0	YES
Acenaphthene	12 / 38	800	8,500	IS66SS150001	LPAH	-- / --	--	YES
Acenaphthylene	6 / 38	1,800	340	IS66SS210001	LPAH	-- / --	--	YES
Acetophenone	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Anthracene	22 / 38	720	21,000	IS66SS150001	LPAH	-- / --	--	NO
Atrazine	3 / 38	1,800	2.50	IS66SS280001	0.050	3 / 38	50.0	YES

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Benzaldehyde	0 / 37	1,800	--	--	NSV	-- / --	NSV	NO
Benzo(a)anthracene	29 / 38	720	69,000	IS66SS150001	HPAH	-- / --	--	YES
Benzo(a)pyrene	25 / 38	720	58,000	IS66SS150001	HPAH	-- / --	--	YES
Benzo(b)fluoranthene	29 / 38	720	130,000	IS66SS150001	HPAH	-- / --	--	YES
Benzo(g,h,i)perylene	24 / 38	720	9,500	IS66SS120001	HPAH	-- / --	--	YES
Benzo(k)fluoranthene	24 / 38	720	130,000	IS66SS150001	HPAH	-- / --	--	YES
bis(2-Chloroethoxy)methane	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
bis(2-Chloroethyl)ether	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
bis(2-Ethylhexyl)phthalate	3 / 38	1,800	27,000	IS66SS080001	NSV	-- / --	NSV	YES
Butylbenzylphthalate	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Caprolactam	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Carbazole	5 / 38	800	18,000	IS66SS150001	NSV	-- / --	NSV	YES
Chrysene	28 / 38	720	70,000	IS66SS150001	HPAH	-- / --	--	YES
Dibenz(a,h)anthracene	19 / 38	720	9,000	IS66SS150001	HPAH	-- / --	--	YES
Dibenzofuran	2 / 38	800	3,000	IS66SS150001	NSV	-- / --	NSV	YES
Diethylphthalate	0 / 38	1,800	--	--	1,000	-- / --	1.80	YES
Dimethyl phthalate	6 / 38	1,800	3.10	IS66SS410001	2,000	0 / 38	0.0016	NO
Di-n-butylphthalate	1 / 38	800	540	IS66SS150001	200,000	0 / 38	0.0027	NO
Di-n-octylphthalate	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Fluoranthene	29 / 38	720	130,000	IS66SS150001	LPAH	-- / --	--	YES
Fluorene	8 / 38	800	4,200	IS66SS150001	LPAH	-- / --	--	YES
Hexachlorobenzene	0 / 38	1,800	--	--	1,000,000	-- / --	0.0018	NO
Hexachlorobutadiene	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Hexachlorocyclopentadiene	2 / 38	1,800	4.40	IS66SS280001	100	0 / 38	0.044	NO
Hexachloroethane	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Indeno(1,2,3-cd)pyrene	26 / 38	720	58,000	IS66SS150001	HPAH	-- / --	--	YES
Isophorone	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
Naphthalene	3 / 38	800	2,300	IS66SS150001	LPAH	-- / --	--	YES
n-Nitroso-di-n-propylamine	0 / 38	1,800	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 38	1,800	--	--	200	-- / --	9.00	YES
Nitrobenzene	0 / 38	620	--	--	2,260	-- / --	0.27	NO
Pentachlorophenol	0 / 38	4,400	--	--	5,000	-- / --	0.88	NO

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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Phenanthrene	27 / 38	800	72,000	IS66SS150001	LPAH	-- / --	--	YES
Phenol	0 / 38	1,800	--	--	100	-- / --	18.0	YES
Pyrene	28 / 38	720	100,000	IS66SS150001	HPAH	-- / --	--	YES
PAH (LMW)	30 / 38	1,680	671,455	IS66SS150001	29,000	2 / 38	23.2	YES
PAH (HMW)	31 / 38	1,890	1,396,000	IS66SS150001	18,000	3 / 38	77.6	YES
Explosives (UG/KG)								
1,3,5-Trinitrobenzene	0 / 38	620	--	--	2,260	-- / --	0.27	NO
1,3-Dinitrobenzene	0 / 38	620	--	--	2,260	-- / --	0.27	NO
2,4,6-Trinitrotoluene	0 / 38	620	--	--	NSV	-- / --	NSV	NO
2-Amino-4,6-dinitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
HMX	0 / 38	620	--	--	NSV	-- / --	NSV	NO
Nitroglycerin	1 / 38	4,000	1,900	IS66SS310001	NSV	-- / --	NSV	YES
Nitroguanidine	0 / 38	200	--	--	NSV	-- / --	NSV	NO
Perchlorate	31 / 38	3.50	18.0	IS66SS070001	NSV	-- / --	NSV	YES
RDX	0 / 38	620	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 38	1,200	--	--	NSV	-- / --	NSV	NO
Volatile Organic Compounds (UG/KG)								
1,1,1-Trichloroethane	0 / 38	32.0	--	--	300	-- / --	0.11	NO
1,1,2,2-Tetrachloroethane	0 / 38	32.0	--	--	300	-- / --	0.11	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
1,1,2-Trichloroethane	0 / 38	32.0	--	--	300	-- / --	0.11	NO
1,1-Dichloroethane	0 / 38	32.0	--	--	300	-- / --	0.11	NO
1,1-Dichloroethene	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
1,2,4-Trichlorobenzene	0 / 38	32.0	--	--	100	-- / --	0.32	NO
1,2-Dibromo-3-chloropropane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
1,2-Dibromoethane	0 / 38	32.0	--	--	5,000	-- / --	0.0064	NO
1,2-Dichlorobenzene	0 / 38	32.0	--	--	100	-- / --	0.32	NO
1,2-Dichloroethane	0 / 38	32.0	--	--	870,000	-- / --	3.68E-05	NO

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1,2-Dichloropropane	0 / 38	32.0	--	--	300	-- / --	0.11	NO
1,3-Dichlorobenzene	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
1,4-Dichlorobenzene	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
2-Butanone	1 / 37	32.0	29.0	IS66SS310001	NSV	-- / --	NSV	YES
2-Hexanone	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
4-Methyl-2-pentanone	0 / 38	32.0	--	--	100,000	-- / --	3.20E-04	NO
Acetone	10 / 37	48.0	210	IS66SS310001	NSV	-- / --	NSV	YES
Benzene	0 / 38	32.0	--	--	100	-- / --	0.32	NO
Bromodichloromethane	0 / 38	32.0	--	--	450,000	-- / --	7.11E-05	NO
Bromoform	0 / 38	32.0	--	--	1,147,000	-- / --	2.79E-05	NO
Bromomethane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Carbon disulfide	1 / 38	32.0	0.90	IS66SS370001	NSV	-- / --	NSV	YES
Carbon tetrachloride	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Chlorobenzene	0 / 38	32.0	--	--	100	-- / --	0.32	NO
Chloroethane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Chloroform	1 / 38	32.0	4.60	IS66SS220001	300	0 / 38	0.015	NO
Chloromethane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
cis-1,2-Dichloroethene	0 / 38	32.0	--	--	300	-- / --	0.11	NO
cis-1,3-Dichloropropene	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Cyclohexane	0 / 38	32.0	--	--	100	-- / --	0.32	NO
Dibromochloromethane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Dichlorodifluoromethane (Freon-12)	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 38	32.0	--	--	100	-- / --	0.32	NO
Isopropylbenzene	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	1 / 38	32.0	3.70	IS66SS230001	NSV	-- / --	NSV	YES
Methylcyclohexane	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Methylene chloride	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Methyl-tert-butyl ether (MTBE)	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Styrene	3 / 38	32.0	16.0	IS66SS070001	100	0 / 38	0.16	NO
Tetrachloroethene	20 / 38	32.0	14.0	IS66SS310001	300	0 / 38	0.047	NO
Toluene	1 / 38	32.0	7.10	IS66SS230001	100	0 / 38	0.071	NO
trans-1,2-Dichloroethene	0 / 38	32.0	--	--	300	-- / --	0.11	NO

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trans-1,3-Dichloropropene	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Trichloroethene	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Trichlorofluoromethane (Freon-11)	0 / 38	32.0	--	--	NSV	-- / --	NSV	NO
Vinyl chloride	0 / 38	32.0	--	--	300	-- / --	0.11	NO
Xylene, total	0 / 38	32.0	--	--	100	-- / --	0.32	NO
Dioxin/Furans (PG/G)								
1,2,3,4,6,7,8-Heptachlorodibenzofuran	17 / 20	1.10	11.3	IS66SS340001	NSV	-- / --	NSV	YES
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	20 / 20	--	120	IS66SS380001	NSV	-- / --	NSV	YES
1,2,3,4,7,8,9-Heptachlorodibenzofuran	6 / 20	3.66	0.76	IS66SS340001	NSV	-- / --	NSV	YES
1,2,3,4,7,8-Hexachlorodibenzofuran	16 / 20	2.68	1.74	IS66SS270001	NSV	-- / --	NSV	YES
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	13 / 20	2.41	1.63	IS66SS380001	NSV	-- / --	NSV	YES
1,2,3,6,7,8-Hexachlorodibenzofuran	8 / 20	3.23	0.75	IS66SS340001	NSV	-- / --	NSV	YES
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	17 / 20	0.86	2.92	IS66SS380001	NSV	-- / --	NSV	YES
1,2,3,7,8,9-Hexachlorodibenzofuran	1 / 20	3.66	0.067	IS66SS440001	NSV	-- / --	NSV	YES
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	13 / 20	3.23	3.89	IS66SS380001	NSV	-- / --	NSV	YES
1,2,3,7,8-Pentachlorodibenzofuran	7 / 20	3.66	0.42	IS66SS310001	NSV	-- / --	NSV	YES
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	7 / 20	3.66	0.88	IS66SS380001	NSV	-- / --	NSV	YES
2,3,4,6,7,8-Hexachlorodibenzofuran	10 / 20	3.23	0.92	IS66SS340001	NSV	-- / --	NSV	YES
2,3,4,7,8-Pentachlorodibenzofuran	7 / 20	3.66	0.92	IS66SS270001	NSV	-- / --	NSV	YES
2,3,7,8-TCDD (dioxin)	0 / 20	1.46	--	--	1.00	-- / --	1.46	YES
2,3,7,8-Tetrachlorodibenzofuran	8 / 20	1.46	0.95	IS66SS270001	NSV	-- / --	NSV	YES
Octachlorodibenzofuran	17 / 20	4.81	41.0	IS66SS340001	NSV	-- / --	NSV	YES
Octachlorodibenzo-p-dioxin	20 / 20	--	16,900	IS66SS390001	NSV	-- / --	NSV	YES
Total heptachlorodibenzofuran	18 / 20	2.71	36.2	IS66SS340001	NSV	-- / --	NSV	YES
Total heptachlorodibenzo-p-dioxin	20 / 20	--	399	IS66SS380001	NSV	-- / --	NSV	YES
Total hexachlorodibenzofuran	18 / 20	2.68	20.6	IS66SS340001	NSV	-- / --	NSV	YES
Total hexachlorodibenzo-p-dioxin	20 / 20	--	38.5	IS66SS380001	NSV	-- / --	NSV	YES
Total pentachlorodibenzofuran	18 / 20	2.68	15.4	IS66SS340001	NSV	-- / --	NSV	YES
Other Parameters (MG/KG)								
pH	18 / 18	--	8.19	IS66SS080001	NSV	-- / --	NSV	YES
Total organic carbon	17 / 18	202	173,000	IS66SS150001	NSV	-- / --	NSV	YES

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TABLE 7-11
Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Inorganics (MG/KG)								
Aluminum	14 / 14	--	16,500	IS66SD02	25,500	0 / 14	0.65	NO
Antimony	6 / 14	3.30	4.70	IS66SD15	2.00	1 / 14	2.35	YES
Arsenic	12 / 14	1.10	13.8	IS66SD04	9.80	1 / 14	1.41	YES
Barium	14 / 14	--	170	IS66SD02	500	0 / 14	0.34	NO
Beryllium	9 / 14	1.50	0.84	IS66SD13	NSV	-- / --	NSV	YES
Cadmium	9 / 14	1.10	4.70	IS66SD14	0.99	1 / 14	4.75	YES
Calcium [2]	13 / 14	159	4,530	IS66SD14	NSV	-- / --	NSV	NO
Chromium	14 / 14	--	30.2	IS66SD02	43.4	0 / 14	0.70	NO
Cobalt	14 / 14	--	40.9	IS66SD02	50.0	0 / 14	0.82	NO
Copper	14 / 14	--	134	IS66SD14	31.6	3 / 14	4.24	YES
Cyanide	2 / 14	1.20	0.51	IS66SD09	0.10	2 / 14	5.10	YES
Iron	14 / 14	--	25,400	IS66SD02	20,000	3 / 14	1.27	YES
Lead	14 / 14	--	262	IS66SD14	35.8	7 / 14	7.32	YES
Magnesium [2]	14 / 14	--	1,690	IS66SD14	NSV	-- / --	NSV	NO
Manganese	14 / 14	--	593	IS66SD14	460	2 / 14	1.29	YES
Mercury	11 / 14	0.18	1.80	IS66SD15	0.18	3 / 14	10.0	YES
Nickel	14 / 14	--	31.6	IS66SD02	22.7	2 / 14	1.39	YES
Potassium [2]	14 / 14	--	977	IS66SD02	NSV	-- / --	NSV	NO
Selenium	10 / 14	2.00	0.77	IS66SD14	2.00	0 / 14	0.39	NO
Silver	10 / 14	0.87	17.0	IS66SD14	1.00	1 / 14	17.0	YES
Sodium [2]	2 / 14	526	789	IS66SD14	NSV	-- / --	NSV	NO
Thallium	10 / 14	2.10	0.23	IS66SD13	NSV	-- / --	NSV	YES
Vanadium	14 / 14	--	68.0	IS66SD02	57.0	1 / 14	1.19	YES
Zinc	14 / 14	--	414	IS66SD14	121	5 / 14	3.42	YES
Pesticide/Polychlorinated Biphenyls (UG/KG)								
4,4'-DDD	14 / 14	--	57.0	IS66SD08	4.88	11 / 14	11.7	YES

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TABLE 7-11
Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
4,4'-DDE	14 / 14	--	29.0	IS66SD08	3.16	11 / 14	9.18	YES
4,4'-DDT	9 / 14	12.0	39.0	IS66SD14	4.16	5 / 14	9.38	YES
Aldrin	0 / 14	6.30	--	--	2.00	-- / --	3.15	YES
alpha-BHC	0 / 14	6.30	--	--	6.00	-- / --	1.05	YES
alpha-Chlordane	4 / 14	2.60	5.30	IS66SD02	3.24	1 / 14	1.64	YES
Aroclor-1016	0 / 14	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1221	0 / 14	250	--	--	59.8	-- / --	4.18	YES
Aroclor-1232	0 / 14	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1242	0 / 14	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1248	0 / 14	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1254	1 / 14	120	830	IS66SD14	59.8	1 / 14	13.9	YES
Aroclor-1260	1 / 14	120	160	IS66SD03	59.8	1 / 14	2.68	YES
beta-BHC	1 / 14	6.30	1.20	IS66SD05	5.00	0 / 14	0.24	NO
delta-BHC	0 / 14	6.30	--	--	6,400	-- / --	9.84E-04	NO
Dieldrin	2 / 14	12.0	8.30	IS66SD08	1.90	1 / 14	4.37	YES
Endosulfan I	2 / 14	6.30	3.20	IS66SD13	2.90	1 / 14	1.10	YES
Endosulfan II	0 / 14	12.0	--	--	14.0	-- / --	0.86	NO
Endosulfan sulfate	0 / 14	12.0	--	--	5.40	-- / --	2.22	YES
Endrin	1 / 14	12.0	2.10	IS66SD04	2.22	0 / 14	0.95	NO
Endrin aldehyde	2 / 14	8.30	3.40	IS66SD02	2.22	2 / 14	1.53	YES
Endrin ketone	3 / 14	8.30	4.10	IS66SD04	2.22	2 / 14	1.85	YES
gamma-BHC (Lindane)	0 / 14	6.30	--	--	2.37	-- / --	2.66	YES
gamma-Chlordane	4 / 14	2.60	5.00	IS66SD04	2,800	0 / 14	0.0018	NO
Heptachlor	0 / 14	6.30	--	--	68.0	-- / --	0.093	NO
Heptachlor epoxide	0 / 14	6.30	--	--	2.47	-- / --	2.55	YES
Methoxychlor	3 / 14	43.0	35.0	IS66SD02	18.7	1 / 14	1.87	YES
Toxaphene	0 / 14	630	--	--	1.00	-- / --	630	YES
Semivolatile Organic Compounds (UG/KG)								

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Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,1-Biphenyl	0 / 14	1,200	--	--	1,220	-- / --	0.98	NO
2,2'-Oxybis(1-chloropropane)	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	2 / 14	3,100	7.40	IS66SD09	213	0 / 14	0.035	NO
2,4,6-Trichlorophenol	5 / 14	1,200	27.0	IS66SD13	213	0 / 14	0.13	NO
2,4-Dichlorophenol	5 / 14	1,200	23.0	IS66SD08	117	0 / 14	0.20	NO
2,4-Dimethylphenol	0 / 6	1,200	--	--	29.0	-- / --	41.4	YES
2,4-Dinitrophenol	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 14	1,200	--	--	41.6	-- / --	28.8	YES
2,6-Dinitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
2-Chloronaphthalene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
2-Chlorophenol	0 / 14	1,200	--	--	31.2	-- / --	38.5	YES
2-Methylnaphthalene	5 / 14	1,200	9.90	IS66SD12	20.2	0 / 14	0.49	NO
2-Methylphenol	0 / 14	1,200	--	--	12.0	-- / --	100	YES
2-Nitroaniline	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
2-Nitrophenol	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
3- and 4-Methylphenol	4 / 10	110	140	IS66SD14	NSV	-- / --	NSV	YES
3,3'-Dichlorobenzidine	0 / 6	1,200	--	--	127	-- / --	9.45	YES
3-Nitroaniline	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
4,6-Dinitro-2-methylphenol	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
4-Bromophenyl-phenylether	0 / 14	1,200	--	--	1,230	-- / --	0.98	NO
4-Chloro-3-methylphenol	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
4-Chloroaniline	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
4-Chlorophenyl-phenylether	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
4-Methylphenol	0 / 4	1,200	--	--	670	-- / --	1.79	YES
4-Nitroaniline	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
4-Nitrophenol	0 / 14	3,100	--	--	NSV	-- / --	NSV	NO
Acenaphthene	9 / 14	1,200	100	IS66SD05	6.70	8 / 14	14.9	YES
Acenaphthylene	9 / 14	1,200	23.0	IS66SD14	5.90	8 / 14	3.90	YES

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Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Acetophenone	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
Anthracene	11 / 14	1,200	260	IS66SD05	57.2	5 / 14	4.55	YES
Atrazine	5 / 14	1,200	7.30	IS66SD13	6.62	1 / 14	1.10	YES
Benzaldehyde	0 / 6	1,200	--	--	NSV	-- / --	NSV	NO
Benzo(a)anthracene	6 / 14	1,200	780	IS66SD12	108	6 / 14	7.22	YES
Benzo(a)pyrene	13 / 14	1,200	770	IS66SD12	150	11 / 14	5.13	YES
Benzo(b)fluoranthene	13 / 14	1,200	1,300	IS66SD12	27.2	12 / 14	47.8	YES
Benzo(g,h,i)perylene	12 / 14	1,200	430	IS66SD12	170	8 / 14	2.53	YES
Benzo(k)fluoranthene	13 / 14	1,200	640	IS66SD05	27.2	11 / 14	23.5	YES
bis(2-Chloroethoxy)methane	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
bis(2-Chloroethyl)ether	1 / 14	1,200	2.20	IS66SD09	NSV	-- / --	NSV	YES
bis(2-Ethylhexyl)phthalate	0 / 14	1,200	--	--	180	-- / --	6.67	YES
Butylbenzylphthalate	0 / 14	1,200	--	--	10,900	-- / --	0.11	NO
Caprolactam	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
Carbazole	1 / 14	1,200	170	IS66SD05	1,800	0 / 14	0.094	NO
Chrysene	13 / 14	1,200	730	IS66SD05	166	10 / 14	4.40	YES
Dibenz(a,h)anthracene	10 / 14	1,200	210	IS66SD12	33.0	9 / 14	6.36	YES
Dibenzofuran	0 / 14	1,200	--	--	415	-- / --	2.89	YES
Diethylphthalate	0 / 14	1,200	--	--	603	-- / --	1.99	YES
Dimethyl phthalate	2 / 14	1,200	5.50	IS66SD14	71.0	0 / 14	0.077	NO
Di-n-butylphthalate	0 / 14	1,200	--	--	6,470	-- / --	0.19	NO
Di-n-octylphthalate	0 / 14	1,200	--	--	61.0	-- / --	19.7	YES
Fluoranthene	14 / 14	--	1,500	IS66SD05	423	9 / 14	3.55	YES
Fluorene	8 / 14	1,200	110	IS66SD05	77.4	2 / 14	1.42	YES
Hexachlorobenzene	2 / 14	1,200	2.60	IS66SD11	20.0	0 / 14	0.13	NO
Hexachlorobutadiene	0 / 14	1,200	--	--	1.30	-- / --	923	YES
Hexachlorocyclopentadiene	2 / 14	1,200	6.60	IS66SD09	NSV	-- / --	NSV	YES
Hexachloroethane	0 / 14	1,200	--	--	1,027	-- / --	1.17	YES

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Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Indeno(1,2,3-cd)pyrene	12 / 14	1,200	420	IS66SD12	17.0	10 / 14	24.7	YES
Isophorone	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
Naphthalene	1 / 14	1,200	63.0	IS66SD12	176	0 / 14	0.36	NO
n-Nitroso-di-n-propylamine	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 14	1,200	--	--	2,680	-- / --	0.45	NO
Nitrobenzene	0 / 14	620	--	--	21.0	-- / --	29.5	YES
Pentachlorophenol	0 / 14	3,100	--	--	504	-- / --	6.15	YES
Phenanthrene	12 / 14	1,200	940	IS66SD05	204	7 / 14	4.61	YES
Phenol	1 / 14	1,200	8.80	IS66SD09	420	0 / 14	0.021	NO
Pyrene	13 / 14	1,200	1,100	IS66SD05	195	11 / 14	5.64	YES
Explosives (UG/KG)								
1,3,5-Trinitrobenzene	0 / 14	620	--	--	NSV	-- / --	NSV	NO
1,3-Dinitrobenzene	0 / 14	620	--	--	NSV	-- / --	NSV	NO
2,4,6-Trinitrotoluene	0 / 14	620	--	--	NSV	-- / --	NSV	NO
2-Amino-4,6-dinitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 14	1,200	--	--	NSV	-- / --	NSV	NO
HMX	0 / 14	620	--	--	NSV	-- / --	NSV	NO
Nitroglycerin	1 / 14	4,000	1,400	IS66SD06	NSV	-- / --	NSV	YES
Nitroguanidine	0 / 14	320	--	--	NSV	-- / --	NSV	NO
Perchlorate	1 / 11	1.30	7.70	IS66SD03	NSV	-- / --	NSV	YES
RDX	0 / 14	620	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 10	120	--	--	NSV	-- / --	NSV	NO
Volatile Organic Compounds (UG/KG)								
1,1,1-Trichloroethane	0 / 14	55.0	--	--	30.2	-- / --	1.82	YES
1,1,2,2-Tetrachloroethane	0 / 14	55.0	--	--	1,360	-- / --	0.040	NO

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Screening Statistics - Site 66 Sediment - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,1,2-Trichloroethane	0 / 14	55.0	--	--	1,240	-- / --	0.044	NO
1,1-Dichloroethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,1-Dichloroethene	0 / 14	55.0	--	--	31.0	-- / --	1.77	YES
1,2,4-Trichlorobenzene	0 / 14	55.0	--	--	2,100	-- / --	0.026	NO
1,2-Dibromo-3-chloropropane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dibromoethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dichlorobenzene	0 / 14	55.0	--	--	16.5	-- / --	3.33	YES
1,2-Dichloroethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dichloropropane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
1,3-Dichlorobenzene	0 / 14	55.0	--	--	4,430	-- / --	0.012	NO
1,4-Dichlorobenzene	0 / 14	55.0	--	--	599	-- / --	0.092	NO
2-Butanone	4 / 14	49.0	25.0	IS66SD07	NSV	-- / --	NSV	YES
2-Hexanone	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
4-Methyl-2-pentanone	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Acetone	3 / 14	79.0	110	IS66SD07	NSV	-- / --	NSV	YES
Benzene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Bromodichloromethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Bromoform	0 / 14	55.0	--	--	654	-- / --	0.084	NO
Bromomethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Carbon disulfide	0 / 14	55.0	--	--	0.85	-- / --	64.6	YES
Carbon tetrachloride	0 / 14	55.0	--	--	64.2	-- / --	0.86	NO
Chlorobenzene	0 / 14	55.0	--	--	8.42	-- / --	6.53	YES
Chloroethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Chloroform	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Chloromethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
cis-1,2-Dichloroethene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
cis-1,3-Dichloropropene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO

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NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Cyclohexane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Dibromochloromethane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Dichlorodifluoromethane (Freon-12)	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 14	55.0	--	--	1,100	-- / --	0.050	NO
Isopropylbenzene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Methylcyclohexane	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Methylene chloride	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Methyl-tert-butyl ether (MTBE)	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Styrene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Tetrachloroethene	10 / 14	55.0	17.0	IS66SD14	468	0 / 14	0.036	NO
Toluene	1 / 14	55.0	24.0	IS66SD10	NSV	-- / --	NSV	YES
trans-1,2-Dichloroethene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
trans-1,3-Dichloropropene	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Trichloroethene	0 / 14	55.0	--	--	96.9	-- / --	0.57	NO
Trichlorofluoromethane (Freon-11)	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Vinyl chloride	0 / 14	55.0	--	--	NSV	-- / --	NSV	NO
Xylene, total	0 / 14	55.0	--	--	25.2	-- / --	2.18	YES
Dioxin/Furans (PG/G)								
1,2,3,4,6,7,8-Heptachlorodibenzofuran	9 / 10	0.88	24.1	IS66SD15	NSV	-- / --	NSV	YES
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	10 / 10	--	75.1	IS66SD15	NSV	-- / --	NSV	YES
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0 / 10	5.81	--	--	NSV	-- / --	NSV	NO
1,2,3,4,7,8-Hexachlorodibenzofuran	4 / 10	4.98	5.74	IS66SD15	NSV	-- / --	NSV	YES
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2 / 10	4.38	0.46	IS66SD08	NSV	-- / --	NSV	YES
1,2,3,6,7,8-Hexachlorodibenzofuran	3 / 10	4.98	2.27	IS66SD15	NSV	-- / --	NSV	YES
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	7 / 10	3.22	3.10	IS66SD15	NSV	-- / --	NSV	YES
1,2,3,7,8,9-Hexachlorodibenzofuran	0 / 10	8.32	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	7 / 10	3.22	3.88	IS66SD15	NSV	-- / --	NSV	YES

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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,2,3,7,8-Pentachlorodibenzofuran	0 / 10	5.81	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	2 / 10	5.81	1.07	IS66SD15	NSV	-- / --	NSV	YES
2,3,4,6,7,8-Hexachlorodibenzofuran	1 / 10	4.98	2.20	IS66SD15	NSV	-- / --	NSV	YES
2,3,4,7,8-Pentachlorodibenzofuran	0 / 10	5.81	--	--	NSV	-- / --	NSV	NO
2,3,7,8-TCDD (dioxin)	0 / 10	2.32	--	--	8.50E-04	-- / --	2,729	YES
2,3,7,8-Tetrachlorodibenzofuran	5 / 10	2.32	3.46	IS66SD15	NSV	-- / --	NSV	YES
Octachlorodibenzofuran	10 / 10	--	33.0	IS66SD12	NSV	-- / --	NSV	YES
Octachlorodibenzo-p-dioxin	10 / 10	--	1,790	IS66SD08	NSV	-- / --	NSV	YES
Total heptachlorodibenzofuran	10 / 10	--	50.2	IS66SD15	NSV	-- / --	NSV	YES
Total heptachlorodibenzo-p-dioxin	10 / 10	--	253	IS66SD12	NSV	-- / --	NSV	YES
Total hexachlorodibenzofuran	10 / 10	--	26.5	IS66SD15	NSV	-- / --	NSV	YES
Total hexachlorodibenzo-p-dioxin	10 / 10	--	30.4	IS66SD15	NSV	-- / --	NSV	YES
Total pentachlorodibenzofuran	9 / 10	3.34	18.7	IS66SD15	NSV	-- / --	NSV	YES
Other Parameters (MG/KG)								
pH	14 / 14	--	8.10	IS66SD12	NSV	-- / --	NSV	YES
Total organic carbon	14 / 14	--	146,000	IS66SD03	NSV	-- / --	NSV	YES

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TABLE 7-12
Screening Statistics - Site 66 Groundwater - Step 2
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NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Dissolved Metals (UG/L)								
Aluminum	3 / 4	100	115	IS66GW030910	87.0	2 / 4	1.32	YES
Antimony	3 / 4	0.50	0.19	IS66GW030910	30.0	0 / 4	0.0063	NO
Arsenic	0 / 4	11.3	--	--	5.00	-- / --	2.26	YES
Barium	4 / 4	--	155	IS66GW030910	4.00	4 / 4	38.8	YES
Beryllium	2 / 4	0.20	0.23	IS66GW040910	0.66	0 / 4	0.35	NO
Cadmium	3 / 4	0.20	0.24	IS66GW040910	0.21	1 / 4	1.16	YES
Calcium [2]	4 / 4	--	40,500	IS66GW030910	NSV	-- / --	NSV	NO
Chromium	0 / 4	4.10	--	--	69.9	-- / --	0.059	NO
Cobalt	4 / 4	--	40.0	IS66GW040910	23.0	2 / 4	1.74	YES
Copper	0 / 4	10.0	--	--	7.20	-- / --	1.39	YES
Iron	4 / 4	--	19,900	IS66GW030910	300	4 / 4	66.3	YES
Lead	1 / 4	2.70	1.20	IS66GW020910	1.90	0 / 4	0.63	NO
Magnesium [2]	4 / 4	--	12,800	IS66GW040910	NSV	-- / --	NSV	NO
Manganese	4 / 4	--	856	IS66GW050910	120	4 / 4	7.13	YES
Mercury	0 / 4	0.10	--	--	0.026	-- / --	3.85	YES
Nickel	2 / 4	4.00	44.6	IS66GW040910	41.9	1 / 4	1.06	YES
Potassium [2]	3 / 4	838	6,280	IS66GW030910	NSV	-- / --	NSV	NO
Selenium	0 / 4	7.00	--	--	1.00	-- / --	7.00	YES
Silver	0 / 4	4.00	--	--	2.44	-- / --	1.64	YES
Sodium [2]	4 / 4	--	122,000	IS66GW030910	NSV	-- / --	NSV	NO
Thallium	0 / 4	0.40	--	--	0.80	-- / --	0.50	NO
Vanadium	1 / 4	3.40	1.60	IS66GW020910	20.0	0 / 4	0.080	NO
Zinc	2 / 4	2.10	40.3	IS66GW040910	95.2	0 / 4	0.42	NO
Pesticide/Polychlorinated Biphenyls (UG/L)								
4,4'-DDD	0 / 4	0.054	--	--	0.011	-- / --	4.91	YES
4,4'-DDE	0 / 4	0.054	--	--	105	-- / --	5.14E-04	NO

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Screening Statistics - Site 66 Groundwater - Step 2
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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
4,4'-DDT	0 / 4	0.054	--	--	5.00E-04	-- / --	108	YES
Aldrin	0 / 4	0.027	--	--	3.00	-- / --	0.0090	NO
alpha-BHC	0 / 4	0.027	--	--	2.20	-- / --	0.012	NO
alpha-Chlordane	0 / 4	0.027	--	--	0.0022	-- / --	12.3	YES
Aroclor-1016	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1221	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1232	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1242	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1248	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1254	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
Aroclor-1260	0 / 4	0.27	--	--	7.40E-05	-- / --	3,649	YES
beta-BHC	0 / 4	0.027	--	--	2.20	-- / --	0.012	NO
delta-BHC	1 / 4	0.026	0.030	IS66GW040910	141	0 / 4	2.13E-04	NO
Dieldrin	0 / 4	0.054	--	--	0.056	-- / --	0.96	NO
Endosulfan I	0 / 4	0.027	--	--	0.051	-- / --	0.53	NO
Endosulfan II	0 / 4	0.054	--	--	0.051	-- / --	1.06	YES
Endosulfan sulfate	0 / 4	0.054	--	--	0.051	-- / --	1.06	YES
Endrin	0 / 4	0.054	--	--	0.036	-- / --	1.50	YES
Endrin aldehyde	0 / 4	0.054	--	--	0.036	-- / --	1.50	YES
Endrin ketone	0 / 4	0.054	--	--	0.036	-- / --	1.50	YES
gamma-BHC (Lindane)	0 / 4	0.027	--	--	0.010	-- / --	2.70	YES
gamma-Chlordane	0 / 4	0.027	--	--	0.0022	-- / --	12.3	YES
Heptachlor	1 / 4	0.026	0.021	IS66GW040910	0.0019	1 / 4	11.1	YES
Heptachlor epoxide	0 / 4	0.027	--	--	0.0019	-- / --	14.2	YES
Methoxychlor	0 / 4	0.27	--	--	0.019	-- / --	14.2	YES
Toxaphene	0 / 4	0.54	--	--	2.00E-04	-- / --	2,700	YES
Semivolatile Organic Compounds (UG/L)								
1,1-Biphenyl	0 / 4	7.90	--	--	14.0	-- / --	0.56	NO

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Screening Statistics - Site 66 Groundwater - Step 2
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NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
2,2'-Oxybis(1-chloropropane)	0 / 4	0.16	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	0 / 3	20.0	--	--	63.0	-- / --	0.32	NO
2,4,6-Trichlorophenol	0 / 3	0.53	--	--	4.90	-- / --	0.11	NO
2,4-Dichlorophenol	0 / 3	7.90	--	--	11.0	-- / --	0.72	NO
2,4-Dimethylphenol	0 / 3	7.90	--	--	2,120	-- / --	0.0037	NO
2,4-Dinitrophenol	0 / 4	0.53	--	--	30.0	-- / --	0.018	NO
2,4-Dinitrotoluene	0 / 4	0.10	--	--	46.0	-- / --	0.0022	NO
2,6-Dinitrotoluene	0 / 4	0.10	--	--	81.0	-- / --	0.0012	NO
2-Chloronaphthalene	0 / 4	7.90	--	--	620	-- / --	0.013	NO
2-Chlorophenol	0 / 3	7.90	--	--	24.0	-- / --	0.33	NO
2-Methylnaphthalene	0 / 4	7.90	--	--	4.70	-- / --	1.68	YES
2-Methylphenol	0 / 3	7.90	--	--	13.0	-- / --	0.61	NO
2-Nitroaniline	0 / 4	0.16	--	--	2,300	-- / --	6.96E-05	NO
2-Nitrophenol	0 / 3	7.90	--	--	1,920	-- / --	0.0041	NO
3- and 4-Methylphenol	0 / 3	7.90	--	--	NSV	-- / --	NSV	NO
3,3'-Dichlorobenzidine	0 / 3	0.10	--	--	4.50	-- / --	0.022	NO
3-Nitroaniline	0 / 4	20.0	--	--	1,000	-- / --	0.020	NO
4,6-Dinitro-2-methylphenol	0 / 4	0.79	--	--	3.20	-- / --	0.25	NO
4-Bromophenyl-phenylether	0 / 4	7.90	--	--	3.90	-- / --	2.03	YES
4-Chloro-3-methylphenol	0 / 3	7.90	--	--	10.0	-- / --	0.79	NO
4-Chloroaniline	0 / 4	7.90	--	--	232	-- / --	0.034	NO
4-Chlorophenyl-phenylether	0 / 4	7.90	--	--	7.30	-- / --	1.08	YES
4-Methylphenol					543	4		
4-Nitroaniline	0 / 4	0.10	--	--	317	-- / --	3.15E-04	NO
4-Nitrophenol	0 / 4	0.53	--	--	60.0	-- / --	0.0088	NO
Acenaphthene	0 / 4	7.90	--	--	5.80	-- / --	1.36	YES
Acenaphthylene	0 / 4	7.90	--	--	104	-- / --	0.076	NO
Acetophenone	0 / 4	7.90	--	--	1,570	-- / --	0.0050	NO

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NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Anthracene	0 / 4	7.90	--	--	0.012	-- / --	658	YES
Atrazine	0 / 4	0.10	--	--	1.80	-- / --	0.056	NO
Benzaldehyde	0 / 4	7.90	--	--	22.0	-- / --	0.36	NO
Benzo(a)anthracene	0 / 4	0.10	--	--	0.018	-- / --	5.56	YES
Benzo(a)pyrene	0 / 4	0.10	--	--	0.015	-- / --	6.67	YES
Benzo(b)fluoranthene	0 / 4	0.10	--	--	20.5	-- / --	0.0049	NO
Benzo(g,h,i)perylene	0 / 4	7.90	--	--	7.64	-- / --	1.03	YES
Benzo(k)fluoranthene	0 / 4	0.10	--	--	NSV	-- / --	NSV	NO
bis(2-Chloroethoxy)methane	0 / 4	7.90	--	--	11,000	-- / --	7.18E-04	NO
bis(2-Chloroethyl)ether	0 / 4	0.10	--	--	2,380	-- / --	4.20E-05	NO
bis(2-Ethylhexyl)phthalate	0 / 4	1.20	--	--	16.0	-- / --	0.075	NO
Butylbenzylphthalate	0 / 4	7.90	--	--	19.0	-- / --	0.42	NO
Caprolactam	0 / 4	7.90	--	--	NSV	-- / --	NSV	NO
Carbazole	0 / 4	7.90	--	--	1,000	-- / --	0.0079	NO
Chrysene	0 / 4	0.10	--	--	NSV	-- / --	NSV	NO
Dibenz(a,h)anthracene	0 / 4	0.10	--	--	NSV	-- / --	NSV	NO
Dibenzofuran	1 / 4	0.10	0.28	IS66GW030910	3.70	0 / 4	0.076	NO
Diethylphthalate	0 / 4	7.90	--	--	210	-- / --	0.038	NO
Dimethyl phthalate	0 / 4	7.90	--	--	330	-- / --	0.024	NO
Di-n-butylphthalate	0 / 4	7.90	--	--	19.0	-- / --	0.42	NO
Di-n-octylphthalate	0 / 4	7.90	--	--	22.0	-- / --	0.36	NO
Fluoranthene	0 / 4	7.90	--	--	0.040	-- / --	198	YES
Fluorene	0 / 4	7.90	--	--	3.00	-- / --	2.63	YES
Hexachlorobenzene	0 / 4	0.10	--	--	3.00E-04	-- / --	333	YES
Hexachlorobutadiene	0 / 4	0.10	--	--	1.30	-- / --	0.077	NO
Hexachlorocyclopentadiene	0 / 4	7.90	--	--	5.20	-- / --	1.52	YES
Hexachloroethane	0 / 4	0.10	--	--	12.0	-- / --	0.0083	NO
Indeno(1,2,3-cd)pyrene	0 / 4	0.10	--	--	4.31	-- / --	0.023	NO

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Screening Statistics - Site 66 Groundwater - Step 2
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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Isophorone	0 / 4	7.90	--	--	117,000	-- / --	6.75E-05	NO
Naphthalene	1 / 4	0.10	1.70	IS66GW030910	1.10	1 / 4	1.55	YES
n-Nitroso-di-n-propylamine	0 / 4	0.10	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 4	7.90	--	--	117	-- / --	0.068	NO
Nitrobenzene	0 / 4	0.12	--	--	27,000	-- / --	4.44E-06	NO
Pentachlorophenol	0 / 4	0.53	--	--	0.50	-- / --	1.06	YES
Phenanthrene	0 / 4	7.90	--	--	0.40	-- / --	19.8	YES
Phenol	0 / 3	7.90	--	--	4.00	-- / --	1.98	YES
Pyrene	0 / 4	7.90	--	--	0.025	-- / --	316	YES
Explosives (UG/L)								
1,3,5-Trinitrobenzene	0 / 4	0.12	--	--	11.0	-- / --	0.011	NO
1,3-Dinitrobenzene	0 / 4	0.12	--	--	40.0	-- / --	0.0030	NO
2,4,6-Trinitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
2-Amino-4,6-dinitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
HMX	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
Nitroglycerin	0 / 4	2.00	--	--	NSV	-- / --	NSV	NO
Nitroguanidine	0 / 4	6.00	--	--	NSV	-- / --	NSV	NO
Perchlorate	0 / 4	0.25	--	--	NSV	-- / --	NSV	NO
RDX	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 4	0.12	--	--	NSV	-- / --	NSV	NO
Volatile Organic Compounds (UG/L)								
1,1,1-Trichloroethane	0 / 4	0.50	--	--	11.0	-- / --	0.045	NO
1,1,2,2-Tetrachloroethane	0 / 4	0.50	--	--	111	-- / --	0.0045	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 4	0.50	--	--	NSV	-- / --	NSV	NO

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AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,1,2-Trichloroethane	0 / 4	0.50	--	--	1,200	-- / --	4.17E-04	NO
1,1-Dichloroethane	0 / 4	0.50	--	--	47.0	-- / --	0.011	NO
1,1-Dichloroethene	0 / 4	0.50	--	--	25.0	-- / --	0.020	NO
1,2,4-Trichlorobenzene	0 / 4	0.50	--	--	24.0	-- / --	0.021	NO
1,2-Dibromo-3-chloropropane	0 / 4	1.00	--	--	216	-- / --	0.0046	NO
1,2-Dibromoethane	0 / 4	0.50	--	--	18,000	-- / --	2.78E-05	NO
1,2-Dichlorobenzene	0 / 4	0.50	--	--	0.70	-- / --	0.71	NO
1,2-Dichloroethane	0 / 4	0.50	--	--	100	-- / --	0.0050	NO
1,2-Dichloropropane	0 / 4	0.50	--	--	5,700	-- / --	8.77E-05	NO
1,3-Dichlorobenzene	0 / 4	0.50	--	--	150	-- / --	0.0033	NO
1,4-Dichlorobenzene	0 / 4	0.50	--	--	26.0	-- / --	0.019	NO
2-Butanone	0 / 4	2.50	--	--	14,000	-- / --	1.79E-04	NO
2-Hexanone	0 / 4	2.50	--	--	99.0	-- / --	0.025	NO
4-Methyl-2-pentanone	0 / 4	2.50	--	--	170	-- / --	0.015	NO
Acetone	0 / 4	6.70	--	--	1,500	-- / --	0.0045	NO
Benzene	0 / 4	0.50	--	--	370	-- / --	0.0014	NO
Bromodichloromethane	0 / 4	0.50	--	--	11,000	-- / --	4.55E-05	NO
Bromoform	0 / 4	0.50	--	--	320	-- / --	0.0016	NO
Bromomethane	0 / 4	1.00	--	--	110	-- / --	0.0091	NO
Carbon disulfide	0 / 4	0.50	--	--	0.92	-- / --	0.54	NO
Carbon tetrachloride	0 / 4	0.50	--	--	13.3	-- / --	0.038	NO
Chlorobenzene	0 / 4	0.50	--	--	1.30	-- / --	0.38	NO
Chloroethane	0 / 4	1.00	--	--	NSV	-- / --	NSV	NO
Chloroform	0 / 4	0.50	--	--	1.80	-- / --	0.28	NO
Chloromethane	0 / 4	2.60	--	--	5,500	-- / --	4.73E-04	NO
cis-1,2-Dichloroethene	0 / 4	0.50	--	--	590	-- / --	8.47E-04	NO
cis-1,3-Dichloropropene	0 / 4	0.50	--	--	0.055	-- / --	9.09	YES
Cyclohexane	0 / 4	0.50	--	--	329	-- / --	0.0015	NO

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Dibromochloromethane	0 / 4	0.50	--	--	11,000	-- / --	4.55E-05	NO
Dichlorodifluoromethane (Freon-12)	0 / 4	1.00	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 4	0.50	--	--	90.0	-- / --	0.0056	NO
Isopropylbenzene	0 / 4	0.50	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 4	0.75	--	--	3,200	-- / --	2.34E-04	NO
Methylcyclohexane	0 / 4	0.50	--	--	452	-- / --	0.0011	NO
Methylene chloride	0 / 4	2.50	--	--	98.1	-- / --	0.025	NO
Methyl-tert-butyl ether (MTBE)	0 / 4	0.50	--	--	11,070	-- / --	4.52E-05	NO
Styrene	0 / 4	0.50	--	--	72.0	-- / --	0.0069	NO
Tetrachloroethene	0 / 4	0.50	--	--	111	-- / --	0.0045	NO
Toluene	1 / 4	0.50	5.50	IS66GW030910	2.00	1 / 4	2.75	YES
trans-1,2-Dichloroethene	0 / 4	0.50	--	--	590	-- / --	8.47E-04	NO
trans-1,3-Dichloropropene	0 / 4	0.50	--	--	0.055	-- / --	9.09	YES
Trichloroethene	0 / 4	0.50	--	--	21.0	-- / --	0.024	NO
Trichlorofluoromethane (Freon-11)	0 / 4	1.00	--	--	NSV	-- / --	NSV	NO
Vinyl chloride	0 / 4	1.00	--	--	930	-- / --	0.0011	NO
Xylene, total	0 / 4	1.50	--	--	13.0	-- / --	0.12	NO
Dioxin/Furans (NG/L)								
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0 / 4	0.026	--	--	NSV	-- / --	NSV	NO
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,4,7,8-Hexachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,6,7,8-Hexachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8,9-Hexachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8-Pentachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits
2 - Macronutrient - Not considered to be a COPC

TABLE 7-12
Screening Statistics - Site 66 Groundwater - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
2,3,4,6,7,8-Hexachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
2,3,4,7,8-Pentachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
2,3,7,8-TCDD (dioxin)	0 / 4	0.011	--	--	3.10E-06	-- / --	3,516	YES
2,3,7,8-Tetrachlorodibenzofuran	0 / 4	0.011	--	--	NSV	-- / --	NSV	NO
Octachlorodibenzofuran	0 / 4	0.054	--	--	NSV	-- / --	NSV	NO
Octachlorodibenzo-p-dioxin	1 / 4	0.020	0.14	IS66GW030910	NSV	-- / --	NSV	YES
Total heptachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
Total heptachlorodibenzo-p-dioxin	2 / 4	0.027	0.0061	IS66GW030910	NSV	-- / --	NSV	YES
Total hexachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
Total hexachlorodibenzo-p-dioxin	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
Total pentachlorodibenzofuran	0 / 4	0.027	--	--	NSV	-- / --	NSV	NO
Total tetrachlorodibenzo-p-dioxin	0 / 4	0.011	--	--	NSV	-- / --	NSV	NO
Other Parameters (MG/L)								
Hardness	4 / 4	--	140	IS66GW030910	NSV	-- / --	--	--

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits
2 - Macronutrient - Not considered to be a COPC

TABLE 7-13
Calculation of 2,3,7,8-TCDD Equivalents for Groundwater - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Frequency of Detection	Maximum	Toxicity Equivalents Factors[1]	Bioaccumulation Equivalence Factors[1]	2,3,7,8-TCDD Equivalent
Dioxins (ug/L)					
2,3,7,8-TCDD (dioxin)	0 / 4	--	1.0	1.0	
1,2,3,7,8-Pentachlorodebenzo-p-dioxin	0 / 4	--	1.0	0.9	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0 / 4	--	0.1	0.3	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0 / 4	--	0.1	0.1	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0 / 4	--	0.1	0.1	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0 / 4	--	0.01	0.05	
Octachlorodibenzo-p-dioxin	1 / 4	1.42E-04	0.001	0.01	1.42E-09
Furans (ug/L)					
2,3,7,8-Tetrachlorodibenzofuran	0 / 4	--	0.1	0.8	
1,2,3,7,8-Pentachlorodibenzofuran	0 / 4	--	0.05	0.2	
2,3,4,7,8-Pentachlorodibenzofuran	0 / 4	--	0.5	1.6	
1,2,3,4,7,8-Hexachlorodibenzofuran	0 / 4	--	0.1	0.08	
1,2,3,6,7,8-Hexachlorodibenzofuran	0 / 4	--	0.1	0.2	
2,3,4,6,7,8-Hexachlorodibenzofuran	0 / 4	--	0.1	0.7	
1,2,3,7,8,9-Hexachlorodibenzofuran	0 / 4	--	0.1	0.6	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0 / 4	--	0.01	0.01	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0 / 4	--	0.01	0.4	
Octachlorodibenzofuran	0 / 4	--	0.001	0.02	
			SUM		1.42E-09
			Screening Value[2]		**Hazard Quotient**
			3.10E-09		**0.5**

[1] TEFs and BEFs from USEPA, 1995 (source of screening value)

[2] EPA Region 3 Screening Value for 2,3,7,8-TCDD (dioxin)

TABLE 7-14
Screening Statistics - Site 66 Ash - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
Inorganics (MG/KG)								
Aluminum	6 / 6	--	11,100	IS66AH08	50.0	9 / 6	222	YES
Antimony	2 / 6	1.20	0.37	IS66AH09	78.0	3 / 6	0.0047	NO
Arsenic	6 / 6	--	123	IS66AH07	18.0	9 / 6	6.83	YES
Barium	6 / 6	--	201	IS66AH08	330	3 / 6	0.61	NO
Beryllium	6 / 6	--	3.00	IS66AH07	40.0	3 / 6	0.075	NO
Cadmium	6 / 6	--	0.49	IS66AH05	32.0	3 / 6	0.015	NO
Calcium [2]	6 / 6	--	5,310	IS66AH08	NSV	-- / --	NSV	NO
Chromium	6 / 6	--	28.8	IS66AH07	0.40	9 / 6	72.0	YES
Cobalt	6 / 6	--	17.2	IS66AH04	13.0	5 / 6	1.32	YES
Copper	6 / 6	--	43.6	IS66AH06	70.0	3 / 6	0.62	NO
Cyanide	0 / 6	0.76	--	--	0.10	-- / --	7.6	YES
Iron	6 / 6	--	51,300	IS66AH07	200	9 / 6	257	YES
Lead	6 / 6	--	49.0	IS66AH05	120	3 / 6	0.41	NO
Magnesium [2]	6 / 6	--	960	IS66AH05	NSV	-- / --	NSV	NO
Manganese	6 / 6	--	455	IS66AH09	220	6 / 6	2.07	YES
Mercury	6 / 6	--	0.67	IS66AH07	0.10	9 / 6	6.70	YES
Nickel	6 / 6	--	38.4	IS66AH08	38.0	4 / 6	1.01	YES
Potassium [2]	6 / 6	--	1,090	IS66AH08	NSV	-- / --	NSV	NO
Selenium	6 / 6	--	8.10	IS66AH09	0.52	9 / 6	15.6	YES
Silver	6 / 6	--	0.14	IS66AH05	560	3 / 6	2.50E-04	NO
Sodium [2]	6 / 6	--	399	IS66AH09	NSV	-- / --	NSV	NO
Thallium	6 / 6	--	1.90	IS66AH07	1.00	6 / 6	1.90	YES
Vanadium	6 / 6	--	150	IS66AH09	2.00	9 / 6	75.0	YES
Zinc	6 / 6	--	59.0	IS66AH05	120	3 / 6	0.49	NO
Dioxin/Furans (PG/G)								
1,2,3,4,6,7,8-Heptachlorodibenzofuran	3 / 6	10,040	6.36	IS66AH08	NSV	-- / --	NSV	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits
2 - Macronutrient - Not considered to be a COPC

TABLE 7-14
Screening Statistics - Site 66 Ash - Step 2
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Preliminary COPC?
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	3 / 6	10,040	73.3	IS66AH08	NSV	-- / --	NSV	YES
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0 / 6	10,040	--	--	NSV	-- / --	NSV	NO
1,2,3,4,7,8-Hexachlorodibenzofuran	2 / 6	10,040	3.04	IS66AH09	NSV	-- / --	NSV	YES
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0 / 6	10,040	--	--	NSV	-- / --	NSV	NO
1,2,3,6,7,8-Hexachlorodibenzofuran	1 / 6	10,040	1.15	IS66AH09	NSV	-- / --	NSV	YES
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	1 / 6	10,040	2.01	IS66AH08	NSV	-- / --	NSV	YES
1,2,3,7,8,9-Hexachlorodibenzofuran	1 / 6	10,040	0.19	IS66AH09	NSV	-- / --	NSV	YES
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0 / 6	10,040	--	--	NSV	-- / --	NSV	NO
1,2,3,7,8-Pentachlorodibenzofuran	3 / 6	10,040	9.41	IS66AH09	NSV	-- / --	NSV	YES
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1 / 6	10,040	0.32	IS66AH09	NSV	-- / --	NSV	YES
2,3,4,6,7,8-Hexachlorodibenzofuran	1 / 6	10,040	0.13	IS66AH07	NSV	-- / --	NSV	YES
2,3,4,7,8-Pentachlorodibenzofuran	2 / 6	10,040	3.78	IS66AH09	NSV	-- / --	NSV	YES
2,3,7,8-TCDD (dioxin)	0 / 6	4,016	--	--	1.00	-- / --	4,016	YES
2,3,7,8-Tetrachlorodibenzofuran	3 / 6	4,016	16.8	IS66AH09	NSV	-- / --	NSV	YES
Octachlorodibenzofuran	2 / 6	20,081	8.62	IS66AH08	NSV	-- / --	NSV	YES
Octachlorodibenzo-p-dioxin	6 / 6	--	654	IS66AH08	NSV	-- / --	NSV	YES
Total heptachlorodibenzofuran	3 / 6	10,040	16.8	IS66AH08	NSV	-- / --	NSV	YES
Total heptachlorodibenzo-p-dioxin	6 / 6	--	129	IS66AH08	NSV	-- / --	NSV	YES
Total hexachlorodibenzofuran	3 / 6	10,040	10.7	IS66AH09	NSV	-- / --	NSV	YES
Total hexachlorodibenzo-p-dioxin	3 / 6	10,040	10.5	IS66AH08	NSV	-- / --	NSV	YES
Total pentachlorodibenzofuran	4 / 6	10,040	71.9	IS66AH09	NSV	-- / --	NSV	YES
Total pentachlorodibenzo-p-dioxin	2 / 6	10,040	2.06	IS66AH09	NSV	-- / --	NSV	YES
Total tetrachlorodibenzofuran	4 / 6	4,016	155	IS66AH09	NSV	-- / --	NSV	YES
Total tetrachlorodibenzo-p-dioxin	3 / 6	4,016	5.26	IS66AH09	NSV	-- / --	NSV	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits
2 - Macronutrient - Not considered to be a COPC

TABLE 7-15
Screening Statistics - Site 66 - Mammal/Bird Eco-SSLs
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Arithmetic Mean	Mammal Eco-SSL	Frequency of Exceedance	Maximum Hazard Quotient[1]	Mean Hazard Quotient[1]	Bird Eco-SSL	Frequency of Exceedance	Maximum Hazard Quotient[1]	Mean Hazard Quotient[1]
Inorganics (MG/KG)												
Arsenic	36 / 38	1.10	108.0	8.79	46.0	1 / 38	2.3	0.2	43	1 / 38	2.5	0.2
Barium	38 / 38	--	200	67.47	2,000	0 / 38	0.1	0.0	--	-- / --	--	--
Beryllium	24 / 38	0.57	2.90	0.50	21.0	0 / 38	0.1	0.0	--	-- / --	--	--
Cadmium	2 / 38	0.59	1.10	0.11	0.77	1 / 38	1.4	0.1	0.36	1 / 38	3.1	0.3
Chromium	38 / 38	--	28.1	14.24	26	1 / 38	1.1	0.5	34	0 / 38	0.8	0.4
Cobalt	38 / 38	--	17.9	6.35	120	0 / 38	0.1	0.1	230	0 / 38	0.1	0.0
Copper	38 / 38	--	56.9	18.54	49.0	1 / 38	1.2	0.4	28	8 / 38	2.0	0.7
Lead	38 / 38	--	305.0	52.47	56	7 / 38	5.4	0.9	11.0	36 / 38	27.7	4.8
Manganese	38 / 38	--	521	196.04	4,000	0 / 38	0.1	0.0	4,300	0 / 38	0.1	0.0
Nickel	38 / 38	--	90.4	12.87	130	0 / 38	0.7	0.1	210	0 / 38	0.4	0.1
Silver	25 / 38	0.58	0.55	0.14	4.2	0 / 38	0.1	0.0	14	0 / 38	0.0	0.0
Vanadium	38 / 38	--	115	33.71	7.8	38 / 38	14.7	4.3	280	0 / 38	0.4	0.1
Zinc	38 / 38	--	373	73.31	79	9 / 38	4.7	0.9	46	13 / 38	8.1	1.6
Pesticides (UG/KG)												
4,4'-DDT	7 / 38	6.70	640.0	20.09	93	1 / 38	6.9	0.2	63	1 / 38	10.2	0.3
Dieldrin	15 / 38	7.20	71.0	3.56	6.9	15 / 38	10.3	0.5	0.032	15 / 38	2,219	111
PAHs (UG/KG)												
PAH (LMW)	30 / 38	1,680	671,455	19,877	100,000	1 / 38	6.7	0.2	--	-- / --	--	--
PAH (HMW)	31 / 38	1,890	1,396,000	41,858	1,100	20 / 38	1,269	38	--	-- / --	--	--

TABLE 7-16
Summary of Hazard Quotients for Food Web Exposures - Terrestrial Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Lead	7.59	0.76	2.40	0.60	0.06	0.19	8.30	1.66	3.71	7.61	1.52	3.40
Mercury	1696.78	339.36	758.82	7.58	4.55	5.87	56.45	23.05	36.07	40.31	16.46	25.76
Selenium	3.32	2.01	2.58	1.06	0.64	0.82	2.19	0.64	1.18	1.45	0.43	0.79
Vanadium	7.87	1.57	3.52	0.58	0.12	0.26	0.10	0.02	0.04	0.09	0.02	0.04
Zinc	3.57	1.79	2.53	2.38	0.48	1.06	17.72	1.96	5.90	21.36	2.36	7.11
Pesticides/PCBs												
4,4'-DDD	0.20	0.04	0.09	0.01	<0.01	<0.01	0.12	0.01	0.04	0.97	0.19	0.44
4,4'-DDE	0.39	0.08	0.18	0.02	<0.01	<0.01	0.23	0.02	0.07	1.94	0.39	0.87
4,4'-DDT	0.06	0.01	0.03	<0.01	<0.01	<0.01	0.03	<0.01	0.01	0.27	0.05	0.12
Aldrin	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	1.10	0.22	0.49	<0.01	<0.01	<0.01	0.13	0.03	0.06	0.18	0.04	0.08
Aroclor-1221	2.21	0.44	0.99	0.14	0.03	0.06	0.27	0.05	0.12	0.36	0.07	0.16
Aroclor-1232	1.10	0.22	0.49	0.07	0.01	0.03	0.13	0.03	0.06	0.18	0.04	0.08
Aroclor-1242	1.10	0.22	0.49	0.07	0.01	0.03	0.13	0.03	0.06	0.18	0.04	0.08
Aroclor-1248	1.10	0.22	0.49	0.07	0.01	0.03	0.13	0.03	0.06	0.18	0.04	0.08
Aroclor-1254	1.10	0.22	0.49	0.07	0.01	0.03	0.13	0.03	0.06	0.18	0.04	0.08
Aroclor-1260	1.10	0.22	0.49	0.07	0.01	0.03	0.13	0.03	0.06	0.18	0.04	0.08
PCBs (total)	8.84	1.77	3.95	0.56	0.11	0.25	1.07	0.21	0.48	1.45	0.29	0.65
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	1.69	0.34	0.76	0.16	0.03	0.07	0.34	0.07	0.15	0.44	0.09	0.20
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01	0.03	<0.01	0.01
Semivolatile Organics												
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-16
Summary of Hazard Quotients for Food Web Exposures - Terrestrial Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.02	0.03	<0.01	0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	0.02	0.04	0.08	0.02	0.03
Benzo(a)anthracene	1.73	0.35	0.77	0.15	0.03	0.07	0.18	0.04	0.08	0.21	0.04	0.09
Benzo(a)pyrene	1.69	0.34	0.76	0.14	0.03	0.06	0.17	0.03	0.08	0.21	0.04	0.09
Benzo(b)fluoranthene	2.80	0.56	1.25	0.26	0.05	0.11	0.29	0.06	0.13	0.33	0.07	0.15
Benzo(g,h,i)perylene	0.17	0.03	0.08	0.02	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01
Benzo(k)fluoranthene	2.80	0.56	1.25	0.25	0.05	0.11	0.28	0.06	0.13	0.33	0.07	0.15
Chrysene	2.45	0.49	1.10	0.20	0.04	0.09	0.26	0.05	0.12	0.31	0.06	0.14
Dibenz(a,h)anthracene	0.34	0.07	0.15	0.03	<0.01	0.01	0.03	<0.01	0.02	0.04	<0.01	0.02
Fluoranthene	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.47	0.09	0.21	0.51	0.10	0.23
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01	<0.01
Hexachlorobenzene	0.39	0.20	0.28	0.02	<0.01	<0.01	1.30	0.26	0.58	1.68	0.34	0.75
Hexachlorobutadiene	0.12	0.01	0.04	0.01	<0.01	<0.01	0.03	<0.01	0.01	0.04	<0.01	0.02
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	1.92	0.38	0.86	0.15	0.03	0.07	0.19	0.04	0.09	0.24	0.05	0.11
Pentachlorophenol	0.84	0.17	0.38	0.06	0.01	0.02	0.36	0.18	0.26	0.49	0.24	0.34
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.26	0.05	0.12	0.24	0.05	0.11
Pyrene	3.22	0.64	1.44	0.29	0.06	0.13	0.38	0.08	0.17	0.41	0.08	0.18
Volatile Organics												
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dioxin/Furans												
Dioxin/furan (TEQ)	0.99	0.10	0.31	0.02	<0.01	<0.01	0.04	<0.01	0.01	0.04	<0.01	0.01

TABLE 7-17
Summary of Hazard Quotients for Food Web Exposures - Semi-Aquatic Receptors
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Chemical	Raccoon			Muskrat			Spotted sandpiper			Great blue heron		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Arsenic	0.24	0.05	0.11	6.11	1.22	2.73	0.63	0.25	0.40	0.07	0.03	0.04
Cadmium	0.38	0.08	0.17	1.46	0.15	0.46	2.77	0.20	0.75	0.11	<0.01	0.03
Chromium	0.05	<0.01	0.02	0.16	0.03	0.07	3.18	0.64	1.42	0.24	0.05	0.11
Copper	0.75	0.58	0.66	0.12	0.09	0.10	6.05	4.61	5.28	0.06	0.05	0.05
Lead	0.35	0.03	0.11	1.73	0.17	0.55	9.63	1.93	4.31	1.00	0.20	0.45
Mercury	1.32	0.79	1.02	26.53	5.31	11.86	55.45	18.48	32.02	66.28	22.09	38.26
Nickel	0.03	0.01	0.02	0.11	0.06	0.08	0.05	0.03	0.04	0.09	0.06	0.07
Selenium	0.19	0.12	0.15	1.11	0.67	0.87	0.61	0.31	0.43	0.09	0.02	0.04
Silver	0.02	<0.01	<0.01	0.02	<0.01	0.01	0.05	<0.01	0.02	0.10	0.02	0.04
Vanadium	2.66	0.53	1.19	1.64	0.33	0.73	1.89	0.38	0.84	1.25	0.25	0.56
Zinc	1.13	0.23	0.51	0.46	0.23	0.33	36.88	4.08	12.27	0.88	0.10	0.29
Pesticides/PCBs												
4,4'-DDD	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	0.01	0.03	0.09	<0.01	0.03
4,4'-DDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.22	0.04	0.10	0.53	0.05	0.17
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	0.02	0.03	0.24	0.02	0.08
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	0.02	<0.01	0.01	0.01	<0.01	<0.01	0.46	0.09	0.21	0.22	0.04	0.10
Aroclor-1221	0.44	0.09	0.20	0.03	<0.01	0.01	0.96	0.19	0.43	0.45	0.09	0.20
Aroclor-1232	0.21	0.04	0.10	0.01	<0.01	<0.01	0.46	0.09	0.21	0.22	0.04	0.10
Aroclor-1242	0.21	0.04	0.09	0.01	<0.01	<0.01	0.46	0.09	0.21	0.22	0.04	0.10
Aroclor-1248	0.21	0.04	0.09	0.01	<0.01	<0.01	0.46	0.09	0.21	0.22	0.04	0.10
Aroclor-1254	1.44	0.29	0.65	0.06	0.01	0.03	3.17	0.63	1.42	1.50	0.30	0.67
Aroclor-1260	0.28	0.06	0.13	0.01	<0.01	<0.01	0.61	0.12	0.27	0.29	0.06	0.13
PCBs (total)	2.99	0.61	1.35	0.14	0.03	0.06	6.58	1.32	2.94	3.10	0.62	1.39
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.13	0.03	0.06	0.02	<0.01	0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.20	0.04	0.09	0.13	0.03	0.06

TABLE 7-17
Summary of Hazard Quotients for Food Web Exposures - Semi-Aquatic Receptors
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Chemical	Raccoon			Muskrat			Spotted sandpiper			Great blue heron		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Semivolatile Organics												
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	<0.01	0.02	0.02	<0.01	0.01
Benzo(a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	0.01
Benzo(b)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.04	<0.01	0.02
Benzo(g,h,i)perylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Benzo(k)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01
Chrysene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01
Dibenz(a,h)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01	0.04	<0.01	0.02
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.08	0.02	0.03	0.03	<0.01	0.01
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Pentachlorophenol	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.23	0.12	0.16	0.15	0.08	0.11
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01	0.03	<0.01	0.01
Pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.02	0.03	<0.01	0.01
Volatile Organics												
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dioxin/Furans												
Dioxin/furan (TEQ)	0.02	<0.01	<0.01	0.05	<0.01	0.01	0.08	<0.01	0.02	<0.01	<0.01	<0.01

TABLE 7-18
Summary of Hazard Quotients for Food Web Exposures - Ash Material Exposure
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NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Arsenic	42.34	8.47	18.94	0.63	0.13	0.28	5.42	1.81	3.13	1.34	0.45	0.77
Cadmium	2.34	0.23	0.74	0.11	0.02	0.05	0.67	0.05	0.18	0.68	0.05	0.18
Chromium	3.40	0.68	1.52	0.17	0.03	0.08	4.23	0.85	1.89	4.95	0.99	2.21
Copper	0.11	0.08	0.10	0.17	0.13	0.15	0.11	0.08	0.09	0.16	0.12	0.14
Lead	1.22	0.12	0.39	0.10	<0.01	0.03	1.33	0.27	0.60	1.22	0.24	0.55
Mercury	51.44	10.29	23.01	0.23	0.14	0.18	1.71	0.70	1.09	1.22	0.50	0.78
Nickel	0.56	0.28	0.39	0.06	0.02	0.04	0.15	0.11	0.13	0.14	0.10	0.12
Selenium	7.89	4.78	6.14	2.52	1.53	1.96	5.21	1.53	2.82	3.46	1.02	1.87
Silver	0.03	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01
Vanadium	10.26	2.05	4.59	0.76	0.15	0.34	0.13	0.03	0.06	0.11	0.02	0.05
Zinc	0.57	0.28	0.40	0.38	0.08	0.17	2.80	0.31	0.93	3.38	0.37	1.12
Dioxin/Furans												
Dioxin/furan (TEQ)	1.89	0.19	0.60	0.03	<0.01	<0.01	0.27	0.03	0.08	0.26	0.03	0.08

TABLE 7-19
Summary of Hazard Quotients for Food Web Exposures - Shallow Subsurface Soil Exposure
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics						
Arsenic	5.89	1.18	2.64	0.09	0.02	0.04
Cadmium	2.63	0.26	0.83	0.13	0.03	0.06
Chromium	3.10	0.62	1.39	0.15	0.03	0.07
Copper	0.10	0.08	0.09	0.16	0.12	0.14
Lead	4.63	0.46	1.46	0.37	0.04	0.12
Mercury	48.37	9.67	21.63	0.22	0.13	0.17
Nickel	0.37	0.18	0.26	0.04	0.02	0.03
Selenium	2.93	1.77	2.28	0.94	0.57	0.73
Silver	0.03	<0.01	0.01	<0.01	<0.01	<0.01
Vanadium	10.67	2.13	4.77	0.79	0.16	0.35
Zinc	3.75	1.87	2.65	2.49	0.50	1.11
Pesticides/PCBs						
4,4'-DDD	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	0.72	0.14	0.32	<0.01	<0.01	<0.01
Aroclor-1221	1.52	0.30	0.68	0.10	0.02	0.04
Aroclor-1232	0.72	0.14	0.32	0.05	<0.01	0.02
Aroclor-1242	0.72	0.14	0.32	0.05	<0.01	0.02
Aroclor-1248	0.72	0.14	0.32	0.05	<0.01	0.02
Aroclor-1254	0.72	0.14	0.32	0.05	<0.01	0.02
Aroclor-1260	0.72	0.14	0.32	0.05	<0.01	0.02
PCBs (total)	5.84	1.17	2.61	0.37	0.08	0.17
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	0.05	<0.01	0.02	<0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Semivolatile Organics						
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-19
Summary of Hazard Quotients for Food Web Exposures - Shallow Subsurface Soil Exposure
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	0.38	0.08	0.17	0.03	<0.01	0.02
Benzo(a)pyrene	0.44	0.09	0.20	0.04	<0.01	0.02
Benzo(b)fluoranthene	0.32	0.06	0.15	0.03	<0.01	0.01
Benzo(g,h,i)perylene	0.20	0.04	0.09	0.02	<0.01	<0.01
Benzo(k)fluoranthene	0.28	0.06	0.13	0.03	<0.01	0.01
Chrysene	0.53	0.11	0.24	0.04	<0.01	0.02
Dibenz(a,h)anthracene	0.10	0.02	0.04	<0.01	<0.01	<0.01
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	0.12	0.06	0.08	<0.01	<0.01	<0.01
Hexachlorobutadiene	0.04	<0.01	0.01	<0.01	<0.01	<0.01
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	0.37	0.07	0.16	0.03	<0.01	0.01
Pentachlorophenol	0.25	0.05	0.11	0.02	<0.01	<0.01
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	0.81	0.16	0.36	0.07	0.01	0.03
Volatile Organics						
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-20
Exposure Parameters for Upper Trophic Level Ecological Receptors - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Receptor	Body Weight (kg)		Water Ingestion Rate (L/day)		Food Ingestion Rate (kg/day - dry)	
	Value	Reference	Value	Reference	Value	Reference
Birds						
American woodcock	0.198	Dunning 1993	0.0199	allometric equation[1]	0.0231	USEPA 1993a
Great blue heron	2.23	Quinney 1982	0.1010	allometric equation[1]	0.3931	allometric equation[3]
Eastern screech owl	0.18	Dunning 1993	0.0188	allometric equation[1]	0.0191	allometric equation[3]
Spotted sandpiper	0.040	Dunning 1993	0.0069	allometric equation[1]	0.0072	allometric equation[3]
Mammals						
Muskrat	1.169	Silva and Downing 1995	0.1139	allometric equation[2]	0.0596	USEPA 1993a
Raccoon	5.94	Silva and Downing 1995	0.4921	allometric equation[2]	0.0920	Conover 1989
Red fox	4.06	Silva and Downing 1995	0.3494	allometric equation[2]	0.1231	Sample and Suter 1994
Short-tailed shrew	0.017	USEPA 1993a	0.0038	USEPA 1993a	0.0015	USEPA 1993a

[1] All birds equation: $0.059\ (BW)^{0.67}$

[2] All mammals equation: $0.099\ (BW)^{0.90}$

[3] All birds equation: $(0.638*((BW*1000)^{0.685}))/1000$

TABLE 7-21
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Inorganics						
Arsenic	0.038	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Cadmium	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Chromium	Regression	USEPA 2007	0.306	USEPA 2007	Regression	USEPA 2007
Copper	Regression	USEPA 2007	0.515	USEPA 2007	Regression	USEPA 2007
Lead	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Mercury	0.344	Bechtel Jacobs 1998a	1.186	Sample et al. 1998a	0.054	Sample et al. 1998b
Nickel	Regression	USEPA 2007	1.656	Sample et al. 1998a	Regression	USEPA 2007
Selenium	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Silver	0.014	USEPA 2007	2.045	Sample et al. 1998a	0.004	USEPA 2007
Zinc	Regression	USEPA 2007	Regression	USEPA 2007	Regression	USEPA 2007
Pesticides/PCBs						
4,4'-DDD	0.2024	USEPA 2007	Regression	USEPA 2007	--	see text
4,4'-DDE	0.1093	USEPA 2007	Regression	USEPA 2007	--	see text
4,4'-DDT	0.1354	USEPA 2007	Regression	USEPA 2007	--	see text
Aldrin	0.4100	USEPA 2007	14.7000	USEPA 2007 (diedrin value)	--	see text
alpha-BHC	1.7352	USEPA 2007	1.0000	--	--	see text
alpha-Chlordane	0.1648	USEPA 2007	4.0000	Edwards and Bohlen 1992	--	see text
Aroclor-1016	0.3229	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1221	0.7485	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1232	0.5151	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1242	0.3229	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1248	0.1844	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1254	0.1393	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
Aroclor-1260	0.1053	USEPA 2007	4.2974	Sample et al. 1998a	--	see text
beta-BHC	1.7190	USEPA 2007	1.0000	--	--	see text
delta-BHC	1.3111	USEPA 2007	1.0000	--	--	see text
Dieldrin	0.4100	USEPA 2007	14.7000	USEPA 2007	--	see text
Endosulfan I	1.6872	USEPA 2007	1.0000	--	--	see text
Endosulfan II	0.8856	USEPA 2007	1.0000	--	--	see text
Endrin	0.4100	USEPA 2007 (dieldrin value)	14.7000	USEPA 2007 (diedrin value)	--	see text
gamma-BHC (Lindane)	1.8524	USEPA 2007	1.0000	--	--	see text
gamma-Chlordane	0.1648	USEPA 2007	4.0000	Edwards and Bohlen 1992	--	see text
Heptachlor	0.1743	USEPA 2007	3.0000	Edwards and Bohlen 1992	--	see text
Heptachlor epoxide	0.5656	USEPA 2007	8.3900	USEPA 1999	--	see text
Methoxychlor	0.5249	USEPA 2007	1.0000	--	--	see text
Toxaphene	0.3545	USEPA 2007	1.0000	--	--	see text

TABLE 7-21
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Semivolatile Organics						
4-Bromophenyl-phenylether	0.5656	USEPA 2007	1.0000	--	--	see text
4-Chlorophenyl-phenylether	0.5926	USEPA 2007	1.0000	--	--	see text
Acenaphthene	Regression	USEPA 2007	3.040	USEPA 2007	--	see text
Acenaphthylene	Regression	USEPA 2007	1.470	USEPA 2007	--	see text
Anthracene	Regression	USEPA 2007	0.320	Beyer and Stafford 1993	--	see text
Benzo(a)anthracene	Regression	USEPA 2007	1.5900	USEPA 2007	--	see text
Benzo(a)pyrene	Regression	USEPA 2007	1.3300	USEPA 2007	--	see text
Benzo(b)fluoranthene	0.3100	USEPA 2007	2.6000	USEPA 2007	--	see text
Benzo(g,h,i)perylene	Regression	USEPA 2007	2.9400	USEPA 2007	--	see text
Benzo(k)fluoranthene	Regression	USEPA 2007	2.6000	USEPA 2007	--	see text
Chrysene	Regression	USEPA 2007	2.2900	USEPA 2007	--	see text
Dibenz(a,h)anthracene	0.1300	USEPA 2007	2.3100	USEPA 2007	--	see text
Fluoranthene	0.5000	USEPA 2007	3.0400	USEPA 2007	--	see text
Fluorene	Regression	USEPA 2007	9.5700	USEPA 2007	--	see text
Hexachlorobenzene	0.2463	USEPA 2007	1.6900	Beyer 1996	--	see text
Hexachlorobutadiene	0.6754	USEPA 2007	1.0000	--	--	see text
Hexachlorocyclopentadiene	0.3929	USEPA 2007	1.0000	--	--	see text
Hexachloroethane	1.4395	USEPA 2007	1.0000	--	--	see text
Indeno(1,2,3-cd)pyrene	0.1100	USEPA 2007	2.8600	USEPA 2007	--	see text
Pentachlorophenol	0.5200	USEPA 2007	14.6300	USEPA 2007	--	see text
Phenanthrene	Regression	USEPA 2007	1.7200	USEPA 2007	--	see text
Pyrene	0.7200	USEPA 2007	1.7500	USEPA 2007	--	see text
Volatile Organics						
1,1,2,2-Tetrachloroethane	6.4770	USEPA 2007	1.0000	--	--	see text
1,2,4-Trichlorobenzene	1.4261	USEPA 2007	0.5600	Beyer 1996	--	see text
1,2-Dichlorobenzene	2.4516	USEPA 2007	1.0000	--	--	see text
1,3-Dichlorobenzene	2.2964	USEPA 2007	1.0000	--	--	see text
1,4-Dichlorobenzene	2.4746	USEPA 2007	1.0000	--	--	see text

TABLE 7-21
Soil Bioconcentration Factors For Plants, Soil Invertebrates, and Small Mammals - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Soil-Plant BCF (dry weight)		Soil-Invertebrate BAF (dry weight)		Soil-Mouse BAF (dry weight)	
	Value	Reference	Value	Reference	Value	Reference
Dioxin/Furans						
2,3,7,8-TCDD	0.0056	USEPA 1999	1.5900	USEPA 1999	7.81E-05	USEPA 1999
1,2,3,7,8-PCDD	0.0052	USEPA 1999	1.46	USEPA 1999	7.19E-05	USEPA 1999
1,2,3,4,7,8-HxCDD	0.0017	USEPA 1999	0.49	USEPA 1999	2.42E-05	USEPA 1999
1,2,3,6,7,8-HxCDD	0.00067	USEPA 1999	0.19	USEPA 1999	9.37E-06	USEPA 1999
1,2,3,7,8,9-HxCDD*	0.00078	USEPA 1999	0.22	USEPA 1999	1.09E-05	USEPA 1999
1,2,3,4,6,7,8-HpCDD	0.00029	USEPA 1999	0.081	USEPA 1999	3.98E-06	USEPA 1999
OCDD*	0.000067	USEPA 1999	0.019	USEPA 1999	9.37E-07	USEPA 1999
2,3,7,8-TCDF	0.0045	USEPA 1999	1.27	USEPA 1999	6.25E-05	USEPA 1999
1,2,3,7,8-PCDF	0.0011	USEPA 1999	0.32	USEPA 1999	1.72E-05	USEPA 1999
2,3,4,7,8-PCDF	0.009	USEPA 1999	2.54	USEPA 1999	1.25E-04	USEPA 1999
1,2,3,4,7,8-HxCDF	0.00043	USEPA 1999	0.121	USEPA 1999	5.94E-06	USEPA 1999
1,2,3,6,7,8-HxCDF*	0.0011	USEPA 1999	0.3	USEPA 1999	1.48E-05	USEPA 1999
2,3,4,6,7,8-HxCDF*	0.0038	USEPA 1999	1.07	USEPA 1999	5.23E-05	USEPA 1999
1,2,3,7,8,9-HxCDF*	0.0035	USEPA 1999	1	USEPA 1999	4.92E-05	USEPA 1999
1,2,3,4,6,7,8-HpCDF*	0.000062	USEPA 1999	0.017	USEPA 1999	8.59E-07	USEPA 1999
1,2,3,4,7,8,9-HpCDF*	0.0022	USEPA 1999	0.62	USEPA 1999	3.05E-05	USEPA 1999
OCDF*	0.00009	USEPA 1999	0.025	USEPA 1999	1.25E-06	USEPA 1999

TABLE 7-22
Sediment Bioaccumulation Factors For Benthic Invertebrates and Fish - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Invertebrate BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Arsenic	0.466	Bechtel Jacobs 1998b	0.126	Pascoe et al. 1996
Cadmium	0.679	Bechtel Jacobs 1998b	0.164	Pascoe et al. 1996
Chromium	0.083	Bechtel Jacobs 1998b	0.038	Krantzberg and Boyd 1992
Copper	0.919	Bechtel Jacobs 1998b	0.100	Krantzberg and Boyd 1992
Lead	0.080	Bechtel Jacobs 1998b	0.070	Krantzberg and Boyd 1992
Mercury	1.077	Bechtel Jacobs 1998b	3.250	Cope et al. 1990
Nickel	0.134	Bechtel Jacobs 1998b	1.000	--
Selenium	1.000	--	1.000	--
Silver	0.180	Hirsch 1998	1.000	--
Zinc	0.954	Bechtel Jacobs 1998b	0.147	Pascoe et al. 1996
Pesticides/PCBs				
4,4'-DDD	0.230	Oliver and Niimi 1988	2.250	Oliver and Niimi 1988
4,4'-DDE	2.000	Oliver and Niimi 1988	26.200	Oliver and Niimi 1988
4,4'-DDT	1.300	Oliver and Niimi 1988	8.800	Oliver and Niimi 1988
Aldrin	1.000	--	1.000	--
alpha-BHC	1.000	--	1.000	--
alpha-Chlordane	1.000	--	1.000	--
Aroclor-1016	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1221	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1232	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1242	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1248	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1254	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
Aroclor-1260	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
PCBs (total)	1.919	Bechtel Jacobs 1998b	12.940	Oliver and Niimi 1988
beta-BHC	1.000	--	1.000	--
delta-BHC	1.000	--	1.000	--
Dieldrin	4.520	Standley 1997	1.000	--
Endosulfan I	1.000	--	1.000	--
Endosulfan II	1.000	--	1.000	--
Endrin	1.000	--	1.000	--
gamma-BHC (Lindane)	1.000	--	6.200	Oliver and Niimi 1988

TABLE 7-22
Sediment Bioaccumulation Factors For Benthic Invertebrates and Fish - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Invertebrate BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
gamma-Chlordane	1.000	--	1.000	--
Heptachlor	1.000	--	1.000	--
Heptachlor epoxide	1.000	--	1.000	--
Methoxychlor	1.000	--	1.000	--
Toxaphene	1.000	--	1.000	--
Semivolatile Organics				
4-Bromophenyl-phenylether	1.000	--	1.000	--
4-Chlorophenyl-phenylether	1.000	--	1.000	--
Acenaphthene	2.040	Maruya et al. 1997	1.000	--
Acenaphthylene	2.040	Acenaphthene value	1.000	--
Anthracene	0.191	Maruya et al. 1997	1.000	--
Benzo(a)anthracene	0.358	Maruya et al. 1997	1.000	--
Benzo(a)pyrene	0.127	Maruya et al. 1997	1.000	--
Benzo(b)fluoranthene	0.150	Maruya et al. 1997	1.000	--
Benzo(g,h,i)perylene	0.215	Maruya et al. 1997	1.000	--
Benzo(k)fluoranthene	0.232	Maruya et al. 1997	1.000	--
Chrysene	0.198	Maruya et al. 1997	1.000	--
Dibenz(a,h)anthracene	0.191	Anthracene value	1.000	--
Fluoranthene	0.212	Maruya et al. 1997	1.000	--
Fluorene	0.481	Maruya et al. 1997	1.000	--
Hexachlorobenzene	0.520	Oliver and Niimi 1988	0.940	Oliver and Niimi 1988
Hexachlorobutadiene	0.390	Oliver and Niimi 1988	0.384	Parkerton et al. 1993
Hexachlorocyclopentadiene	1.000	--	1.000	--
Hexachloroethane	1.000	--	1.000	--
Indeno(1,2,3-cd)pyrene	0.173	Maruya et al. 1997	1.000	--
Pentachlorophenol	1.000	--	1.000	--
Phenanthrene	0.294	Maruya et al. 1997	1.000	--
Pyrene	0.435	Maruya et al. 1997	1.000	--

TABLE 7-22
Sediment Bioaccumulation Factors For Benthic Invertebrates and Fish - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Invertebrate BAF (dry weight)		Sediment-Fish BAF (dry weight)	
	Value	Reference	Value	Reference
Volatile Organics				
1,1,2,2-Tetrachloroethane	1.000	--	1.000	--
1,2,4-Trichlorobenzene	0.260	Oliver and Niimi 1988	0.074	Parkerton et al. 1993
1,2-Dichlorobenzene	1.000	--	0.085	Parkerton et al. 1993
1,3-Dichlorobenzene	1.000	--	0.085	Parkerton et al. 1993
1,4-Dichlorobenzene	1.000	--	0.085	Parkerton et al. 1993
Dioxin/Furans				
2,3,7,8-TCDD	1.2829	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.263	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8-PCDD	0.6436	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.045	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8-HxCDD	0.1655	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.010	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,6,7,8-HxCDD	0.1720	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.013	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8,9-HxCDD*	0.0954	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.007	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,6,7,8-HpCDD	0.0301	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.010	USEPA 2008 (Mean of forage fish BSAFs)
OCDD*	0.0132	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.007	USEPA 2008 (Mean of forage fish BSAFs)
2,3,7,8-TCDF	0.5673	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.149	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8-PCDF	0.4501	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.405	USEPA 2008 (Mean of forage fish BSAFs)
2,3,4,7,8-PCDF	0.1412	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.135	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8-HxCDF	0.1116	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.008	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,6,7,8-HxCDF*	0.1040	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.106	USEPA 2008 (Mean of forage fish BSAFs)
2,3,4,6,7,8-HxCDF*	0.1155	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.012	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,7,8,9-HxCDF*	0.0954	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.004	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,6,7,8-HpCDF*	0.0258	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.017	USEPA 2008 (Mean of forage fish BSAFs)
1,2,3,4,7,8,9-HpCDF*	0.0069	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.017	USEPA 2008 (Mean of forage fish BSAFs)
OCDF*	0.0079	USEPA 2008 (Mean of invertebrate/crayfish BSAFs)	0.002	USEPA 2008 (Mean of forage fish BSAFs)

TABLE 7-23
Sediment Bioaccumulation Factors For Aquatic Plants and Frogs - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Frog BAF (dry weight)	
	Value	Reference	Value	Reference
Inorganics				
Arsenic	0.037	Bechtel Jacobs 1998a	0.126	Pascoe et al. 1996
Cadmium	0.514	Bechtel Jacobs 1998a	0.164	Pascoe et al. 1996
Chromium	0.048	Bechtel Jacobs 1998a	0.038	Krantzberg and Boyd 1992
Copper	0.123	Bechtel Jacobs 1998a	0.100	Krantzberg and Boyd 1992
Lead	0.038	Bechtel Jacobs 1998a	0.070	Krantzberg and Boyd 1992
Mercury	0.344	Bechtel Jacobs 1998a	3.250	Cope et al. 1990
Nickel	0.034	Bechtel Jacobs 1998a	1.000	--
Selenium	0.567	Bechtel Jacobs 1998a	1.000	--
Silver	0.013	Bechtel Jacobs 1998a	1.000	--
Zinc	0.358	Bechtel Jacobs 1998a	0.147	Pascoe et al. 1996
Pesticides/PCBs				
4,4'-DDD	0.0115	Travis and Arms 1988	2.250	Oliver and Niimi 1988
4,4'-DDE	0.0048	Travis and Arms 1988	26.20	Oliver and Niimi 1988
4,4'-DDT	0.0065	Travis and Arms 1988	8.800	Oliver and Niimi 1988
Aldrin	0.0068	Travis and Arms 1988	1.000	--
alpha-BHC	0.2464	Travis and Arms 1988	1.000	--
alpha-Chlordane	0.0086	Travis and Arms 1988	1.000	--
Aroclor-1016	0.0224	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1221	0.0744	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1232	0.0437	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1242	0.0224	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1248	0.0101	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1254	0.0068	Travis and Arms 1988	12.94	Oliver and Niimi 1988
Aroclor-1260	0.0045	Travis and Arms 1988	12.94	Oliver and Niimi 1988
PCBs (total)	0.0068	Travis and Arms 1988	12.94	Oliver and Niimi 1988
beta-BHC	0.2431	Travis and Arms 1988	1.000	--
delta-BHC	0.1653	Travis and Arms 1988	1.000	--
Dieldrin	0.0305	Travis and Arms 1988	1.000	--
Endosulfan I	0.2367	Travis and Arms 1988	1.000	--

TABLE 7-23
Sediment Bioaccumulation Factors For Aquatic Plants and Frogs - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Frog BAF (dry weight)	
	Value	Reference	Value	Reference
Endosulfan II	0.0945	Travis and Arms 1988	1.000	--
Endrin	0.0461	Travis and Arms 1988	1.000	--
gamma-BHC (Lindane)	0.2704	Travis and Arms 1988	6.200	Oliver and Niimi 1988
gamma-Chlordane	0.0086	Travis and Arms 1988	1.000	--
Heptachlor	0.0093	Travis and Arms 1988	1.000	--
Heptachlor epoxide	0.0499	Travis and Arms 1988	1.000	--
Methoxychlor	0.0448	Travis and Arms 1988	1.000	--
Toxaphene	0.0256	Travis and Arms 1988	1.000	--
Semivolatile Organics				
4-Bromophenyl-phenylether	0.0499	Travis and Arms 1988	1.000	--
4-Chlorophenyl-phenylether	0.0533	Travis and Arms 1988	1.000	--
Acenaphthene	0.2100	Travis and Arms 1988	1.000	--
Acenaphthylene	0.1653	Travis and Arms 1988	1.000	--
Anthracene	0.0908	Travis and Arms 1988	1.000	--
Benzo(a)anthracene	0.0197	Travis and Arms 1988	1.000	--
Benzo(a)pyrene	0.0114	Travis and Arms 1988	1.000	--
Benzo(b)fluoranthene	0.0101	Travis and Arms 1988	1.000	--
Benzo(g,h,i)perylene	0.0052	Travis and Arms 1988	1.000	--
Benzo(k)fluoranthene	0.0101	Travis and Arms 1988	1.000	--
Chrysene	0.0197	Travis and Arms 1988	1.000	--
Dibenz(a,h)anthracene	0.0053	Travis and Arms 1988	1.000	--
Fluoranthene	0.0425	Travis and Arms 1988	1.000	--
Fluorene	0.1428	Travis and Arms 1988	1.000	--
Hexachlorobenzene	0.0153	Travis and Arms 1988	0.940	Oliver and Niimi 1988
Hexachlorobutadiene	0.0642	Travis and Arms 1988	0.384	Parkerton et al. 1993
Hexachlorocyclopentadiene	0.0297	Travis and Arms 1988	1.000	--
Hexachloroethane	0.1888	Travis and Arms 1988	1.000	--
Indeno(1,2,3-cd)pyrene	0.0056	Travis and Arms 1988	1.000	--
Pentachlorophenol	0.0443	Travis and Arms 1988	1.000	--
Phenanthrene	0.0908	Travis and Arms 1988	1.000	--

TABLE 7-23
Sediment Bioaccumulation Factors For Aquatic Plants and Frogs - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Sediment-Plant BCF (dry weight)		Sediment-Frog BAF (dry weight)	
	Value	Reference	Value	Reference
Pyrene	0.0431	Travis and Arms 1988	1.000	--
Volatile Organics				
1,1,2,2-Tetrachloroethane	1.6091	Travis and Arms 1988	1.000	--
1,2,4-Trichlorobenzene	0.1863	Travis and Arms 1988	0.074	Parkerton et al. 1993
1,2-Dichlorobenzene	0.4031	Travis and Arms 1988	0.085	Parkerton et al. 1993
1,3-Dichlorobenzene	0.3673	Travis and Arms 1988	0.085	Parkerton et al. 1993
1,4-Dichlorobenzene	0.4085	Travis and Arms 1988	0.085	Parkerton et al. 1993
Dioxin/Furans				
2,3,7,8-TCDD	2.67E-02	USEPA 1999	0.263	Fish BAF used
1,2,3,7,8-PCDD	2.48E-02	USEPA 1999	0.045	Fish BAF used
1,2,3,4,7,8-HxCDD	8.10E-03	USEPA 1999	0.010	Fish BAF used
1,2,3,6,7,8-HxCDD	3.19E-03	USEPA 1999	0.013	Fish BAF used
1,2,3,7,8,9-HxCDD*	3.71E-03	USEPA 1999	0.007	Fish BAF used
1,2,3,4,6,7,8-HpCDD	1.38E-03	USEPA 1999	0.010	Fish BAF used
OCDD*	3.19E-04	USEPA 1999	0.007	Fish BAF used
2,3,7,8-TCDF	2.14E-02	USEPA 1999	0.149	Fish BAF used
1,2,3,7,8-PCDF	5.24E-03	USEPA 1999	0.405	Fish BAF used
2,3,4,7,8-PCDF	4.29E-02	USEPA 1999	0.135	Fish BAF used
1,2,3,4,7,8-HxCDF	2.05E-03	USEPA 1999	0.008	Fish BAF used
1,2,3,6,7,8-HxCDF*	5.24E-03	USEPA 1999	0.106	Fish BAF used
2,3,4,6,7,8-HxCDF*	1.81E-02	USEPA 1999	0.012	Fish BAF used
1,2,3,7,8,9-HxCDF*	1.67E-02	USEPA 1999	0.004	Fish BAF used
1,2,3,4,6,7,8-HpCDF*	2.95E-04	USEPA 1999	0.017	Fish BAF used
1,2,3,4,7,8,9-HpCDF*	1.05E-02	USEPA 1999	0.017	Fish BAF used
OCDF*	4.29E-04	USEPA 1999	0.002	Fish BAF used

TABLE 7-24
Screening Statistics - Site 66 Surface Soil - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Inorganics (MG/KG)									
Arsenic	36 / 38	1.10	108	IS66SS140001	8.79	18.0	4 / 38	0.49	NO
Chromium	38 / 38	--	28.1	IS66SS340001	14.2	0.40	38 / 38	35.6	YES
Cobalt	38 / 38	--	17.9	IS66SS110001	6.35	13.0	2 / 38	0.49	NO
Cyanide	10 / 38	0.64	0.57	IS66SS210001	0.18	0.10	7 / 38	1.82	YES
Lead	38 / 38	--	305	IS66SS150001	52.5	120	6 / 38	0.44	NO
Manganese	38 / 38	--	521	IS66SS150001	196	220	13 / 38	0.89	NO
Mercury	27 / 38	0.45	22.1	IS66SS200001	0.79	0.10	7 / 38	7.89	YES
Nickel	38 / 38	--	90.4	IS66SS020001	12.9	38.0	1 / 38	0.34	NO
Selenium	22 / 38	1.30	3.40	IS66SS150001	0.51	0.52	5 / 38	0.99	NO
Vanadium	38 / 38	--	115	IS66SS140001	33.7	2.00	38 / 38	16.9	YES
Zinc	38 / 38	--	373	IS66SS160001	73.3	120	7 / 38	0.61	NO
Pesticide/Polychlorinated Biphenyls (UG/KG)									
4,4'-DDD	7 / 38	6.70	640	IS66SS410001	20.1	100	1 / 38	0.20	NO
4,4'-DDE	27 / 38	6.70	250	IS66SS150001	17.8	100	2 / 38	0.18	NO
4,4'-DDT	25 / 38	7.20	460	IS66SS410001	25.9	100	2 / 38	0.26	NO
Aroclor-1221	0 / 38	160	--	--	26.6	100	-- / --	0.27	NO
Endosulfan I	7 / 38	4.10	5.10	IS66SS410001	1.05	NSV	-- / --	NSV	YES
Endosulfan II	6 / 38	7.20	23.0	IS66SS150001	2.57	NSV	-- / --	NSV	YES
Endosulfan sulfate	5 / 38	7.20	38.0	IS66SS150001	2.88	NSV	-- / --	NSV	YES
Methoxychlor	8 / 38	37.0	230	IS66SS150001	16.9	100	1 / 38	0.17	NO
Semivolatile Organic Compounds (UG/KG)									
1,1-Biphenyl	0 / 38	1,800	--	--	207	600	-- / --	0.34	NO
2,4-Dimethylphenol	0 / 37	1,800	--	--	140	100	-- / --	1.40	NO
2-Chloronaphthalene	0 / 38	1,800	--	--	207	1,000	-- / --	0.21	NO
2-Chlorophenol	0 / 38	1,800	--	--	149	100	-- / --	1.49	NO
2-Methylphenol	0 / 38	1,800	--	--	149	100	-- / --	1.49	NO
4-Methylphenol	0 / 18	1,800	--	--	282	100	-- / --	2.82	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-24
Screening Statistics - Site 66 Surface Soil - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
4-Nitrophenol	0 / 38	4,400	--	--	349	100	-- / --	3.49	NO
Atrazine	3 / 38	1,800	2.50	IS66SS280001	136	0.050	3 / 38	50.0	YES
bis(2-Ethylhexyl)phthalate	3 / 38	1,800	27,000	IS66SS080001	885	NSV	-- / --	NSV	YES
Carbazole	5 / 38	800	18,000	IS66SS150001	703	NSV	-- / --	NSV	YES
Dibenzofuran	2 / 38	800	3,000	IS66SS150001	267	NSV	-- / --	NSV	YES
Diethylphthalate	0 / 38	1,800	--	--	207	1,000	-- / --	0.21	NO
n-Nitrosodiphenylamine	0 / 38	1,800	--	--	207	200	-- / --	1.03	NO
Phenol	0 / 38	1,800	--	--	149	100	-- / --	1.49	NO
PAH (LMW)	30 / 38	1,680	671,455	IS66SS150001	19,877	29,000	2 / 38	0.7	NO
PAH (HMW)	31 / 38	1,890	1,396,000	IS66SS150001	41,858	18,000	3 / 38	2.3	YES
Explosives (UG/KG)									
Nitroglycerin	1 / 38	4,000	1,900	IS66SS310001	1,103	NSV	-- / --	NSV	YES
Perchlorate	31 / 38	3.50	18.0	IS66SS070001	2.96	NSV	-- / --	NSV	YES
Volatile Organic Compounds (UG/KG)									
2-Butanone	1 / 37	32.0	29.0	IS66SS310001	7.82	NSV	-- / --	NSV	YES
Acetone	10 / 37	48.0	210	IS66SS310001	21.6	NSV	-- / --	NSV	YES
Carbon disulfide	1 / 38	32.0	0.90	IS66SS370001	3.81	NSV	-- / --	NSV	YES
Methyl acetate	1 / 38	32.0	3.70	IS66SS230001	4.34	NSV	-- / --	NSV	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-25
Screening Statistics - Site 66 Sediment - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Inorganics (MG/KG)									
Antimony	6 / 14	3.30	4.70	IS66SD15	0.90	2.00	1 / 14	0.45	NO
Arsenic	12 / 14	1.10	13.8	IS66SD04	5.67	9.80	1 / 14	0.58	NO
Beryllium	9 / 14	1.50	0.84	IS66SD13	0.47	NSV	-- / --	NSV	YES
Cadmium	9 / 14	1.10	4.70	IS66SD14	0.72	0.99	1 / 14	0.73	NO
Copper	14 / 14	--	134	IS66SD14	30.1	31.6	3 / 14	0.95	NO
Cyanide	2 / 14	1.20	0.51	IS66SD09	0.29	0.10	2 / 14	2.94	YES
Iron	14 / 14	--	25,400	IS66SD02	14,381	20,000	3 / 14	0.72	NO
Lead	14 / 14	--	262	IS66SD14	52.1	35.8	7 / 14	1.46	YES
Manganese	14 / 14	--	593	IS66SD14	220	460	2 / 14	0.48	NO
Mercury	11 / 14	0.18	1.80	IS66SD15	0.29	0.18	3 / 14	1.60	YES
Nickel	14 / 14	--	31.6	IS66SD02	13.6	22.7	2 / 14	0.60	NO
Silver	10 / 14	0.87	17.0	IS66SD14	1.37	1.00	1 / 14	1.37	YES
Thallium	10 / 14	2.10	0.23	IS66SD13	0.28	NSV	-- / --	NSV	YES
Vanadium	14 / 14	--	68.0	IS66SD02	27.5	57.0	1 / 14	0.48	NO
Zinc	14 / 14	--	414	IS66SD14	110	121	5 / 14	0.91	NO
Pesticide/Polychlorinated Biphenyls (UG/KG)									
4,4'-DDD	14 / 14	--	57.0	IS66SD08	26.3	4.88	11 / 14	5.40	YES
4,4'-DDE	14 / 14	--	29.0	IS66SD08	10.1	3.16	11 / 14	3.21	YES
4,4'-DDT	9 / 14	12.0	39.0	IS66SD14	6.79	4.16	5 / 14	1.63	YES
Aldrin	0 / 14	6.30	--	--	1.09	2.00	-- / --	0.54	NO
alpha-BHC	0 / 14	6.30	--	--	1.09	6.00	-- / --	0.18	NO
alpha-Chlordane	4 / 14	2.60	5.30	IS66SD02	1.21	3.24	1 / 14	0.37	NO
Aroclor-1016	0 / 14	120	--	--	16.1	59.8	-- / --	0.27	NO
Aroclor-1221	0 / 14	250	--	--	27.4	59.8	-- / --	0.46	NO
Aroclor-1232	0 / 14	120	--	--	17.1	59.8	-- / --	0.29	NO
Aroclor-1242	0 / 14	120	--	--	16.1	59.8	-- / --	0.27	NO
Aroclor-1248	0 / 14	120	--	--	16.1	59.8	-- / --	0.27	NO

NSV - No Screening Value
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TABLE 7-25
Screening Statistics - Site 66 Sediment - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Aroclor-1254	1 / 14	120	830	IS66SD14	74.5	59.8	1 / 14	1.25	YES
Aroclor-1260	1 / 14	120	160	IS66SD03	24.6	59.8	1 / 14	0.41	NO
Dieldrin	2 / 14	12.0	8.30	IS66SD08	2.63	1.90	1 / 14	1.39	YES
Endosulfan I	2 / 14	6.30	3.20	IS66SD13	1.38	2.90	1 / 14	0.47	NO
Endosulfan sulfate	0 / 14	12.0	--	--	2.11	5.40	-- / --	0.39	NO
Endrin aldehyde	2 / 14	8.30	3.40	IS66SD02	1.93	2.22	2 / 14	0.87	NO
Endrin ketone	3 / 14	8.30	4.10	IS66SD04	1.89	2.22	2 / 14	0.85	NO
gamma-BHC (Lindane)	0 / 14	6.30	--	--	1.09	2.37	-- / --	0.46	NO
Heptachlor epoxide	0 / 14	6.30	--	--	1.09	2.47	-- / --	0.44	NO
Methoxychlor	3 / 14	43.0	35.0	IS66SD02	11.4	18.7	1 / 14	0.61	NO
Toxaphene	0 / 14	630	--	--	66.4	1.00	-- / --	66.4	NO
Semivolatile Organic Compounds (UG/KG)									
2,4-Dimethylphenol	0 / 6	1,200	--	--	257	29.0	-- / --	8.87	NO
2,4-Dinitrotoluene	0 / 14	1,200	--	--	115	41.6	-- / --	2.76	NO
2-Chlorophenol	0 / 14	1,200	--	--	139	31.2	-- / --	4.46	NO
2-Methylphenol	0 / 14	1,200	--	--	139	12.0	-- / --	11.6	NO
3- and 4-Methylphenol	4 / 10	110	140	IS66SD14	47.6	NSV	-- / --	NSV	YES
3,3'-Dichlorobenzidine	0 / 6	1,200	--	--	257	127	-- / --	2.02	NO
4-Methylphenol	0 / 4	1,200	--	--	380	670	-- / --	0.57	NO
Acenaphthene	9 / 14	1,200	100	IS66SD05	118	6.70	8 / 14	14.9	YES
Acenaphthylene	9 / 14	1,200	23.0	IS66SD14	117	5.90	8 / 14	3.90	YES
Anthracene	11 / 14	1,200	260	IS66SD05	141	57.2	5 / 14	2.47	YES
Atrazine	5 / 14	1,200	7.30	IS66SD13	114	6.62	1 / 14	1.10	YES
Benzo(a)anthracene	6 / 14	1,200	780	IS66SD12	320	108	6 / 14	2.96	YES
Benzo(a)pyrene	13 / 14	1,200	770	IS66SD12	353	150	11 / 14	2.35	YES
Benzo(b)fluoranthene	13 / 14	1,200	1,300	IS66SD12	530	27.2	12 / 14	19.5	YES
Benzo(g,h,i)perylene	12 / 14	1,200	430	IS66SD12	256	170	8 / 14	1.50	YES
Benzo(k)fluoranthene	13 / 14	1,200	640	IS66SD05	239	27.2	11 / 14	8.79	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-25
Screening Statistics - Site 66 Sediment - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
bis(2-Chloroethyl)ether	1 / 14	1,200	2.20	IS66SD09	114	NSV	-- / --	NSV	YES
bis(2-Ethylhexyl)phthalate	0 / 14	1,200	--	--	162	180	-- / --	0.90	NO
Chrysene	13 / 14	1,200	730	IS66SD05	364	166	10 / 14	2.19	YES
Dibenz(a,h)anthracene	10 / 14	1,200	210	IS66SD12	157	33.0	9 / 14	4.75	YES
Dibenzofuran	0 / 14	1,200	--	--	260	415	-- / --	0.63	NO
Diethylphthalate	0 / 14	1,200	--	--	260	603	-- / --	0.43	NO
Di-n-octylphthalate	0 / 14	1,200	--	--	139	61.0	-- / --	2.28	NO
Fluoranthene	14 / 14	--	1,500	IS66SD05	644	423	9 / 14	1.52	YES
Fluorene	8 / 14	1,200	110	IS66SD05	122	77.4	2 / 14	1.42	YES
Hexachlorobutadiene	0 / 14	1,200	--	--	115	1.30	-- / --	88.2	NO
Hexachlorocyclopentadiene	2 / 14	1,200	6.60	IS66SD09	115	NSV	-- / --	NSV	YES
Hexachloroethane	0 / 14	1,200	--	--	260	1,027	-- / --	0.25	NO
Indeno(1,2,3-cd)pyrene	12 / 14	1,200	420	IS66SD12	258	17.0	10 / 14	15.2	YES
Nitrobenzene	0 / 14	620	--	--	86.5	21.0	-- / --	4.12	NO
Pentachlorophenol	0 / 14	3,100	--	--	309	504	-- / --	0.61	NO
Phenanthrene	12 / 14	1,200	940	IS66SD05	365	204	7 / 14	1.79	YES
Pyrene	13 / 14	1,200	1,100	IS66SD05	570	195	11 / 14	2.92	YES
Explosives (UG/KG)									
Nitroglycerin	1 / 14	4,000	1,400	IS66SD06	879	NSV	-- / --	NSV	YES
Perchlorate	1 / 11	1.30	7.70	IS66SD03	1.00	NSV	-- / --	NSV	YES
Volatile Organic Compounds (UG/KG)									
1,1,1-Trichloroethane	0 / 14	55.0	--	--	5.21	30.2	-- / --	0.17	NO
1,1-Dichloroethene	0 / 14	55.0	--	--	5.21	31.0	-- / --	0.17	NO
1,2-Dichlorobenzene	0 / 14	55.0	--	--	5.21	16.5	-- / --	0.32	NO
2-Butanone	4 / 14	49.0	25.0	IS66SD07	14.0	NSV	-- / --	NSV	YES
Acetone	3 / 14	79.0	110	IS66SD07	31.4	NSV	-- / --	NSV	YES
Carbon disulfide	0 / 14	55.0	--	--	4.48	0.85	-- / --	5.26	NO
Chlorobenzene	0 / 14	55.0	--	--	5.21	8.42	-- / --	0.62	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-25
Screening Statistics - Site 66 Sediment - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Toluene	1 / 14	55.0	24.0	IS66SD10	6.78	NSV	-- / --	NSV	YES
Xylene, total	0 / 14	55.0	--	--	8.36	25.2	-- / --	0.33	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-26
Screening Statistics - Site 66 Groundwater - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Dissolved Metals (UG/L)									
Aluminum	3 / 4	100	115	IS66GW030910	70.0	87.0	2 / 4	0.80	NO
Arsenic	0 / 4	11.3	--	--	2.46	5.00	-- / --	0.49	NO
Barium	4 / 4	--	155	IS66GW030910	113	4.00	4 / 4	28.3	YES
Cadmium	3 / 4	0.20	0.24	IS66GW040910	0.14	0.21	1 / 4	0.69	NO
Cobalt	4 / 4	--	40.0	IS66GW040910	16.6	23.0	2 / 4	0.72	NO
Copper	0 / 4	10.0	--	--	2.30	7.20	-- / --	0.32	NO
Iron	4 / 4	--	19,900	IS66GW030910	9,800	300	4 / 4	32.7	YES
Manganese	4 / 4	--	856	IS66GW050910	674	120	4 / 4	5.61	YES
Mercury	0 / 4	0.10	--	--	0.050	0.026	-- / --	1.92	NO
Nickel	2 / 4	4.00	44.6	IS66GW040910	17.2	41.9	1 / 4	0.41	NO
Selenium	0 / 4	7.00	--	--	3.50	1.00	-- / --	3.50	NO
Silver	0 / 4	4.00	--	--	2.00	2.44	-- / --	0.82	NO
Pesticide/Polychlorinated Biphenyls (UG/L)									
4,4'-DDD	0 / 4	0.054	--	--	0.026	0.011	-- / --	2.40	NO
4,4'-DDT	0 / 4	0.054	--	--	0.026	5.00E-04	-- / --	52.8	NO
alpha-Chlordane	0 / 4	0.027	--	--	0.013	0.0022	-- / --	5.97	NO
Aroclor-1016	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1221	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1232	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1242	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1248	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1254	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Aroclor-1260	0 / 4	0.27	--	--	0.13	7.40E-05	-- / --	1,774	NO
Endosulfan II	0 / 4	0.054	--	--	0.026	0.051	-- / --	0.52	NO
Endosulfan sulfate	0 / 4	0.054	--	--	0.026	0.051	-- / --	0.52	NO
Endrin	0 / 4	0.054	--	--	0.026	0.036	-- / --	0.73	NO
Endrin aldehyde	0 / 4	0.054	--	--	0.026	0.036	-- / --	0.73	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-26
Screening Statistics - Site 66 Groundwater - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Endrin ketone	0 / 4	0.054	--	--	0.026	0.036	-- / --	0.73	NO
gamma-BHC (Lindane)	0 / 4	0.027	--	--	0.013	0.010	-- / --	1.31	NO
gamma-Chlordane	0 / 4	0.027	--	--	0.013	0.0022	-- / --	5.97	NO
Heptachlor	1 / 4	0.026	0.021	IS66GW040910	0.015	0.0019	1 / 4	7.89	YES
Heptachlor epoxide	0 / 4	0.027	--	--	0.013	0.0019	-- / --	6.91	NO
Methoxychlor	0 / 4	0.27	--	--	0.13	0.019	-- / --	6.91	NO
Toxaphene	0 / 4	0.54	--	--	0.26	2.00E-04	-- / --	1,319	NO
Semivolatile Organic Compounds (UG/L)									
2-Methylnaphthalene	0 / 4	7.90	--	--	3.89	4.70	-- / --	0.83	NO
4-Bromophenyl-phenylether	0 / 4	7.90	--	--	3.89	3.90	-- / --	1.00	NO
4-Chlorophenyl-phenylether	0 / 4	7.90	--	--	3.89	7.30	-- / --	0.53	NO
4-Methylphenol						543	4		
Acenaphthene	0 / 4	7.90	--	--	3.89	5.80	-- / --	0.67	NO
Anthracene	0 / 4	7.90	--	--	3.89	0.012	-- / --	324	NO
Benzo(a)anthracene	0 / 4	0.10	--	--	0.050	0.018	-- / --	2.76	NO
Benzo(a)pyrene	0 / 4	0.10	--	--	0.050	0.015	-- / --	3.32	NO
Benzo(g,h,i)perylene	0 / 4	7.90	--	--	3.89	7.64	-- / --	0.51	NO
Fluoranthene	0 / 4	7.90	--	--	3.89	0.040	-- / --	97.2	NO
Fluorene	0 / 4	7.90	--	--	3.89	3.00	-- / --	1.30	NO
Hexachlorobenzene	0 / 4	0.10	--	--	0.050	3.00E-04	-- / --	166	NO
Hexachlorocyclopentadiene	0 / 4	7.90	--	--	3.89	5.20	-- / --	0.75	NO
Naphthalene	1 / 4	0.10	1.70	IS66GW030910	0.46	1.10	1 / 4	0.42	NO
Pentachlorophenol	0 / 4	0.53	--	--	0.26	0.50	-- / --	0.52	NO
Phenanthrene	0 / 4	7.90	--	--	3.89	0.40	-- / --	9.72	NO
Phenol	0 / 3	7.90	--	--	3.87	4.00	-- / --	0.97	NO
Pyrene	0 / 4	7.90	--	--	3.89	0.025	-- / --	156	NO

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-26
Screening Statistics - Site 66 Groundwater - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Explosives (UG/L)									
Volatile Organic Compounds (UG/L)									
cis-1,3-Dichloropropene	0 / 4	0.50	--	--	0.25	0.055	-- / --	4.55	NO
Toluene	1 / 4	0.50	5.50	IS66GW030910	1.56	2.00	1 / 4	0.78	NO
trans-1,3-Dichloropropene	0 / 4	0.50	--	--	0.25	0.055	-- / --	4.55	NO
Dioxin/Furans (NG/L)									
2,3,7,8-TCDD (dioxin)	0 / 4	0.011	--	--	0.0053	3.10E-09	-- / --	1,705,645	NO
Octachlorodibenzo-p-dioxin	1 / 4	0.020	0.14	IS66GW030910	0.040	NSV	-- / --	NSV	YES
Total heptachlorodibenzo-p-dioxin	2 / 4	0.027	0.0061	IS66GW030910	0.0092	NSV	-- / --	NSV	YES
Other Parameters (MG/L)									
Hardness	4 / 4	--	140	IS66GW030910	77.5	NSV	-- / --	NSV	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-27
Screening Statistics - Site 66 Ash - Step 3
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean	Screening Value	Frequency of Exceedance	Mean Hazard Quotient[1]	Refined COPC?
Inorganics (MG/KG)									
Aluminum	6 / 6	--	11,100	IS66AH08	8,102	50.0	9 / 6	162	YES
Arsenic	6 / 6	--	123	IS66AH07	63.4	18.0	9 / 6	3.52	YES
Chromium	6 / 6	--	28.8	IS66AH07	20.1	0.40	9 / 6	50.2	YES
Cobalt	6 / 6	--	17.2	IS66AH04	12.1	13.0	5 / 6	0.93	NO
Cyanide	0 / 6	0.76	--	--	0.28	0.0050	-- / --	56.7	NO
Iron	6 / 6	--	51,300	IS66AH07	37,583	200	9 / 6	188	YES
Manganese	6 / 6	--	455	IS66AH09	242	220	6 / 6	1.10	YES
Mercury	6 / 6	--	0.67	IS66AH07	0.40	0.10	9 / 6	4.00	YES
Nickel	6 / 6	--	38.4	IS66AH08	34.7	38.0	4 / 6	0.91	NO
Selenium	6 / 6	--	8.10	IS66AH09	4.07	0.52	9 / 6	7.82	YES
Thallium	6 / 6	--	1.90	IS66AH07	1.21	1.00	6 / 6	1.21	YES
Vanadium	6 / 6	--	150	IS66AH09	88.5	2.00	9 / 6	44.2	YES

NSV - No Screening Value
1 - Shaded cells indicate hazard quotient based on reporting limits

TABLE 7-28
Summary of Hazard Quotients for Food Web Exposures - Step 3, Terrestrial Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Lead	0.22	0.02	0.07	0.02	<0.01	<0.01	0.18	0.04	0.08	0.23	0.05	0.10
Mercury	2.45	0.49	1.10	0.02	0.01	0.02	0.08	0.03	0.05	0.07	0.03	0.04
Selenium	0.22	0.13	0.17	0.03	0.02	0.02	0.06	0.02	0.03	0.06	0.02	0.03
Vanadium	1.15	0.23	0.52	0.10	0.02	0.04	0.01	<0.01	<0.01	0.01	<0.01	<0.01
Zinc	0.09	0.04	0.06	0.06	0.01	0.03	0.43	0.05	0.14	0.59	0.07	0.20
Pesticides/PCBs												
4,4'-DDD	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
4,4'-DDE	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.09	0.02	0.04
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	0.03	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1221	0.07	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Aroclor-1232	0.04	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1242	0.03	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1248	0.03	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1254	0.03	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1260	0.03	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PCBs (total)	0.28	0.06	0.12	0.02	<0.01	<0.01	0.03	<0.01	0.01	0.05	<0.01	0.02
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	0.05	0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-28
Summary of Hazard Quotients for Food Web Exposures - Step 3, Terrestrial Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Semivolatile Organics												
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	0.04	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	0.04	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.06	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	0.06	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	0.05	0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenz(a,h)anthracene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	0.02	<0.01	0.01	<0.01	<0.01	<0.01	0.06	0.01	0.03	0.08	0.02	0.04
Hexachlorobutadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	0.04	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pentachlorophenol	0.03	<0.01	0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	0.01
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	0.07	0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Volatile Organics												
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dioxin/Furans												
Dioxin/furan (TEQ)	0.26	0.03	0.08	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01

TABLE 7-29
Summary of Hazard Quotients for Food Web Exposures - Step 3, Semi-Aquatic Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Raccoon			Muskrat			Spotted sandpiper			Great blue heron		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Arsenic	0.02	<0.01	<0.01	0.15	0.03	0.07	0.11	0.04	0.07	0.02	<0.01	0.02
Cadmium	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.07	<0.01	0.02	0.01	<0.01	<0.01
Chromium	<0.01	<0.01	<0.01	0.03	<0.01	0.01	0.57	0.11	0.26	0.09	0.02	0.04
Copper	0.02	0.01	0.01	<0.01	<0.01	<0.01	0.11	0.08	0.09	0.01	<0.01	<0.01
Lead	0.01	<0.01	<0.01	0.04	<0.01	0.01	0.59	0.12	0.27	0.17	0.03	0.07
Mercury	0.04	0.02	0.03	0.19	0.04	0.08	2.11	0.70	1.22	6.36	2.12	3.67
Nickel	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	0.02	0.03
Selenium	0.03	0.02	0.02	0.07	0.04	0.05	0.19	0.10	0.14	0.04	<0.01	0.02
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	0.60	0.12	0.27	0.33	0.07	0.15	0.43	0.09	0.19	0.42	0.08	0.19
Zinc	0.04	<0.01	0.02	0.01	<0.01	0.01	1.30	0.14	0.43	0.20	0.02	0.07
Pesticides/PCBs												
4,4'-DDD	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.03	<0.01	0.01
4,4'-DDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01	0.16	0.02	0.05
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.01
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01
Aroclor-1221	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.02
Aroclor-1232	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	0.01
Aroclor-1242	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01
Aroclor-1248	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01
Aroclor-1254	0.03	<0.01	0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.11	0.02	0.05
Aroclor-1260	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	0.02
PCBs (total)	0.08	0.02	0.04	0.01	<0.01	<0.01	0.04	<0.01	0.02	0.29	0.06	0.13
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	0.01	<0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01

TABLE 7-29
Summary of Hazard Quotients for Food Web Exposures - Step 3, Semi-Aquatic Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Raccoon			Muskrat			Spotted sandpiper			Great blue heron		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Semivolatile Organics												
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Benzo(g,h,i)perylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dibenz(a,h)anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.12	0.02	0.05	0.17	0.03	0.08
Hexachlorobutadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
Indeno(1,2,3-cd)pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pentachlorophenol	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.01	<0.01	<0.01
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Volatile Organics												
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dioxin/Furans												
Dioxin/furan (TEQ)	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-30
Summary of Hazard Quotients for Food Web Exposures - Step 3, Ash Material Exposure
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox			American robin			Eastern screech-owl		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics												
Arsenic	7.66	1.53	3.43	0.07	0.01	0.03	0.31	0.10	0.18	0.26	0.09	0.15
Cadmium	0.20	0.02	0.06	0.01	<0.01	<0.01	0.05	<0.01	0.01	0.07	<0.01	0.02
Chromium	0.21	0.04	0.10	0.02	<0.01	<0.01	0.28	0.06	0.13	0.37	0.07	0.16
Copper	0.02	0.02	0.02	0.03	0.02	0.02	0.02	0.01	0.02	0.03	0.02	0.02
Lead	0.14	0.01	0.04	0.01	<0.01	<0.01	0.11	0.02	0.05	0.14	0.03	0.06
Mercury	1.24	0.25	0.56	0.01	<0.01	<0.01	0.04	0.02	0.03	0.03	0.01	0.02
Nickel	0.11	0.06	0.08	0.01	<0.01	<0.01	0.02	0.02	0.02	0.03	0.02	0.03
Selenium	1.74	1.05	1.35	0.20	0.12	0.16	0.51	0.15	0.27	0.47	0.14	0.26
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Vanadium	3.03	0.61	1.35	0.25	0.05	0.11	0.04	<0.01	0.02	0.03	<0.01	0.01
Zinc	0.05	0.03	0.04	0.04	<0.01	0.02	0.26	0.03	0.09	0.35	0.04	0.12
Dioxin/Furans												
Dioxin/furan (TEQ)	0.64	0.06	0.20	<0.01	<0.01	<0.01	0.08	<0.01	0.02	0.09	<0.01	0.03

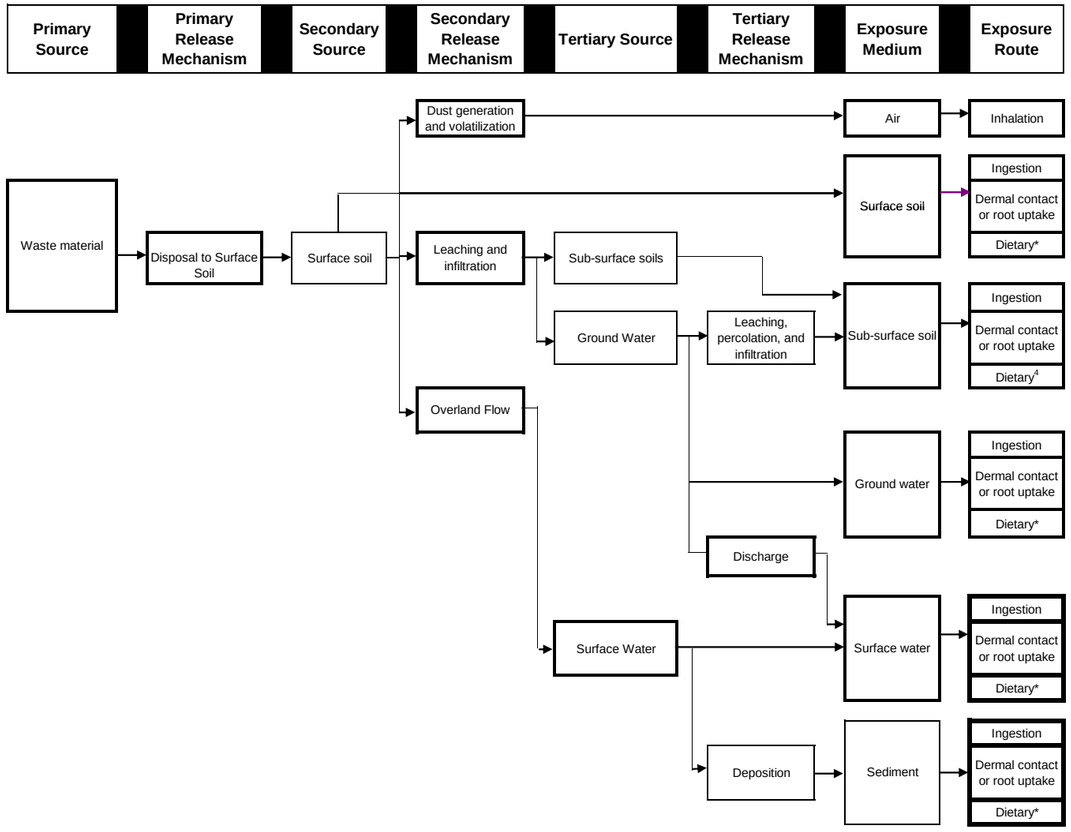
TABLE 7-31
Summary of Hazard Quotients for Food Web Exposures - Step 3, Shallow Subsurface Soil Exposure
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Inorganics						
Arsenic	0.73	0.15	0.33	<0.01	<0.01	<0.01
Cadmium	0.05	<0.01	0.02	<0.01	<0.01	<0.01
Chromium	0.21	0.04	0.09	0.02	<0.01	<0.01
Copper	0.01	0.01	0.01	0.02	0.01	0.01
Lead	0.25	0.03	0.08	0.02	<0.01	<0.01
Mercury	0.59	0.12	0.27	<0.01	<0.01	<0.01
Nickel	0.05	0.02	0.03	<0.01	<0.01	<0.01
Selenium	0.44	0.27	0.35	0.05	0.03	0.04
Silver	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	0.15	0.08	0.11	0.11	0.02	0.05
Pesticides/PCBs						
4,4'-DDD	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDE	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4,4'-DDT	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aldrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
alpha-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Aroclor-1016	0.06	0.01	0.03	<0.01	<0.01	<0.01
Aroclor-1221	0.12	0.02	0.05	<0.01	<0.01	<0.01
Aroclor-1232	0.06	0.01	0.03	<0.01	<0.01	<0.01
Aroclor-1242	0.06	0.01	0.03	<0.01	<0.01	<0.01
Aroclor-1248	0.06	0.01	0.03	<0.01	<0.01	<0.01
Aroclor-1254	0.06	0.01	0.03	<0.01	<0.01	<0.01
Aroclor-1260	0.06	0.01	0.03	<0.01	<0.01	<0.01
PCBs (total)	0.45	0.09	0.20	0.02	<0.01	0.01
beta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
delta-BHC	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dieldrin	0.03	<0.01	0.01	<0.01	<0.01	<0.01
Endosulfan I	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endosulfan II	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Endrin	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-BHC (Lindane)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
gamma-Chlordane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor epoxide	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Toxaphene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 7-31
Summary of Hazard Quotients for Food Web Exposures - Step 3, Shallow Subsurface Soil Exposure
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Short-tailed shrew			Red fox		
	NOAEL	LOAEL	MATC	NOAEL	LOAEL	MATC
Semivolatile Organics						
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
4-Bromophenyl-phenylether	NA	NA	NA	NA	NA	NA
4-Chlorophenyl-phenylether	NA	NA	NA	NA	NA	NA
Acenaphthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	0.06	0.01	0.03	<0.01	<0.01	<0.01
Benzo(a)pyrene	0.07	0.01	0.03	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	0.06	0.01	0.03	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	0.03	<0.01	0.02	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	0.05	<0.01	0.02	<0.01	<0.01	<0.01
Chrysene	0.09	0.02	0.04	<0.01	<0.01	<0.01
Dibenz(a,h)anthracene	0.02	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluorene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	0.03	0.02	0.02	<0.01	<0.01	<0.01
Hexachlorobutadiene	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorocyclopentadiene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	0.06	0.01	0.03	<0.01	<0.01	<0.01
Pentachlorophenol	0.05	<0.01	0.02	<0.01	<0.01	<0.01
Phenanthrene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Pyrene	0.14	0.03	0.06	<0.01	<0.01	<0.01
Volatile Organics						
1,1,2,2-Tetrachloroethane	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2,4-Trichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,2-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,3-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
1,4-Dichlorobenzene	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Figure 7-1
Conceptual Site Model - Potential Ecological Receptors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland



		Ecological Receptors													
		Plants		**Invertebrates**		**Fish**	**Amphibians/Reptiles**		**Birds**				**Mammals**			
Primary Source	**Primary Release Mechanism**	Terrestrial Plants	Aquatic Plants	Soil	Aquatic		Amphibians	Reptiles	Predator	Wading Piscivore	Semi-aquatic Insectivore	Vermivore	Terrestrial Insectivore	Semi-aquatic burrowing herbivore	Predator	Semi-aquatic omnivore
									Eastern Screech Owl	Great Blue Heron	Sandpiper	Woodcock	Short-tailed shrew	Muskrat	Red Fox	Racoon
Waste material	Air	Inhalation	x	x	x	x	x	x	x	i	i	i	i	i	i	i	i
	Surface soil	Ingestion	x	x	●	x	x	i	i	i	i	i	i	○	○	i	i
		Dermal contact or root uptake	●	x	i	x	x	i	i	i	i	i	i	○	○	i	i
		Dietary*	x	x	○	x	x	x	x	●	x	i	●	●	i	●	i
	Sub-surface soil	Ingestion	x	x	x	x	x	x	x	x	x	x	x	x	○	i	x
		Dermal contact or root uptake	●	x	x	x	x	x	x	x	x	x	x	x	i	i	x
		Dietary[4]	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Ground water	Ingestion	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Dermal contact or root uptake	○	x	x	x	x	x	x	x	x	x	x	x	x	x	x
		Dietary*	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Surface water	Ingestion	x	x	x	i	i	i	i	i	i	i	i	i	i	i	i
		Dermal contact or root uptake	x	i	x	i	i	i	i	i	i	i	i	i	i	i	i
		Dietary*	x	x	x	i	i	i	i	i	i	i	i	i	i	i	i
	Sediment	Ingestion	x	x	x	x	i	i	i	i	i	i	i	i	i	i	i
		Dermal contact or root uptake	x	●	x	●	x	○	○	i	i	i	i	i	i	i	i
		Dietary*	x	x	x	i	●	●	●	x	●	●	x	x	●	x	●

Legend

● = Complete and significant pathway

○ = Complete and significance unknown

i = Complete and insignificant pathway

x = Incomplete pathway

Note

*Dietary = Dietary means any tissue that is consumed by the species of interest within the exposure medium, and it includes trophic transfer.

Definitions

A **Complete** pathway means there is a potential for a contaminant to reach a receptor via the proposed route.

An **Incomplete** pathway means there is no potential for a contaminant to reach a receptor via the proposed route.

A **Significant** pathway means there is a high potential that the receptor will receive a significant proportion of the contaminant dose via the proposed route.

An **Insignificant** pathway means there is a low potential that the receptor will receive a significant proportion of the contaminant dose via the proposed route.

Significance Unknown means that it is unknown if the receptor will receive a significant proportion of the contaminant dose via the proposed route alone. However, the receptor could receive a significant proportion of the contaminant dose when combined with other pathways or other contaminants.

SECTION 8

Conclusions and Recommendations

8.1 Conclusions

8.1.1 Site Characterization

Through characterization and sampling activities performed at the site during both the SI and RI, the nature and extent of contamination in soil, sediment, and ash have been adequately characterized to develop human health and ecological risk assessments for the site. Based on the laboratory analytical results, SVOCs, metals, and to some degree, pesticides/PCBs, are the most prevalent classes of contaminants reported as COPCs in soil and sediment. The highest concentrations of these constituents were reported to be widespread within the approximate limit of fill and may be associated with previous site activities. Contaminants in groundwater and ash were mostly limited to metals constituents and appear to exhibit a distribution similar to the other media types. Both dioxins/furans and explosives COPCs were only reported at locations outside of and upgradient of the approximate limits of visible waste material and buried fill material.

In addition to laboratory analysis, visual observation of surface and subsurface material was used to further delineate the lateral extent and thickness of buried fill material. Based on the stratigraphy observed throughout the central portion of the site, the horizontal extent of fill material is generally consistent with the findings of the SI, with the exception of two additional areas identified south of Olsen Road. Subsurface fill material and ash were observed in two locations during the installation of downgradient monitoring wells IS66MW04 and IS66MW05; the lateral extent of the fill material in these two areas was not delineated during the RI field activities.

The depth of buried fill material was observed to extend up to 20.5 feet bgs in the central portion of the site. Fill material was also found to sporadically exist at depths of up to 9 feet bgs at IS66DP03, IS66MW02 and IS66GB10 and additional areas along the eastern edge of the approximate limit of fill, where banks and depressions in the original topography may have facilitated filling activities.

Observation of groundwater levels suggest that shallow groundwater at the site generally flows south to southwest toward the unnamed tributary of Mattawoman Creek.

8.1.2 Human Health Risk

The HHRA was conducted to evaluate the potential human health risks associated with the presence of site-related contaminants in surface soil, combined surface/subsurface soil, ash, sediment, and groundwater at Site 66. Potential risks were calculated for a current and future adult and adolescent trespasser, and future adult resident, child resident, lifetime resident, construction and industrial worker. The assessment determined that there are no risks or hazards that exceed acceptable risk levels for the current or future adult and adolescent trespasser/visitor or the construction worker.

Future industrial use of the site could result in potential unacceptable RME carcinogenic risks associated with exposure to combined surface and subsurface soil (carcinogenic risks associated with ash alone are within acceptable levels). The risk to the industrial worker is associated with carcinogenic PAHs and chromium. Additionally, future adults, children and lifetime residents could result in potential unacceptable risk as follows:

- Soil - RME risk is primarily associated with the carcinogenic PAHs and chromium; noncarcinogenic hazard is associated with metals. No individual COPCs that contribute an HI above 1.
- Ash - RME carcinogenic risk is associated with arsenic and chromium, and the noncarcinogenic hazard is primarily associated with arsenic, with smaller contributions (below 1) from the additional metals.
- Groundwater - RME carcinogenic risk is associated with arsenic, and the noncarcinogenic hazard is associated with arsenic, cobalt, and iron, with a smaller contribution (below 1) from manganese.

None of the evaluated residential or industrial exposure scenarios are currently present at the site, nor are they expected to be present at the site in the future. It is also extremely unlikely that the surficial groundwater at Site 66 will be used as a future source of potable water. Screening for vapor intrusion from groundwater through a future building foundation pathway indicated there are no COPCs from groundwater to indoor air.

8.1.3 Ecological Risk

The SERA was conducted to evaluate the potential ecological risks associated with the presence of site-related surface soil, ash, sediment, and groundwater at Site 66, using the three tiered Navy ERA process. Based on the conservative assumptions in the SERA, the following potential risks were identified:

- Mercury, atrazine, and high molecular weight PAHs in surface soil pose potential risks to soil invertebrates or terrestrial plants.
- Lead, mercury, silver, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, Aroclor-1254, and PAHs in sediment pose potential risks to benthic invertebrates or aquatic plants.
- Several inorganics in the ash material pose potential risks to soil invertebrates or terrestrial plants.
- Mercury in sediment poses a potential risk to upper trophic level semi-aquatic receptors.
- Arsenic and selenium in the ash material pose potential risks to upper trophic level terrestrial receptors.

8.2 Recommendations

An additional area of buried fill and ash-like material was discovered outside the Site 66 boundary, south of Olsen Road. In addition, elevated concentrations of three of the risk-driving COPCs in shallow groundwater (heptachlor, cobalt, and manganese) were found in the downgradient monitoring wells. As a result, additional investigation of this area is recommended to: 1) further delineate the extent of fill material and 2) further characterize the extent of groundwater contamination. Based on the results of the risk assessments, a feasibility study is recommended to evaluate remedial alternatives for those exposure scenarios that potentially pose an unacceptable risk to human health and/or ecological receptors (i.e., groundwater, soil, and ash). A BERA is recommended for sediment.

SECTION 9

References

ATSDR. 1995. *Toxicological profile for polycyclic aromatic hydrocarbons (PAHs)*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. August.

ATSDR. 2000. *Toxicological profile for Polychlorinated Biphenyls (PCBs)*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2002a. *Toxicological Profile for DDT, DDE, and DDD*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2002b. *Toxicological profile for Aldrin/Dieldrin*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2003. *Toxicological profile for Atrazine*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2004. *Toxicological profile for cobalt*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2005. *Toxicological profile for arsenic.* U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2007. *Toxicological profile for Heptachlor and Heptachlor Epoxide*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

ATSDR. 2008. *Toxicological profile for Chromium (Draft for Public Comment)*. U.S. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA.

Buchman. 2008. NOAA SQuiRTs *(Screening Quick Reference Tables)*.

CH2MHILL. 2008. *Site 66 - Final Turkey Run Disposal Area Site Inspection Report, Naval Support Facility Indian Head, Indian Head, Maryland*. November.

CH2M HILL. 2010. *Final Uniform Federal Policy Sampling and Analysis Plan for Site 66 Turkey Run Disposal Area Remedial Investigation, Naval Support Facility, Indian Head, Indian Head, Maryland.* May.

Chief of Naval Operations. 1999. *Navy Policy for Conducting Ecological Risk Assessments*. Memorandum from Chief of Naval Operations to Commander, Naval Facilities Engineering Command. Ser N453E/9U595355. April 5.

EFACHES. 2001. *EFA Chesapeake Ecological Screening and COPC Refinement for Sediment, Soil, and Surface Water*. 16 October 2001. Revision 2.

Efroymson, R.A., M.E. Will, G.W. Suter II, and A.C. Wooten. 1997a. *Toxicological benchmarks for screening contaminants of potential concern for effects on terrestrial plants: 1997 revision.* Environmental Restoration Division, ORNL Environmental Restoration Program. ES/ER/TM-85/R3.

Efroymson, R.A., M.E. Will, and G.W. Suter II. 1997b. *Toxicological benchmarks for screening contaminants of potential concern for effects on soil and litter invertebrates and heterotrophic process: 1997 revision.* Environmental Restoration Division, ORNL Environmental Restoration Program. ES/ER/TM-126/R2.

Ensafe/Allen & Hoshall. 1994. *Final Site Inspection Report, Phase II Indian Head Division, Naval Surface Warfare Center*. March.

Fetter, 1993. *Contaminant Hydrogeology*. C.W. Fetter. Prentice-Hall, Inc., 1993.

Hiortdahl, S. N. 1990. Changes in Ground-Water Quality Caused by River-Water Intrusion in the Potomac Group Aquifer System of Northwestern Charles County, Maryland in *Proceedings of the FOCUS Conference on Eastern Regional Ground Water Issues*, Springfield, Mass., October 17–19.

Hiortdahl, Steven N. 1993. Personal Communication – Comments: Draft Site Inspection Report, Indian Head, Maryland.

Jones, D.S., G.W. Suter II, and R.N. Hull. 1997. *Toxicological benchmarks for screening contaminants of potential concern for effects on sediment-associated biota: 1997 revision.* Environmental Restoration Division, ORNL Environmental Restoration Program. ES/ER/TM-95/R4.

Kearney, A.T. 1997. Risk assessment for the Waste Technologies Industries (WTI) hazardous waste incinerator facility (East Liverpool, Ohio). Volume 6. Screening ecological risk assessment. EPA/905/R-97/002F. May.

Maryland Department of Natural Resources. 1992. *Natural Heritage Program, Rare, Threatened and Endangered Species and Natural Area Survey for the Naval Surface Warfare Center, Indian Head Division*.

McCarroll N., N. Keshava, J, Chen, G. Akerman, A. Kligerman, and E. Rinde. 2010. An evaluation of the mode of action framework for mutagenic carcinogens case study II: Chromium (VI), *Environmental and Molecular Mutagenesis* Volume 51, Issue 2, pages 89–111, March.

Naval Energy and Environment Support Activity . 1992. Preliminary Assessment Report, Naval Ordnance Station, Indian Head, Maryland. *NEESA 13-021A*.

Naval Energy and Environment Support Activity . 1993. Initial Assessment Study of Naval Ordnance Station Indian Head, Maryland. *NEESA 13-021.*

NAVFAC, 2006. Navy guidance for conducting ecological risk assessments. Available at http://web.ead.anl.gov/ecorisk/. Website version last modified: 01/23/2006.

Roberts, W.C. and W.R. Hartley, eds. 1992. *Drinking Water Health Advisory: Munitions*. USEPA, Office of Drinking Water Health Advisories. Lewis Publishers, Boca Raton, Florida.

Sample, B.E., D.M. Opresko, and G.W. Suter II. 1996. *Toxicological benchmarks for wildlife: 1996 revision.* Environmental Restoration Division, ORNL Environmental Restoration Program. ES/ER/TM-86/R3.

Sample, B.E., M.S. Aplin, R.A. Efroymson, G.W. Suter II, and C.J.E. Welsh. 1997. *Methods and tools for estimation of the exposure of terrestrial wildlife to contaminants.* Environmental Sciences Division, Oak Ridge National Laboratory. ORNL/TM-13391.

Sample, B.E., J.J. Beauchamp, R.A. Efroymson, and G.W. Suter II. 1998. *Development and validation of bioaccumulation models for small mammals.* Environmental Restoration Division, ORNL Environmental Restoration Program. ES/ER/TM-219.

Tetra Tech NUS. 2002a. *Background Soil Investigation Report for Indian Head and Stump Neck Annex Naval Surface Warfare Center, Indian Head, Maryland*. February 2002.

Tetra Tech NUS. 2002b. *Mattawoman Creek Study*. Indian Head Division Naval Surface Warfare Center, Indian Head, Maryland. July 2002.

Tetra Tech NUS. 2004. *Master Plans for Installation Restoration Program Environmental Investigations at Naval District Washington, Indian Head*, Indian Head, Maryland. June.

Travis, C.C. and A.D. Arms. 1988. Bioconcentration of organics in beef, milk, and vegetation. *Environmental Science and Technology.* 22:271-274.

U.S. Department of Agriculture. 1974. *Soil Survey of Charles County, Maryland.* Soil Conservation Service.

USEPA. 1989a. *Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part A)*. Interim Final. EPA/540/1-89/002. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C. December.

USEPA. 1989b. *Protocol for Short Term Toxicity Screening of Hazardous Waste Sites*. EPA/600/3-88/029.

USEPA. 1991. *Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors.* Office of Solid Waste and Emergency Response. OSWER Directive No. 9285.6-03, March 25.

USEPA. 1993a. *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses*. April.

USEPA. 1993b. *Region III Technical Guidance Manual Selecting Exposure Routes and Contaminants of Concern by Risk-Based Screening*. Region III, Hazardous Waste Management Division, Office of Superfund Programs. EPA/903/R-93-001. January 1993.

USEPA. 1993c. *Wildlife exposure factors handbook. Volume I of II.* EPA/600/R-93/187a.

USEPA. 1994a. *USEPA Region III Modifications to National Functional Guidelines for Organic Data Review, Multi Media, Multi Concentration*, September.

USEPA. 1994b. *1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities*, OSWER Directive 9355.4-12. July 14.

USEPA. 1994c. *Guidance Manual for the Integrated Exposure Uptake Biokinetic Model for Lead in Children.* Office of Solid Waste and Emergency Response. EPA/540/R-93/081. 1994.

USEPA. 1995a. *Internal report on summary of measured, calculated and recommended log k_{ow} values.* Environmental Research Laboratory, Athens, GA. 10 April.

USEPA. 1995b. *Great Lakes Water Quality Initiative criteria documents for the protection of wildlife: DDT, mercury, 2,3,7,8-TCDD, PCBs.* EPA/820/B-95/008.

USEPA. 1996a. *Soil Screening Guidance: Technical Background Document*. USEPA, May 1996, EPA/540/R-95/128.

USEPA. 1996b. *Superfund chemical data matrix.* EPA/540/R-96/028.

USEPA. 1997. *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments*. Interim Final. EPA/540/R-97/006. December.

USEPA. 1998. *OSWER Directive: Clarification to the 1994 Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities*. USEPA August 1998, EPA/540/F-98/030 [OSWER Directive #9200.4-27P].

USEPA. 2000. Bioaccumulation Testing and Interpretation for the Purpose of Sediment Quality Assessment. EPA-823-R-00-001, February 2000.

USEPA. 2001a. *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments*. Office of Solid Waste and Emergency Response. EPA 540-R-97-033. OSWER 9285.7-01D. December.

USEPA. 2001b. *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim.* EPA/540/R/99/005. OSWER 9285.7-02EP. September.

USEPA. 2001c. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*. OSWER 9355.4-24.

USEPA. 2002a. *National Primary Drinking Water Regulations*. EPA 816-F-02-013. July.

USEPA. 2002b. *Office of Solid Waste and Emergency Response Draft Guidance for Evaluating the Vapor Intrusion from Groundwater and Soils*. November.

USEPA. 2002c. *Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites*. OSWER 9355.4-24. December.

USEPA. 2003a. *Human Health Toxicity Values in Superfund Risk Assessments.* OSWER Directive 9285.7-53. December.

USEPA. 2003b. Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposure to Lead in Soil. Office of Solid Waste and Emergency Response. *OSWER 9285.7-54*. January.

USEPA. 2003c. Ecological Soil Screening Level for Aluminum. Interim Final. OSWER Directive 9285.7-60. August.

USEPA. 2003d. Ecological Soil Screening Level for Iron. Interim Final. OSWER Directive 9285.7-69. August.

USEPA. 2004. Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment) Final. EPA/540/R/99/005. OSWER 9285.7-02EP. July.

USEPA. 2005a. *Guidelines for Carcinogenic Risk Assessment*. EPA/630/P-03/001F. March.

USEPA. 2005b. *Supplemental Guidance for Assessing Susceptibility from Early-Life Exposure to Carcinogens*. EPA/630/R-03/003F. March.

USEPA. 2005c. Guidance Manual for the All-Ages Lead Model (AALM) Draft Version 1.05. Research Triangle Park, North Carolina.

USEPA. 2006a. *Derivation of RBCs for Carcinogens that Act Via a Mutagenic Mode of Action and Incorporate Default ADAFs*. . October.

USEPA. 2006b. Region III BTAG Freshwater Screening Benchmarks. http://www.epa.gov/reg3hscd/risk/eco/btag/sbv/fw/R3_BTAG_FW_Benchmarks_07-06.pdf. Table dated July 2006.

USEPA, 2008. *Regional Screening Levels for Chemical Contaminants at Superfund Sites*. Developed by Oak Ridge National Laboratory for USEPA Regions III, VI, and IX. September 12.

USEPA. 2009. Calculations of Blood Lead Concentrations (PbBs), U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee, Version date 6/21/09.

USEPA. 2010a. Regional Screening Levels for Chemicals at Superfund Sites. November.

USEPA. 2010b. ProUCL software Version 4.00.05.

USEPA. 2010c. ProUCL *Version 4.00.05 Technical Guide (Draft).* EPA/600/R-07/041. May.

USEPA. 2010d. Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds. Risk Assessment Forum, Washington, DC. *EPA/100/R-10/005*.

USEPA. 2010e. Integrated Risk Information System (IRIS) Database.

USEPA. 2010f. IEUBKWin32 Lead Model for Windows, Version 1.1, Build 11. http://www.epa.gov/superfund/lead/products.htm#guid

USEPA/Navy. 2000. *Federal Facility Agreement (under CERCLA Section 120), Naval Surface Warfare Center, Indian Head Division, Indian Head, MD*. USEPA Region III and U.S. Department of the Navy Administrative Docket Number III-FCA-CERC-018. December.

Van den Berg, M; Birnbaum, L; Bosveld, ATC; Brunstrom, B; Cook, P; Feeley, M; Giesy, JP; Hanberg, A; Hasegawa, R; Kennedy, SW; Kubiak, T; Larsen, JC; van Leeuwen, FX; Liem, AK; Nolt, C; Peterson, RE; Poellinger, L; Safe, S; Schrenk, D; Tillitt, D; Tysklind, M; Younes, M; Waern, F; Zacharewski, T. 1998. Toxic equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. Environ Health Perspect 106(12):775-792.

Van den Berg, M; Birnbaum, LS; Denison, M, DeVito, M, Farland, W, Feeley, M; Fiedler, H; Hakansson, H; Hanberg, A; Haws, L; Rose, M; Safe, S; Schrenk, D; Tohyama, C; Tritscher, A; Tuomisto, J; Tysklind, M; Walker, N; Peterson, RE. 2006. The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds. Toxicol Sci 93:223-241.

Appendix A
Soil Boring Logs

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP01	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-4		4		0-8": Dark Brown (10 YR 3/3) SILT (ML) little clay, organics, rootlets, soft, slight cohesion, moderate plasticity, moist	0.0 ppm
					8"-2': Dark Grayish Brown (2.5 Y 4/2) SILT (ML), very moist, cohesive, little clay, low plasticity, very soft, 1" layer of peat/wood chips	0.0 ppm
					2'-4': Gray (2.5 Y 6/0) mottled with Yellowish Brown (10 YR 5/4) lean CLAY (CL), moist, cohesive, med. stiff, med. plasticity, little silt	0.0 ppm
5	4-8		3		1.5' of lean CLAY (CL) as described at 2-4'	0.0 ppm
					1.5' of Light Gray (10 YR 7/1) SILT (ML), slight orange mottling, soft, very moist to wet, clayey at base	0.0 ppm
	8-12		4		4' of Dark Gray (5 Y 4/1) CLAY (CL), soft at top becoming med. soft at bottom 3', cohesive, med. plasticity, wet at top, silty at top, becomes moist	
10						Water table encountered at ~ 10' bgs
					End of boring = 12 feet	Set PVC screen at 12 feet
15						
20						
25						
30						

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP02	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		1		7" of Dark Brown (7.5 YR 3/2) SILT (ML) little fine to medium sand, soft, moist, organic (roots, leaves)	0.0 ppm
					5" of Yellowish Brown (10 YR 5/4) SILT (ML) some clay, cohesive, med. plasticity, moist	0.0 ppm
5	5-9		0.75		Only recovered wood chips, went through a log/timber, wet, mixed witth some sand	N/A Water table encountered at ~ 5-6' bgs
	9-13		0		No recovery	N/A
10						
					End of boring = 13 feet	PVC placed at~ 10' bgs
15						

	PROJECT NUMBER	BORING NUMBER
CH2MHILL	317395.SI.DF	IS66DP03 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		3		1' of Dark Brown (7.5 YR 3/2) SILT (ML), organic, clayey at base, little fine to coarse sand, little fine gravel (FILL)	0.0 ppm
					1' of concrete chunks	0.0 ppm
					1' of (2.5 Y N 2/0) black ash-like material, fine silt-sized particles, non-cohesive, friable, moist to wet at base	
5	5-9		0.75		Only advanced 1', but refusal, recovered 0.75' of black ash-like material as above, wet	0.0 ppm
					End of boring = Refusal at 6 feet. Drive PVC to 10 feet in an adjacent hole	
10						

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP04	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		2.5		8" of Dark Brown (7.5 YR 3/2) SILT (ML), organic, soft, trace fine to medium sand, damp 4" of Yellowish Brown SILT (ML), little clay, hard, moist, becomes sandy at base 1.5' of silty SAND (SM), Grayish Brown (10 YR 5/2) mottled with Strong Brown (7.5 YR 5/8), fine to medium sand, loose, heterogeneous, mix of clay, silt, sand, wood, moist, (FILL)	0.0 ppm
5	5-9		2		1' SAA (SM), moist, some reddish wood fragments 0.6' of pulverized concrete 0.3' of Dark Grayish Brown (2.5 Y 4/2) CLAY (CL), homogeneous, silt, sand, clay, gravel, wood, cinder fragments, hard, very moist 0.1' of Black (2.5 Y 2/0) ash-like material, very moist	0.0 ppm
	9-13		1.5		1.5' of Grayish Brown (2.5 Y 4/2) and Black (2.5 Y 2/0) CLAY (CL) mixed with sand, little gravel, charred wood, soft, very moist to wet, slight fuel odor at base	0.7 ppm
10						
	13-17		0		No recovery	
15						
					End of boring = 17 feet	Push PVC to 20 feet
20						

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP05	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		3		0.2' of Dark Brown (7.5 YR 3/2) SILT (ML) organic, fine to medium sand, low plasticity, moist 0.8' of Brownish Yellow (10 YR 6/6) SILT (ML), some clay, cohesive, hard, moist 0.2' of charred wood layer 1.8' of Dark Yellowish Brown (10 YR 4/6) SILT with sand (ML), little clay, very fine to fine sand, medium stiff, cohesive, moist	1.4 ppm
5	5-9		1.2		0.6' SAA (SAA) moist 0.8' black ash-like material, moist to wet	1.7 ppm
	9-13		4		3.6' of Black (2.5 Y 2/0) ash-like material, wet 0.4' of Grayish Brown (10 YR 5/2) fine SAND (SP), fine to medium sand, little silt, wet, loose	0.0 ppm
10						
					End of boring = 13 feet	Install PVC at 13 feet
15						

	PROJECT NUMBER	BORING NUMBER	
CH2MHILL	317395.SI.DF	IS66DP06	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		5		0.2' of Dark Brown (7.5 YR 3/2) SILT (ML), moist, soft, little fine to medium sand, organic 4.6' of Yellowish Brown (10 YR 5/8) SILT (ML), some clay, cohesive, hard 0.2' of (10 YR 4/2) Dark Grayish Brown silty SAND (SM), loose, very moist, fine to medium sand	0.0 ppm
5	5-9		4		4' of darkGrayish Brown (2.5 Y 4/2) CLAY (CL) mixed with sand, gravel, concrete chunks, brick fragments, wood, hard, moist (FILL)	0.0 ppm
	9-13		3		1' of Olive Gray (5 Y 4/2) lean CLAY (CL) slight orange and black mottling, hard, moist 1' of Black (5 Y 2.5/1) ash-like material, moist 1' of Very Dark Grayish Brown (2.5 Y 3/2) SILT (ML) with sand, fine to medium sand, hard, very moist	0.0 ppm
10						
	13-17		2		2' of mottled Grayish Brown, Black, and Olive Green CLAY (CL) mixed with silt, sand, gravel, charcoal, very soft, very moist to wet	0.0 ppm
15						
	17-21		3.5		1.5' of Olive Gray CLAY (CL), medium plasticity, very soft, wet, homogeneous 2' of Dark Brown (7.5 YR 3/2) SILT (ML), highly organic peat-like texture, moist, med. stiff, low plasticity	Water Table encountered at ~ 16.5' bgs 0.0 ppm
20						
					End of boring = 21 feet	Set PVC at 20 feet
25						

	PROJECT NUMBER	BORING NUMBER	
CH2MHILL	317395.SI.DF	IS66DP07	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 0900 04/12/2007 END : 0930 04/12/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-1		1.0'		0.2' of V. Dark Grayish Brown (10 YR 3/3) SILT (ML) little clay, organic, low plasticity, soft, moist 0.8' of Yellowish Brown (10 YR 5/6) mottled with Gray (10 YR 6/1) SILT (ML), medium plasticity, little-some clay, stiff, trace organics, trace very fine to fine sand, moist	7.1 ppm 0-1 interval described from surface soil sa 2.3 ppm 0-5 interval described from DPT borehole
	0-5		1.0'		1' of Brown (10 YR 5/3) mottled with Yellowish Brown (10 YR 5/6) and Gray (10 YR 6/1) SILT (ML), low plasticity, very moist, med. stiff, little-some very fine sand	0.0 ppm
5	5-9		3.0'		3' of mottled Yellowish Brown (10 YR 5/8) and Light Gray (10 YR 7/1) SILT (ML), clayey intervals with medium plasticity, hard, moist, trace very fine to fine sand and silt intervals	Water Table encountered ~ 5-6' bgs 0.0 ppm
	9-13		3.5'		3.5' of mottled Yellowish Brown and Light Gray SILT (ML), as above, becoming clayey, med. stiff, medium plasticity	0.0 ppm
10						
					End of Boring = 13 feet	Place PVC screen 10'-0'
15						

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP08	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-5		2.5		0.5' of Dark Brown (7.5 YR 3/2) SILT (ML), little sand, trace fine gravel, some organics (roots) moist, soft	0.0 ppm
					2' of Black (5 Y 2.5/1) ash-like material, med. stiff, wet	
5	5-9		4		2' of ash-like material as above, wet, very soft, becomes Olive Green and clayey at base	0.0 ppm
					2' of Yellowish Brown (10 YR 5/6) SILT (ML), with sand, hard, very moist to wet, trace coarse gravel, mottled white	0.0 ppm
	9-13		4		1.5' of Dark Yellowish Brown (10 YR 4/6) mottled with Light Gray (10 YR 7/1) SAND (SP), fine to	0.0 ppm
10					medium sand, trace silt, loose, moist to wet (perched)	Water Table encountered at ~ 10' bgs
					2' of Dark Yellowish Brown (10 YR 4/6) and Light Gray (SILT)(ML), very hard, mixed clay, moist, low plasticity, cohesive	0.0 ppm
					0.5' of black (5Y 2.5/1) ash-like material, appears slightly clayey, low plasticity, wet, v. soft	
	13-17		3.5		3.5' of Yellowish Brown (10 YR 5/8) SAND (SP), fine to medium sand, loose, very wet	0.0 ppm
15						
						PVC Screen set at 7' to 17' bgs
					End of boring	
20						

	PROJECT NUMBER	BORING NUMBER
CH2MHILL	317395.SI.DF	IS66DP09 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/12/2007 END : 04/12/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-1		0.5		Dark Brown (10 YR 3/3) SILT (ML) little fine to medium sand, very moist, little organics, (weeds, grass, roots)	0.0 ppm
	1-4		3		Dark Grayish Brown (10 YR 4/2) CLAY (CL), medium plasticity, likely some silt, very soft, very moist	0.0 ppm Water Table encountered ~ 3-4' bgs
						Hand Auger 0-4' interval. Obstructions (rocks, woo at ~ 4' bgs
5						
					End of boring = 6 feet	Place PVC screen 6'
10						

CH2MHILL

PROJECT NUMBER	BORING NUMBER	
317395.SI.DF	IS66DP10	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Indian Head Site 66 LOCATION : Indian Head, MD

ELEVATION : DRILLING CONTRACTOR : Vironex

DRILLING METHOD AND EQUIPMENT USED : Direct Push

WATER LEVELS : START : 04/11/2007 END : 04/11/2007 LOGGER : C. Houck

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY, OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY.	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS, AND INSTRUMENTATION. OVM (ppm): Breathing Zone Headspace
0	0-1		1		0.3' of Dark Yellowish Brown (10 YR 3/3) SILT (ML) little organics, moist 0.7' of Brownish Yellow (10 YR 6/6) SILT (ML), damp hard, slightly moist, very low to no plasticity, massive	12.7 ppm 0-1 foot sample described at surface soil sample locaiton.
	0-5		2		2' of Brownish Yellow (10 YR 6/6) SILT (ML), damp, silght Light Gray (10 YR 7/1) mottling, hard, very low plasticity	0.0 ppm 0-5 foot sample described at DPT boreho
5	5-9		4		3' of Yellowish Brown (10 YR 5/5) SILT (ML), some very fine to fine sand, moist, damp, non-plastic, non-cohesive, homogeneous, slight gray mottling, 1' of Light Gray (10 YR 7/1) lean CLAY (CL) very stiff, slight 10 YR 5/8 mottling, cohesive, damp, mod. plasticity	0.0 ppm
	9-13		2		1.5' of Yellowish Brown (10 YR 5/8) SILT (ML), some very fine to fine sand, slight cohesion, soft, becomes Light Gray (10 YR 7/1)	0.0 ppm
10					0.5' of Light Yellowish Brown (10 YR 4/4) SAND (SP), very fine to fine sand,moist, loose, littl	0.0 ppm
	13-18		5		4.5' of fine grained SAND (SP) as above (9-13'), wet 0.5' of Gray (10 YR 5/1) SILT with sand (ML), some very fine to fine sand, loose, wet	0.0 ppm 0.0 ppm Water Table encountered at ~ 14' bgs (perched on clay)
15						
	18-23		3		3' of Dark Olive Gray (5 Y 3/2) fat CLAY (CH), med. stiff, high plasticity, homogeneous, cohesive, moist	0.0 ppm
20						
					End of boring = 23 feet	PVC set at ~ 20' bgs
25						

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	DP-22	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 10/1/10 10:30 END : 10/1/10 11:45 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft) / RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
	3.0 / 4.0		**Silt and Sand** 0.0-3.0' - 10YR 7/6, yellow, dry to moist, loose, fine to medium grain sand		0	Surface Soil Sample: IS66SS220001 IS66SS22P0001 (Duplicate)
			3.0-4.0' - no recovery			
4.0						
5	3.0 / 4.0		**Silt and Sand** 4.0-6.0' - Same as 0.0-3.0			
			Sand 6.0-7.0' - 10YR 7/1, light gray, moist, medium stiff, fine to medium grain sand, some clay, little silt		0	
			7.0-8.0' - no recovery			
8.0						
	4.0 / 4.0		**Sand** 8.0-9.0' - Same as 6.0-7.0			
10			**Clay** 9.0-12.0' - 10YR 6/8, brown-yellow, with common fine distinct mottling (10YR 7/1 light gray), moist, stiff, trace fine grain sand		0	
12.0						Subsurface Soil Sample: IS66SB221112 IS66SB22P1112 (Duplicate) Water at 12' bgs
	4.0 / 4.0		**Clay** 12.0-14.0' - Same as 9.0-12.0 except wet, soft			
15			**Clay** 14.0-16.0' - 10YR 6/1, gray, moist to wet, stiff, little fine grain sand		0	
16.0						
			Bottom of Boring at 0.0 ft below ground surface			
20						

PROJECT NUMBER:	BORING NUMBER:
386329	DP-23 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 10/1/10 09:00 END : 10/1/10 10:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Silt** 0.0-2.0' - 10YR 7/6, yellow, moist, soft, some fine to medium grain sand			Surface Soil Sample: IS66SS230001
	4.0			2.0-4.0' - no recovery		0	
5		3.0/4.0		**Silt** 4.0-5.5' - Same as 0.0-2.0 **Clay** 5.5-7.0' - 10YR 6/8, brownish yellow, with common fine distinct mottling (10YR 7/1 light gray), moist, stiff, trace fine to medium grain sand		0	
	8.0			7.0-8.0' - no recovery			
10		4.0/4.0		**Clay** 8.0-12.0' - Same as 5.5-7.0		0	
	12.0						
15		4.0/4.0		**Clay** 12.0-16.0' - Same as 8.0-12.0		0	
	16.0						Subsurface Soil Sample: IS66SB231516 Water at 16' bgs
		4.0/4.0		**Clay** 16.0-18.0' - Same as 12.0-16.0 except wet, soft **Clay and Sand** 18.0-20.0' - 10YR 6/1, gray, wet, very soft, fine to medium grain sand		0	
20	20.0			Bottom of Boring at 20.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:
386329	DP-24 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 10/1/10 12:50 END : 10/1/10 14:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.0' - 10YR 7/6, yellow, moist, dense, some fine to medium grain sand			Surface Soil Sample: IS66SS240001
				Clay 1.0-3.0' - 10YR 6/8, brown-yellow, with common fine distinct mottling (10YR 7/1 light gray), dry to moist, stiff, little fine to medium grain sand		0	
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Clay** 4.0-7.0' - Same as 1.0-3.0		0	
	8.0			**Sand** 7.0-8.0' - 10YR 8/3, very pale brown, dry, loose, fine to medium grain sand, some silt			Subsurface Soil Sample: IS66SB240708 Water at 8' bgs
10		3.0/4.0		**Sand** 8.0-10.0' - 10YR 6/4, light yellowish brown, wet, loose, fine to coarse grain sand, little silt and clay		0	
	12.0			**Sand and Clay** 10.0-11.0' - 10YR 6/1, gray, wet, medium stiff, fine to medium grain sand			
				11.0-12.0' - no recovery			
15				Bottom of Boring at 12.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-25 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 10/1/10 11:45 END : 10/1/10 12:50 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Sand and Gravel** 0.0-2.0' - 10YR 7/6, yellow, moist, soft, fine to coarse grain sand and fine to coarse subrounded gravel, some silt, little clay			Surface Soil Sample: IS66SS250001
				2.0-4.0' - no recovery		0	
	4.0						
5		4.0/4.0		**Clay** 4.0-8.0' - 10YR 6/8, brown-yellow, with common fine distinct mottling (10YR 7/1 light gray, moist, stiff, little fine grain sand		0	
	8.0						
10		4.0/4.0		**Clay** 8.0-11.0' - Same as 4.0-8.0		0	
	12.0			**Sand** 11.0-12.0' - 10YR 6/1, gray, moist to wet, medium stiff, fine to mediun grain sand, some clay			Subsurface Soil Sample: IS66SB251011 Water at 11' bgs
		4.0/4.0		**Sand** 12.0-14.0' - Same as 11.0-12.0 except wet			
15				**Clay** 14.0-16.0' - 10YR 6/1, gray, wet, very soft, some fine to medium grain sand		0	
	16.0						
				Bottom of Boring at 12.0 ft below ground surface			
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	DP-26	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/24/10 10:50 END : 9/24/10 14:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt and Sand** 0.0-3.0' - 10YR 7/2, light gray, dry, dense, fine to medium grain sand		0	Surface Soil Sample: IS66SS260001
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Sand** 4.0-5.5' - 10YR 7/8, yellow, dry to moist, firm, fine to medium grain sand, some silt			
				Sand 5.5-8.0' - 10YR 8/3, very pale brown, moist, soft, fine to medium grain sand, some clay, little silt		0	
	8.0						Subsurface Soil Sample: IS66SB260708 Water at 8' bgs
				Sand 8.0-9.5' - 10YR 6/6, brown yellow, wet, soft, fine to medium grain sand, little clay			
10		3.0/4.0		**Sand** 9.5-11.0' - 10YR 7/2, gray, wet, soft, fine to medium grain sand, some clay		0	
	12.0			11.0-12.0' - no recovery			
				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:
386329	DP-27 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/24/10 09:00 END : 9/24/10 10:50 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt and Sand** 0.0-4.0' - 10YR 5/3, brown, dry, firm, fine to medium grain sand, little clay		0	Surface Soil Sample: IS66SS270001
	4.0			3.0-4.0' - no recovery			
5		3.0/4.0		**Clay** 4.0-7.0' - 10YR 5/4, yellowish brown, with common fine distinct mottling (10YR 5/1 gray), moist, firm, some fine to medium grain sand		0	
	8.0			7.0-8.0' - no recovery			
10		4.0/4.0		**Clay** 8.0-10.0' - Same as 4.0-7.0		0	Subsurface Soil Sample: IS66SB270910 Water at 10' bgs
	12.0			**Sand** 10.0-12.0' - 10YR 5/1, gray, wet, loose, fine to coarse grain sand, some fine to medium gravel, trace clay			
				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-28 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/23/10 13:10 END : 9/23/10 16:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.5' - 10YR 8/4, very pale brown, dry, firm, some fine to medium grain sand			Surface Soil Sample: IS66SS280001
				Silt and Sand 1.5-3.0' - 7.5YR 6/8, red yellow, dry, dense, fine to medium grain sand		0	
				3.0-4.0' - no recovery			
	4.0						
5		3.0/4.0		**Sand** 4.0-6.0' - 10YR 7/3, very pale brown, dry, loose, fine to medium grain sand, little silt			
				Sand 6.0-7.0' - Same as 4.0-6.0 except wet		0	Subsurface Soil Sample: IS66SB280607 Water at 7' bgs
				7.0-8.0' - no recovery			
	8.0			Bottom of Boring at 8.0 ft below ground surface			
10							
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-29 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/24/10 14:00 END : 9/24/10 15:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft) / SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0	**Silt** 0.0-3.0' - 10YR 8/4, very pale brown, dry, firm, sime fine to medium grain sand		0	Surface Soil Sample: IS66SS290001
	4.0		3.0-4.0' - no recovery			
5		4.0/4.0	**Silt** 4.0-6.0' - Same as 0.0-3.0		0	
	8.0		**Sand** 6.0-7.0' - 5YR 5/8, yellowish red, dry, firm, fine to medium grain sand, little silt **Sand and Silt** 7.0-8.0' - 10YR 7/6, yellow, dry, firm, fine to medium grain sand			
10	12.0	4.0/4.0	**Clay and Sand** 8.0-12.0' - 10YR 7/2, light gray, with common fine distrinct mottling (5YR 5/8 yellow-red), dry to moist, stiff, fine to medium grain sand		0	
15	16.0	3.0/4.0	**Clay and Sand** 12.0-14.0' - Same as 8.0-12.0 **Clay** 14.0-15.0' - 5YR 5/8, yellow-red, moist, stiff, little fine grain sand 15.0-16.0'		0	
20	20.0	3.0/4.0	**Clay** 16.0-17.0' - 10R 6/4, pale red, with common fine distinct mottling (7.5YR 5/8 strong brown), moist, stiff, some fine to medium grain sand **Sand and Gravel** 17.0-19.0' - 10YR 7/3, very pale brown, wet, dense, fine to coarse grain sand andfine to medium subrounded gravel, little clay 19.0-20.0'		0	Subsurface Soil Sample: IS66SB291617 Water at 17' bgs
			Bottom of Boring at 20.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:
386329	DP-30 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/22/10 12:30 END : 9/22/10 15:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		4.0/4.0		**Silt and Sand** 0.0-4.0' - 10YR 6/8, brown yellow, dry, firm, fine to medium grain sand		0	Surface Soil Sample: IS66SS300001
	4.0						
5		4.0/4.0		**Silt and Sand** 4.0-6.0' - Same as 0.0-4.0			
				Sand and Clay 6.0-8.0' - 10YR 5/8, yellow brown, with common fine distinct mottling (10YR 6/2 light brown gray), moist to dry, soft, fine to medium grain sand, little silt		0	
	8.0						
10		3.0/4.0		**Clay** 8.0-10.0' - 10YR 5/8, yellow brown, with common fine distinct mottling (10YR 6/2 light brown gray), moist, soft, some fine to medium grain sand			Subsurface Soil Sample: IS66SB309010 Water at 10' bgs
				Sand 10.0-12.0' - 10YR 6/8, yellow brown, wet, loose, fine to medium grain sand, some clay		0	
	12.0						
				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-31 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/23/10 16:00 END : 9/23/10 17:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt (ML)** 0.0-4.0' - 10YR 7/8, yellow, dry, firm, some fine to medium grain sand		0	Surface Soil Sample: IS66SS310001
	4.0						
5		3.0/4.0		**Silt (ML)** 4.0-5.5' - 10YR 5/8, yellow, dry, firm, with fine to medium grain sand		0	
				Sand and Silt 5.5-7.0' - 10YR 8/2, very pale brown, dry, firm, fine to medium grain sand			
	8.0			7.0-8.0' - no recovery			
				Sand and Silt 8.0-9.0' - Same as 5.5-7.0			
10		3.0/4.0		**Clay and Sand** 9.0-11.0' - 10R 6/4, pale red, with common fine distinct mottling (7.5YR 5/8) strong brown, dry to moist, stiff, fine to medium grain sand, some 75 YR 7/1 light gray clay and fine to medim sand		0	
	12.0			11.0-12.0' - no recovery			
				Clay and Sand 12.0-13.5' - Same as 9.0-11.0			
15		3.0/4.0		**Clay and Sand** 13.5-15.0' - 5YR 4/3, reddish brown, with some common fine distinct mottling (5YR 3/1 very dark gray), moist to wet, soft			Subsurface Soil Sample IS66SB311415 Water at 15' bgs
	16.0			15.0-16.0' - no recovery			
				Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-32 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/29/10 09:00 END : 9/29/10 10:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.5/4.0		**Silt** 0.0-2.0' - 10YR 7/6, yellow, dry, loose, some fine to medium grain sand			Surface Soil Sample: IS66SS320001 IS66SS32P0001 (Duplicate)
				Clay and Sand 2.0-3.5' - 10YR 6/8, brown yellow, with common fine distinct mottling (10YR 7/1 light gray), dry, firm, fine to medium graing sand, some silt		0	
	4.0			3.5-4.0' - no recovery			
5		4.0/4.0		**Clay and Sand** 4.0-6.0' - Same as 2.0-3.5			
				Clay and Sand 6.0-7.0' - 10YR 5/3, brown, with common fine distrinct mottling (10YR 6/8 brownish yellow), moist, soft, fine to medium grain sand		0	
	8.0			**Clay and Sand** 7.0-8.0' - 5YR 5/6, red, moist, soft, fine to medium grain sand			
				Clay and Sand 8.0-9.0' - Same as 6.0-7.0			Subsurface Soil Sample: IS66SB320809 IS66SB32P0809 (Duplicate) Water at 9' bgs
10		4.0/4.0		**Clay and Sand** 9.0-12.0' - 10YR 7/2, light gray, wet, soft, fine to medium grain sand		0	
	12.0						
				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-33 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 14:15 END : 9/28/10 15:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		4.0/4.0		**Silt** 0.0-4.0' - 10YR 7/6, yellow, dry, dense, little fine to medium grain sand		0	Surface Soil Sample: IS66SS330001
	4.0						
5		4.0/4.0		**Sand and Clay** 4.0-8.0' - 5YR 6/8, reddish yellow, dry, very stiff, fine to medium grain sand, some 5YR 7/1 light gray fine to medium sand nd clay, little silt		0	
	8.0						
10		3.0/4.0		**Sand and Clay** 8.0-11.0' - Same as 4.0-8.0		0	
				11.0-12.0' - no recovery			
	12.0						
		4.0/4.0		**Clay** 12.0-13.0' - 2.5YR 7/2, pale red, dry to moist, very stiff, some silt, little fine grain sand		0	
				Clay and Sand 13.0-15.0' - 2.5YR 7/2, pale red, with common fine distinct mottling (2.5YR 5/8 red), moist, stiff, fine grain sand			
15				**Clay and Sand** 15.0-16.0' - 2.5YR 5/8, red, moist to wet, firm, fine to medium grain sand			Subsurface Soil Sample: IS66SB331415 Water at 15' bgs
	16.0			Bottom of Boring at 16.0 ft below ground surface			
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	DP-34	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 15:30 END : 9/28/10 16:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Sand and Gravel** 0.0-1.0' - 5YR 6/8, reddish yellow, moist, loose, fine to coarse grain sand and fine to coarse subangular gravel **Silt and Clay** 1.0-2.0' - 5YR 5/4, reddish brown, moist, stiff, little fine to medium grain sand 2.0-4.0' - no recovery		0.2	Surface Soil Sample: IS66SS340001
	4.0						
5		3.0/4.0		**Silt and Clay** 4.0-5.0' - Same as 1.0-2.0 **Clay** 5.0-7.0' - 10YR 5/3, brown, moist, firm, trace fine grain sand 7.0-8.0' - no recovery		0	
	8.0						
10		4.0/4.0		**Clay** 8.0-9.0' - Same as 5.0-7.0 **Clay and Sand** 9.0-12.0' - 10YR 6/6, brownish yellow, wet, soft, fine to medium grain sand		0	Subsurface Soil Sample: IS66SB340809 Water at 9' bgs
	12.0						
15		4.0/4.0		**Clay and Sand** 12.0-14.0' - Same as 9.0-12.0 **Clay** 14.0-16.0' - 10YR 7/1, light gray, with common fine distinct mottling (5YR 6/8 reddish yellow), moist, stiff, trace fine grain sand		0	
	16.0			Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-35 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/29/10 11:00 END : 9/29/10 11:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-3.0' - 10YR 8/3, very pale brown, dry, firm, some fint to medium grain sand		0	Surface Soil Sample: IS66SS350001
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Silt** 4.0-5.0' - Same as 0.0-3.0 **Clay** 5.0-8.0' - 10YR 7.5YR 6/8 and 10YR 6/2, reddish yellow and light brownish gray, dry to moist, stiff, some fine to medium grain sand, little silt		0	
	8.0			**Clay** 8.0-12.0' - 10YR 7/1, light gray, with common fine distinct mottling (10YR 5/8 yellowish brown), moist, stiff, some fine to medium grain sand			
10		4.0/4.0				0	
	12.0			**Clay** 12.0-13.0' - Same as 8.0-12.0 **Clay** 13.0-14.0' - 5YR 5/8, yellowish red, with common fine distinct mottling (10YR 7/1 light gray), moist, firm, little fine to medium grain sand			
15		3.0/4.0		**Clay and Sand** 14.0-15.0' - 5YR 6/3, light reddish brown, wet, soft, fine to medium grain sand		0	Subsurface Soil Sample: IS66SB351415 Water at 15' bgs
	16.0			15.0-16.0' - no recovery			
				Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-36 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/27/10 14:45 END : 9/28/10 09:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft) / RECOVERY (ft) / SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
	4.0 / 4.0	**Silt** 0.0-1.0' - 10YR 8/3, very pale brown, dry, soft, little fine to medium grain sand **Sand** 1.0-4.0' - 10YR 6/8, brownish yellow, dry to moist, stiff, fine to medium grain sand, little clay, some 10YR 7/1 light gray silt and fine to medium grain sand inclusions		0	Surface Soil Sample: IS66SS360001
4.0					
5	4.0 / 4.0	**Sand** 4.0-8.0' - Same as 1.0-4.0		0	
8.0					
	3.0 / 4.0	**Clay** 8.0-9.0' - 10YR 5/8, yellowish brown, moist, stiff, some fine to medium grain sand **Sand** 9.0-11.0' - 10YR 5/8, yellowish brown, wet, loose, fine to medium grain sand, trace clay		0	Surface Soil Sample: IS66SB360809 Water at 9' bgs
10		11.0-12.0' - no recovery			
12.0		Bottom of Boring at 12.0 ft below ground surface			
15					
20					

PROJECT NUMBER:	BORING NUMBER:
386329	DP-37 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 09:30 END : 9/28/10 10:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-3.0' - 10YR 8/3, very pale brown, dry, soft, little fine to medium grain sand		0	Surface Soil Sample: IS66SS370001
	4.0			3.0-4.0' - no recovery			
5		3.0/4.0		**Silt** 4.0-6.0' - Same as 0.0-3.0			
				Sand 6.0-7.0' - 10YR 6/8, brown-yellow, dry to moist, stiff, fine to medium grain sand, little clay, some 10YR 7/1 light gray silt and fine to medium sand inclusions		0	
	8.0			7.0-8.0' - no recovery			
10		3.0/4.0		**Sand** 8.0-10.0' - Same as 6.0-7.0			
				Clay 10.0-11.0' - 5YR 6/6, reddish yellow, dry to moist, stiff, some tind to medium grain sand		0	
	12.0			11.0-12.0' - no recovery			
		3.0/4.0		**Clay** 12.0-13.5' - 2.5YR 5/8, red, with sommon fine distinct mottleing (5YR 6/6 Red-yellow), dry to moist, stiff, some fine grain sand			
15				**Sand** 13.5-15.0' - 5YR 6/6, reddish yellow, wet, very soft, fne to medium grain sand, some clay		0	Subsurface Soil Sample: IS66SB371314 Water at 14' bgs
	16.0			15.0-16.0' - no recovery			
				Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-38 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/21/10 12:15 END : 9/21/10 17:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		4.0/4.0		**Silt and Clay** 0.0-4.0' - 7.5YR 5/8, strong brown, with common fine distinct mottling (7.5YR 7/1 light gray), dry, hard, little fine to medium grain sand		0	Surface Soil Sample: IS66SS380001
4.0							
5		4.0/4.0		**Clay** 4.0-8.0' - 7.5YR 7/1, light gray, dry, hard, some silt and fine grain sand		0	
8.0							
10		4.0/4.0		**Clay** 8.0-10.5' - Same as 4.0-8.0		0	
				Clay 10.5-12.0' - 5YR 4/3, reddish brown, with common fine distinct mottling (5YR 6/8 red-yellow), dry to moist, firm, little fine grain sand			
12.0				**Clay** 12.0-13.0' - Same as 10.5-12.0			Subsurface Soil Sample: IS66SB381213 Water at 13' bgs
		2.0/4.0		**Sand** 13.0-14.0' - 5YR 5/4, reddish brown, wet, medium stiff, fine to medium grain sand, some clay		0	
15				14.0-16.0' - no recovery			
16.0				Bottom of Boring at 16.0 ft below ground surface			
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	DP-39	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 10:00 END : 9/28/10 11:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-3.0' - 10YR 8/3, very pale brown, dry, soft, little fine to medium grain sand		0	Surface Soil Sample: IS66SS390001
	4.0			3.0-4.0' - no recovery			
5		3.0/4.0		**Clay** 4.0-5.5' - 5YR 6/6, reddish yellow, dry to moist, very stiff, some fine to medium grain sand, little silt		0	
				Clay 5.5-7.0' - 5YR 6/6, reddish yellow, dry to moist, very stiff, some fine grain sand, and 10YR 7/1 light gray silt and fine grain sand inclusions			
	8.0			7.0-8.0' - no recovery			
				Clay 8.0-9.0' - Same as 5.5-7.0			
10		2.0/4.0		**Sand** 9.0-10.0' - 5YR 5/8, yellow-red, moist, loose, fine to medium grain sand, little silt and clay		0	
	12.0			10.0-12.0' - no recovery			
				Sand 12.0-13.0' - Same as 9.0-10.0			Subsurface Soil Sample: IS66SB391213 Water at 13' bgs
15		3.0/4.0		**Sand and Clay** 13.0-15.0' - 5YR 6/3, light reddish brown, wet, firm, fine to medium grain sand		0	
	16.0			15.0-16.0' - no recovery			
				Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-40 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/30/10 08:30 END : 9/30/10 09:40 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.0' - 10YR 4/3, brown, dry, soft, some fine to medium grain sand and fine to coarse subangular gravel **Ash material** 1.0-3.0' - 10YR 2/1, black, dry, loose, ash material		0	Surface Soil Sample: IS66SS400001
	4.0			3.0-4.0' - no recovery			
5		3.0/4.0		**Ash material** 4.0-5.0' - Same as 1.0-3.0 **Silt** 5.0-6.0' - 10YR 7/4, very pale brown, dry, firm, some fine to medium grain sand **Sand** 6.0-7.0' - 10YR 5/8, yellowish brown, moist, firm, fine to medium grain sand, little silt and clay		0	Native Soil
	8.0			7.0-8.0' - no recovery			
10		4.0/4.0		**Sand** 8.0-10.0' - Same as 6.0-7.0 **Sand** 10.0-11.0' - Same as 8.0-10.0 except moist to wet, soft		0	Subsurface Soil Sample: IS66SB400910 Water at 10' bgs
	12.0			**Clay** 11.0-12.0' - 10YR 7/1, light gray, with common fine distinct mottling (10YR 5/8 yellow brown), moist, stiff, little fine to medium grain sand Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	DP-41 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/30/10 14:00 END : 9/30/10 14:45 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.0' - 10YR 6/4, light yellowish brown, moist, firm, some fine to medium grain sand and clay			Surface Soil Sample: IS66SS410001
				Concrete and Wood debris 1.0-3.0'		0	
				3.0-4.0' - no recovery			
	4.0						
5		4.0/4.0		**Clay** 4.0-6.0' - 10YR 6/6, brown-yellow, moist, stiff, fine to coarse grain sand and fine to coarse subrounded gravel, little silt			
				Fill material 6.0-7.5' - 10YR 3/1, very dark gray, moist, soft, some fine to medium grain sand and wood and burn debris		0 6.2	creosote odor Subsurface Soil Sample: IS66SB410607 Water at 7' bgs
	8.0			**Silt** 7.5-8.0' - Same as 6.0-7.5 except wet			
				Bottom of Boring at 8.0 ft below ground surface			
10							
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-01 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/24/10 08:00 END : 9/24/10 09:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Silt and Sand** 0.0-0.5' - 10YR 5/4, yellowish brown, moist to wet, soft, fine grain sand **Silt and Sand** 0.5-2.0' - 10YR 5/1, gray, wet, very loose, fine to medium grain sand, little clay and organic material 2.0-4.0' - no recovery		0	
4.0							
5		2.0/4.0		**Silt and Sand** 4.0-4.5' - 10YR 5/4, yellowish brown, moist to wet, soft, fine grain sand **Silt and Sand** 4.5-6.0' - 10YR 5/1, gray, wet, very loose, fine to medium grain sand, little clay and organic material 6.0-8.0' - no recovery		0	
8.0							
10		3.0/4.0		**Sand and Clay** 8.0-9.0' - 10YR 5/8, yellow brown, wet, loose, fine to medium grain sand and little fine to medium gravel **Clay and Sand** 9.0-10.0' - 10YR 7/2, light gray, with common fine distinct mottling (10YR 5/8 yellow brown), moist to wet, soft **Clay** 10.0-11.0' - 10YR 7/1, light gray, moist, soft, trace fine sand 11.0-12.0' - no recovery		0	
12.0				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-02	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/23/10 12:30 END : 9/23/10 13:10 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
0	0.0-4.0	3.0/4.0		**Silt** 0.0-0.5' - 10YR 5/3, brown, dry, soft, trace fine grain sand **Silt and Sand** 0.5-3.0' - 10YR 7/6, yellow, dry, soft, fine to medium grain sand 3.0-4.0' - no recovery		0	
4.0							
5	4.0-8.0	3.0/4.0		**Silt and Sand** 4.0-6.0' - Same as 0.5-3.0 **Silt and Sand** 6.0-7.0' - 10YR 7/3, very pale brown, with common fine distinct mottling (5YR 4/6 yellowish red), dry to moist, firm, fine to medium grain sand, some clay 7.0-8.0' - no recovery		0	
8.0							
10	8.0-12.0	3.0/4.0		**Clay** 8.0-11.0' - 10YR 7/3, very pale brown, with common fine distinct mottling (5YR 4/6 yellow red), dry to moist, soft, little silt and fine grain sand 11.0-12.0' - no recovery		0	
12.0							
15	12.0-16.0	3.0/4.0		**Clay** 12.0-12.5' - Same as 8.0-11.0 **Clay and Sand** 12.5-14.0' - 10YR 5/4, yellow brown, moist, soft, fine to medium grain sand **Clay and Sand** 14.0-15.0' - 5YR 4/6, yellow red, moist, firm, fine to medium grain sand, some fine to medium grain sand inclusions (10YR 8/2 very pale brown) 15.0-16.0' - no recovery		0	
16.0				Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-03 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/21/10 09:00 END : 9/21/10 10:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Silt and Sand** 0.0-2.0' - dark yellowish brown, dry, loose, fine to coarse grain sand, some medium to coarse subangular gravel			
				2.0-4.0' - no recovery		0	
	4.0						
5		2.0/4.0		**Silt and organic matter** 4.0-6.0' - 10YR 4/1, dark gray, wet, very soft, some fine to coarse grain sand			
				6.0-8.0' - no recovery		0	Water at 7' bgs
	8.0						
				Silt and organic matter 8.0-9.0' - Same as 4.0-6.0			
10		1.0/4.0		9.0-12.0' - no recovery		0	
	12.0						
				Silt and organic matter 12.0-13.0' - Same as 8.0-9.0			
		1.0/4.0		13.0-16.0' - no recovery		0	
15	16.0						
				Silt and organic matter 16.0-17.0' - Same as 12.0-13.0			
				Clay and Sand 17.0-18.0' - 10YR 6/1, gray, wet, soft, fine to coarse grain sand			Native soil at 17' bgs
		3.0/4.0		**Sand and Gravel** 18.0-19.0' - 10YR 6/1, gray, wet, firm, fine to coarse grain sand, fine to medium subrounded gravel		0	
20	20.0			19.0-20.0' - no recovery			
				Sand and Gravel 20.0-22.0' - Same as 18.0-19.0			
		2.0/4.0		22.0-24.0' - no recovery		0	
	24.0						
25				Bottom of Boring at 24.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-04	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/21/10 10:00 END : 9/21/10 11:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft) / SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0 / 4.0	**Silt and Clay** 0.0-2.0' - 10YR 6/6, brownish yellow, dry, stiff, some fine to medium grain sand 2.0-4.0' - no recovery		0	
	4.0					
5		2.0 / 4.0	**Silt and Clay** 4.0-6.0' - 10YR 8/4, very pale brown, dry, stiff, trace fine grain sand 6.0-8.0' - no recovery		0	
	8.0					
		0.5 / 4.0	**Silt and wood/ rubble (Fill material)** 8.0-8.5' - 10YR 8/4, dark gray, wet, very soft, little fine to medium grain sand 8.5-12.0' - no recovery		0.2	Water at 8' bgs
10	12.0					
		1.0 / 4.0	**Silt and wood/rubble (Fill material)** 12.0-13.0' - Same as 8.0-8.5 except more wood and concrete debris 13.0-16.0' - no recovery		0.4	
15	16.0					
		1.0 / 4.0	**Clay and Sand** 16.0-17.0' - 10YR 4/1, dark gray, wet, soft 17.0-20.0' - no recovery		0	
20	20.0					
		3.0 / 4.0	**Clay and Sand** 20.0-21.0' - Same as 16.0-17.0 **Sand** 21.0-23.0' - 10YR 6/1, gray, wet, medium stiff, fine to medium grain sand, little clay 23.0-24.0' - no recovery		0	
	24.0					
25			Bottom of Boring at 24.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:
386329	GB-05 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 13:15 END : 9/28/10 14:15 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.0' - 10YR 8/3, very pale brown, dry, soft, little fine to medium grain sand **Silt** 1.0-3.0' - 10YR 7/6, yellow, dry, dense, little fine to medium grain sand		0	
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Sand and Clay** 4.0-8.0' - 5YR 6/8, reddish yellow, dry to moist, stiff, fine to medium grain sand, some 5YR 7/1 light gray fine to medium sand and clay		0	
	8.0						
10		3.0/4.0		**Sand and Clay** 8.0-12.0' - Same as 4.0-8.0		0	
	12.0						
		4.0/4.0		**Clay** 12.0-13.0' - 5YR 6/8, reddish yellow, moist, stiff, little fine grain sand **Clay** 13.0-15.0' - 5YR 7/6, reddish yellow, with common fine distinct mottling (5YR 7/1 light gray), moist to wet, stiff, trace fine grain sand		0	Water at 13' bgs
15				**Clay** 15.0-16.0' - 2.5YR 4/8, red, moist to wet, firm			
	16.0			Bottom of Boring at 16.0 ft below ground surface			
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-06	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/29/10 10:30 END : 9/29/10 11:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-3.0' - 10YR 7/6, yellow, dry, loose, some fine to medium grain sand		0	
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Silt** 4.0-5.0' - Same as 0.0-3.0 **Clay and Sand** 5.0-8.0' - 10YR 6/8, brownish yellow, with common fine distinct mottling (10YR 7/1 light gray), dry to moist, dense, fine to medium grain sand, little silt		0	
	8.0			**Clay and Sand** 8.0-9.0' - Same as 4.0-5.0			
10		4.0/4.0		**Clay** 9.0-12.0' - 10YR 7/1, light gray, with common fine distinct mottling (10YR 5/8 yellowish brown), moist, stiff, little fine grain sand		0	
	12.0			Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-07 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/20/10 17:15 END : 9/20/10 18:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-3.0' - 10YR 6/6, brownish yellow, dry, stiff, some fine to coarse grain sand, little coarse subrounded gravel		0	
	4.0			3.0-4.0' - no recovery			
5		2.0/4.0		**Silt** 4.0-5.0' - Same as 0.0-3.0 **Silt and Sand** 5.0-6.0' - 10YR 3/4, dark yellowish brown, dry, medium stiff, fine to coarse grain sand, some fine to coarse subrounded gravel 6.0-8.0' - no recovery		0	
	8.0						
10		3.0/4.0		**Silt and Sand** 8.0-9.0' - Same as 5.0-6.0 **Silt** 9.0-10.0' - 10YR 3/1, very dark gray, moist, firm, some fine to coarse grain sand and concrete rubble		0.2	
	12.0			**Silt** 10.0-11.0' - 10YR 3/1, very dark gray, moist, soft, trace fine grain sand and wood debris (likely railroad ties since creosote odor) 11.0-12.0' - no recovery			
15		4.0/4.0		**Silt** 12.0-16.0' - Same as 10.0-11.0		0.4	
	16.0						
		1.0/4.0		**Silt** 16.0-17.0' - Same as 12.0-16.0 except wet 17.0-20.0' - no recovery		0	
20	20.0						
		3.0/4.0		**Silt** 20.0-20.5' - Same as 16.0-17.0 **Clay** 20.5-22.0' - 10YR 6/2, light brownish gray, moist, soft **Peat** 22.0-23.0' - 10YR 2/2, very dark brown, moist, soft 23.0-24.0' - no recovery		0	Water at 20' bgs Native soil
	24.0						
25				Bottom of Boring at 24.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:
386329	GB-08 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/22/10 15:30 END : 9/22/10 16:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		2.0/4.0		**Silt** 0.0-2.0' - 10YR 7/6, yellow, dry, loose, little fine to medium grain sand			
				2.0-4.0' - no recovery		0	
	4.0						
5		2.0/4.0		**Silt** 4.0-5.0' - Same as 0.0-2.0 except wet			
				Silt and Sand 5.0-6.0' - 10YR 5/1, gray, wet, soft, fine to medium grain sand, some clay			
				6.0-8.0' - no recovery		0	
	8.0						
10		2.0/4.0		**Clay** 8.0-10.0' - 10YR 6/2, light brown clay, wet, soft, some fine to medium grain sand, also same organic matter			
				10.0-12.0' - no recovery		0	
	12.0						
		4.0/4.0		**Clay** 12.0-14.0' - Same as 8.0-10.0			Debris/Bottlecap found in sample
15				**Clay and Silt** 14.0-15.0' - 10YR 3/1, very dark gray, moist, firm, little fine to medium grain sand		0	
	16.0			**Sand** 15.0-16.0' - 10YR 6/1, gray, wet, loose, fine to medium grain sand, little silt and clay			
	17.0	1.0/1.0		**Clay** 16.0-17.0' - 10YR 6/1, gray, moist to wet, soft, trace fine grain sand		0	
				Bottom of Boring at 17.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-09 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/27/10 14:10 END : 9/27/10 14:45 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.5/4.0		**Silt** 0.0-0.5' - 10YR 3/3, very dark brown, dry to moist, soft, organic matter **Silt** 0.5-3.0' - 10YR 8/3, very pale brown, dry, soft, little fine to medium grain sand		0	
	4.0			3.0-4.0' - no recovery			
5		4.0/4.0		**Silt and Sand** 4.0-8.0' - 10YR 8/4, very pale brown, dry to moist, stiff, fine to medium grain sand, some 10YR 6/8 brownish yellow fine to medium grain sand, little clay		0	
	8.0			**Sand** 8.0-10.0' - 5YR 4/3, reddish brown, wet, soft, fine to medim grain sand, some clay			Water at 8' bgs
10		3.0/4.0		**Sand** 10.0-11.0' - 10YR 5/8, yellow red, moist, soft, fine to medium grain sand, some clay		0	
	12.0			11.0-12.0' - no recovery			
				Bottom of Boring at 12.0 ft below ground surface			
15							
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-10 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/27/10 13:00 END : 9/27/10 14:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		4.0/4.0		**Ash material** 0.0-3.0' - 10YR 2/1, Black, dry, loose		0	
	4.0			**Silt** 3.0-4.0' - 10YR 8/6, yellow, dry, loose, trace fine grain sand			
5		3.0/4.0		**Silt** 4.0-5.0' - Same as 3.0-4.0 **Sand and Silt** 5.0-6.0' - 5YR 5/4, reddish brown, wet, soft, fine to medium grain sand, little clay **Sand and Clay** 6.0-7.0' - 5YR 4/6, yellowish red, moist to wet, medium dense, fine to medium grain sand, little silt 7.0-8.0'		0	
	8.0						
10		3.0/4.0		**Sand and Clay** 8.0-8.5' - Same as 6.0-7.0 except no recovery **Clay** 8.5-10.0' - 5YR 6/3, light reddish brown, with common fine distinct mottling (5YR 7/1 light gray), moist to wet, stiff, little fine grain sand **Sand** 10.0-11.0' - 5YR 7/1, light gray, wet, soft, fine to coarse grain sand, little clay 11.0-12.0' - no recovery		0	
	12.0			Bottom of Boring at 12.0 ft below ground surface			
15							
20							

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-11	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/22/10 16:30 END : 9/22/10 17:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		1.0 / 4.0		**Ash material** 0.0-1.0' - 10YR 3/1, very dark gray, dry, loose 1.0-4.0' - no recovery		0	
	4.0						
5		2.0 / 4.0		**Ash material** 4.0-6.0' - Same as 0.0-1.0 6.0-8.0' - no recovery		0	
	8.0						
10		3.0 / 4.0		**Ash material** 8.0-9.0' - Same as 4.0-6.0 except moist **Sand** 9.0-11.0' - 10YR 6/6, brown yellow, wet, loose, fine to coarse grain sand, little silt 11.0-12.0' - no recovery		0	
	12.0						
15		4.0 / 4.0		**Sand** 12.0-15.0' - Same as 9.0-10.0 **Clay** 15.0-16.0' - 10YR 7/1, light gray, wet, soft, some fine to medium grain sand		0	
	16.0			Bottom of Boring at 16.0 ft below ground surface			
20							

PROJECT NUMBER:	BORING NUMBER:
386329	GB-12 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/21/10 11:30 END : 9/21/10 12:15 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft) / RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
	3.0 / 4.0		**Silt and Clay** 0.0-3.0' - 7.5YR 5/8, strong brown, with common fine distinct mottling (7.5 YR 7/1 light gray, dry, hard, little find grain sand		0	
4.0			3.0-4.0' - no recovery			
	4.0 / 4.0		**Clay** 4.0-8.0' - 7.5YR 7/1, light gray, dry, hard, some silt and fine grain sand		0	
8.0						
	4.0 / 4.0		**Clay** 8.0-9.0' - 7.5YR 5/6, strong brown, with common fine distinct mottling (7.5YR 7/1 light gray), dry, hard, little silt and fine grain sand **Sand** 9.0-10.0' - 5YR 5/8, yellow-red, moist, medium stiff, fine to medium grain sand, little clay **Sand** 10.0-12.0' - 5YR 5/4, reddish brown, wet, medium stiff, fine to medium grain sand, some clay		0	
12.0			Bottom of Boring at 12.0 ft below ground surface			

5 10 15 20

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-14	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/21/10 17:30 END : 9/21/10 18:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft) / SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
0		2.0 / 4.0	**Silt** 0.0-1.0' - 10YR 7/8, yellow, dry, hard, some fine to medium grain sand and fine to coarse subrounded gravel			
			Silt and Sand 1.0-2.0' - 10YR 4/1, dark gray, moist, firm, fine to medium grain sand, little fine to coarse subrounded gravel, organic matter		0	
4.0			2.0-4.0' - no recovery			
5		2.0 / 4.0	**Silt and Sand** 4.0-6.0' - Same as 1.0-2.0			
			6.0-8.0' - no recovery		0	
8.0						
10		2.0 / 4.0	**Silt and Sand** 8.0-10.0' - Same as 4.0-6.0			Water at 8' bgs
			10.0-12.0' - no recovery		0	
12.0						
		2.0 / 4.0	**Sand** 12.0-14.0' - 10YR 4/1, dark gray, wet, loose, fine to coarse grain sand, some silt			Petroleum odor
15			14.0-16.0' - no recovery		0.8	
16.0						
		1.0 / 4.0	**Sand** 16.0-17.0' - Same as 12.0-14.0			
			Sand 17.0-20.0' - Same as 16.0-17.0 except no recovery		0	
20	20.0					
		4.0 / 4.0	**Clay and Sand** 20.0-21.0' - 10YR 6/1, gray, fine to medium grain sand			
			21.0-24.0'		0	
24.0						
25			Bottom of Boring at 24.0 ft below ground surface			

CH2MHILL

PROJECT NUMBER:	BORING NUMBER:	
386329	GB-15	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/28/10 11:30 END : 9/28/10 13:15 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS
		3.0/4.0		**Silt** 0.0-1.0' - 10YR 4/3, brown, dry, soft, little fine to medium grain sand **Sand** 1.0-3.0' - 5YR 4/6, yellowish red, moist, soft, fine to medium grain sand, sme silt and clay		0	
4.0				3.0-4.0' - no recovery			
5		3.0/4.0		**Sand** 4.0-5.0' - 5YR 6/6, reddish yellow, wet, very soft, fine to medium grain sand, little clay **Sand and Clay** 5.0-7.5' - 5YR 6/6, reddish yellow, moist to wet, very soft, fine to mediun grain sand		0	Water at 4' bgs
8.0				**Clay** 7.5-8.0' - 5YR 6/1, gray, moist, firm, little fine grain sand Bottom of Boring at 8.0 ft below ground surface			
10							
15							
20							

Appendix B
Monitoring Well Diagrams

PROJECT NUMBER:	BORING NUMBER:
386329	MW-01 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/22/10 10:00 END : 9/22/10 12:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS	WELL DIAGRAM
		3.0/4.0		**Silt and Sand** 0.0-3.0' - 10YR 6/8, brown yellow, dry, firm, fine to medium grain sand		0		Grout
	4.0			3.0-4.0' - no recovery				2" PVC
5		3.0/4.0		**Sand** 4.0-7.0' - 10YR 5/8, yellow brown, with common fine distinct mottling (10YR 6/2 light brown gray, dry, firm, fine to medium grain sand, some clay, little silt		0		
	8.0			7.0-8.0' - no recovery				Bentonite Seal
10		3.0/4.0		**Clay** 8.0-10.0' - 10YR 5/8, yellow brown, with common fine distinct mottling (10YR 6/2 light brown gray), moist, soft, some fine to medium grain sand, trace silt		0	Water at 10' bgs	
				Sand 10.0-11.0' - 10YR 7/6, yellow, wet, loose, fine to medium grain sand, some clay				
	12.0			11.0-12.0' - no recovery				2" PVC with 0.010" slots
		4.0/4.0		**Sand** 12.0-14.0' - Same as 10.0-11.0		0		Sand
15				**Sand** 14.0-16.0' - 10YR 6/1, gray, wet, loose, fine to medium grain sand, some clay				
	16.0			**Sand** 16.0-19.0' - Same as 14.0-16.0				
		3.0/4.0				0		
				19.0-20.0' - no recovery				
20	20.0			Bottom of Boring at 20.0 ft below ground surface				

PROJECT NUMBER:	BORING NUMBER:	
386329	MW-02	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/10/10 08:00 END : 9/10/10 13:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft) / SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS	WELL DIAGRAM
		2.0 / 4.0	**Silt** 0.0-1.0' - 10YR 5/3, brown, dry, loose, little fine to medium grain sand and medium to coarse subrounded gravel **Silt and Gravel** 1.0-2.0' - 10YR 6/3, pale brown, dry, loose, medium to coarse subrounded gravel, little fine to medium grain sand 2.0-4.0' - no recovery		0		Grout 2" PVC
4.0							
5		3.0 / 4.0	**Silt and Gravel** 4.0-5.0' - Same as 1.0-2.0 **Fill material** 5.0-7.0' - concrete, rubble/wood 7.0-8.0' - no recovery		0		Bentonite Seal
8.0							
10		1.0 / 4.0	**Silt** 8.0-9.0' - 10YR 3/3, dark brown, dry to moist, medium dense, little fine to medium subrounded gravel and fine to medium grain sand 9.0-12.0' - no recovery		0		
12.0							2" PVC with 0.010" slots
15		2.0 / 4.0	**Clay and Sand** 12.0-13.0' - 10YR 5/1, gray, moist, soft, fine to medium grain sand **Sand** 13.0-14.0' - 10YR 5/8, brown-yellow, moist to wet, soft, fine to coarse grain sand, some clay 14.0-16.0' - no recovery		0		Sand
16.0							
		3.0 / 4.0	**Sand** 16.0-17.0' - Same as 13.0-14.0 **Sand** 17.0-19.0' - 10YR 6/1, gray, wet, loose, fine to coarse grain sand, little clay 19.0-20.0' - no recovery		0		
20	20.0		Bottom of Boring at 20.0 ft below ground surface				

PROJECT NUMBER:	BORING NUMBER:
386329	MW-03 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/20/10 14:30 END : 9/20/10 17:00 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS	WELL DIAGRAM
		3.0/4.0		**Silt and Sand** 0.0-3.0' - 10YR 6/6, brownish yellow, dry, dense, fine to coarse grain sand, trace fine subrounded gravel		0		Grout
	4.0			3.0-4.0' - no recovery				2" PVC
5		4.0/4.0		**Silt and Sand** 4.0-5.5' - Same as 0.0-3.0				
				Sand and Silt 5.5-8.0' - 10YR 5/3, brown, dry, medium dense, fine to coarse grain sand, some coarse subangular gravel and wood		0		Bentonite Grout
	8.0			**Sand and Silt** 8.0-9.0' - Same as 5.5-8.0				
10		3.0/4.0		**Clay and Sand** 9.0-11.0' - 10YR 3/1, very dark gray, moist to wet, soft, fine to medium grain sand, little silt		0		
	12.0			11.0-12.0' - no recovery			Water at 11' bgs	
		2.0/4.0		**Clay and Sand (Fill material)** 12.0-14.0' - Same as 9.0-11.0 except strong creosote odor, wood pieces (rubble/wood)				2" PVC with 0.010" slots
15				14.0-16.0' - no recovery		15.3		Sand
	16.0			**Clay and Sand** 16.0-17.0' - Same as 12.0-14.0				
		3.0/4.0		**Clay** 17.0-19.0' - 10YR 5/2, grayish brown, dry to moist, firm, little silt, trace sand		50	Native soil	
20	20.0			19.0-20.0' - no recovery				
				Bottom of Boring at 20.0 ft below ground surface				

PROJECT NUMBER:	BORING NUMBER:
386329	MW-04 SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/8/10 07:30 END : 9/8/10 16:00 LOGGER : A. Bogdanski/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	COMMENTS	WELL DIAGRAM
		4.0/4.0		**Topsoil** 0.0-0.25' - dark brown, dry **Silty Clay** 0.25-4.0' - brown becoming grayish brown, dry, stiff, low plasticity		Drillers encounter refusal at 3' bgs. Offset 3' to the east and try again. Drillers encounter refusal at 9' bgs. Offset 30' north from original location due to overhead powerlines.	
4.0							
5		4.0/4.0		**Silty Clay** 4.0-6.0' - Same as 0.25-4.0			Grout
				Silty Clay with sand 6.0-7.0' - strong brown, dry, fine grained, low plasticity			2" PVC
8.0				**Silty Clay with sand** 7.0-8.0' - Same as 6.0-7.0			
				Silty Clay with sand 8.0-10.0' - Same as 7.0-8.0 except with decreasing amount of sand			
10		2.0/4.0		10.0-12.0' - no recovery			Bentonite Seal
12.0							
		4.0/4.0		**Silty Clay** 12.0-14.5' - strong brown, moist, low plasticity, trace fine grain sand			
15				**Silty Clay** 14.5-16.0' - Same as 12.0-14.5 except dark gray			
16.0							
		4.0/4.0		**Silty Clay with sand** 16.0-20.0' - strong brown, moist, stiff, fine grained, low plasticity			#2 Sand
20	20.0						PVC with 0.010" slots
		4.0/4.0		**Silty Clay with sand** 20.0-24.0' - Same as 16.0-20.0 except wet from 22-23' bgs, soft from 22-23' bgs, otherwise stiff			
24.0							
				Bottom of Boring at 24.0 ft below ground surface			

PROJECT NUMBER:	BORING NUMBER:	
386329	MW-05	SHEET 1 OF 1

SOIL BORING LOG

PROJECT : Turkey Run Disposal Area RI, NSFIH, Indian Head, Maryland LOCATION : Site 66

ELEVATION : DRILLING CONTRACTOR : Parratt Wolff, Inc.

DRILLING METHOD AND EQUIPMENT : Direct Push/Hollow-Stem Auger

WATER LEVELS : --- START : 9/9/10 08:00 END : 9/9/10 13:30 LOGGER : C. Reed/WDC

DEPTH BELOW SURFACE AND ELEVATION (ft)	SAMPLE INTERVAL (ft)	RECOVERY (ft)	SAMPLER (TYPE)	SOIL DESCRIPTION: DEPTH INTERVAL, SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	GRAPHIC LOG	PID (ppm)	COMMENTS	WELL DIAGRAM
		3.0 / 4.0		**Ash material** 0.0-3.0' - 10YR 5/1, gray, dry, loose		0		
	4.0			3.0-4.0' - no recovery				
5		3.0 / 4.0		**Ash material** 4.0-8.0' - Same as 0.0-3.0		0		2" PVC Grout
	8.0			**Ash material** 8.0-9.0' - Same as 4.0-8.0				
10		4.0 / 4.0		**Clay** 9.0-11.5' - 10YR 6/3, pale brown, with common fine distinct mottling (10YR 6/8 brown-yellow), dry to moist, firm		31		
	12.0			**Clay** 11.5-12.0' - 10YR 6/3, brown-yellow, dry, firm				
15		1.0 / 4.0		**Sand and Clay** 12.0-13.0' - 10YR 6/1 and 10YR 6/8, gray and brown-yellow, moist to wet, soft, fine to medium grain sand		0		
	16.0			13.0-16.0' - no recovery				
		4.0 / 4.0		**Sand and Clay** 16.0-19.0' - Same as 12.0-13.0		0		Bentonite Seal
20	20.0			**Clay** 19.0-20.0' - 10YR 6/1, gray, with common fine distinct mottling (10YR 5/6 yellow-brown), moist to wet, stiff, trace fine grain sand			Water at 20' bgs	
		3.0 / 4.0		**Clay** 20.0-23.0' - Same as 19.0-20.0 except wet		0		
	24.0			23.0-24.0' - no recovery				
25		2.0 / 4.0		**Clay** 24.0-26.0' - Same as 20.0-23.0 except little fine grain sand				2" PVC with 0.010" slots
				26.0-28.0' - no recovery		0		
	28.0			**Clay** 28.0-29.5' - Same as 24.0-26.0				Sand/Gravel
30		3.0 / 4.0		**Clay** 29.5-31.0' - 10YR 4/1, dark gray, moist to wet, firm		0		
	32.0			31.0-32.0' - no recovery				
		3.0 / 4.0		**Clay** 32.0-33.5' - yellow-brown, moist to wet, soft, trace fine grain sand				
35				**Clay** 33.5-35.0' - 10YR 6/1, gray, dry to moist, firm		0		
	36.0			35.0-36.0' - no recovery				
				Bottom of Boring at 36.0 ft below ground surface				

Appendix C
Civil Surveying Report

THOTH LAND SURVEYING PROFESSIONALS

8115 FENTON STREET, SUITE 201 • SILVER SPRING MARYLAND 20910

PROJECT:

Survey of monitoring wells, soil borings, and sediment sample locations
Navy Clean 1000 CTO-JU04 Indian Head Site 66 Turkey Run Disposal Area
Indian Head, MD

DATUM:

Horizontal: NAD83(CORS96/EPOCH 2002) Maryland State Plane (U.S. Feet)
Vertical: NAVD88 (U.S. Feet) - Based on CORS96/2002 and Geoid 2009

WELL #	NORTH	EAST	SLEEVE ELEV.	GROUND ELEV.
MW01	329309.66	1256031.96	33.31	30.46
MW02	329403.42	1255646.62	18.97	16.41
MW03	328876.35	1255727.84	22.48	19.68
MW04	328493.76	1255904.02	14.95	11.94
MW05	328475.58	1256098.95	14.98	12.20

POINT	NORTH	EAST
ASH04	329129.03	1255638.21
ASH05	328956.50	1255574.18
ASH06	328740.23	1255740.77
ASH07	329113.41	1255613.87
ASH08	328911.89	1255609.10
ASH09	328662.50	1255846.02
DP22	330007.37	1255691.16
DP23	329901.51	1255801.15
DP24	329794.47	1255552.70
DP25	329699.99	1255646.34
DP26	329717.82	1255890.44
DP27	329567.48	1255764.73
DP28	329505.16	1255525.83
DP29	329450.11	1255905.84
DP30	329314.92	1256035.00
DP31	329170.24	1255488.39
DP32	329113.94	1255868.27
DP33	329031.30	1255478.48
DP34	328884.15	1255496.71
DP35	328881.79	1256077.10
DP36	328813.40	1256148.37
DP37	328795.29	1255631.04
DP38	328663.14	1256225.39
DP39	328609.16	1255779.34
DP40	328541.89	1256109.20
DP41	328497.42	1255927.51
GB01	329593.24	1255638.98
GB02	329470.29	1255572.10
GB03	329186.92	1255624.03
GB04	329053.90	1255657.12
GB05	329012.65	1255522.10
GB06	329075.89	1255833.07
GB07	328944.77	1255703.00
GB08	328877.36	1255641.20
GB09	328826.36	1256078.62
GB10	328803.18	1256009.20
GB11	328763.91	1255714.47
GB12	328658.85	1256159.30
GB14	328592.80	1255951.63
GB15	328641.83	1255860.00
SD06	329620.76	1255592.02
SDO7	329468.16	1255659.05
SD08	329373.97	1255579.97
SD09	329116.19	1255575.35
SD10	328892.77	1255636.49
SD11	328698.63	1255834.62
SD12	328067.51	1255805.92
SD13	327988.57	1255885.92
SD14	327838.68	1255934.19
SD15	327754.96	1256036.55
SO42	328986.14	1255658.45
SO43	328868.99	1255723.93
SO44	328846.07	1255891.51
SO45	328772.95	1255896.55

Appendix D
Monitoring Well Completion Reports

C 1 8053 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 46064

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM 09 DD 23 YY 10 (15–20)

Depth of Well 20 (TO NEAREST FOOT) (22–26)

PERMIT NO. FROM "PERMIT TO DRILL WELL" CH - 95 - 1387 (28–37)

OWNER US Navy (last name)

STREET OR RFD NSF Indian Head Division (first name) TOWN Indian Head

SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown moist med fine Sand some silt	0	11	
Brown wet loose Fine Sand, some silt	11	20	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 017

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: ___ D ___

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes [Y] (44) no [N] (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT [C M] (45 46) BENTONITE CLAY [B C] (45 46)

NO. OF BAGS 2 NO. OF POUNDS 10

GALLONS OF WATER 15

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (TOP 48–52) ft. to 6 (BOTTOM 54–58) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

[S T] STEEL [C O] CONCRETE [P L] PLASTIC [O T] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	10 (66–70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole insert appropriate code below

[S T] STEEL [B R] BRASS BRONZE [H O] OPEN HOLE [P L] PLASTIC [O T] OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN		from	to
1	PL (8 9)	10 (11–15)	20 (17–21)
2	(23 24)	(26–30)	(32–36)
3	(38 39)	(41–45)	(47–51)

SLOT SIZE 1 010 2 ___ 3 ___

DIAMETER OF SCREEN 2 (56–60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 — from 8 to 20 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 1 (11–15)

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING 1 (17–20) ft.

WHEN PUMPING 1 (22–25) ft.

TYPE OF PUMP USED (for test)

[A] air (27) [P] piston (27) [T] turbine (27)

[C] centrifugal (27) [R] rotary (27) [O] other (describe below) (27)

[J] jet (27) [S] submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES (NO)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31–35)

PUMP HORSE POWER (37–41)

PUMP COLUMN LENGTH (nearest ft.) (43–47)

CASING HEIGHT (circle appropriate box and enter casing height)

[+] above (49) / [–] below (49) LAND SURFACE

3 (nearest foot) (50 51)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

See map

1566 MW-01

DRILLER

DENV-CR00

C 1 8054 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 46064

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM DD YY: 09 10 10 (15–20)

Depth of Well (TO NEAREST FOOT): 20 (22–26)

PERMIT NO. FROM "PERMIT TO DRILL WELL": CH 95 - 1383 (28–37)

OWNER US Navy

STREET OR RFD NSF Indian Head (last name) (first name) TOWN U Indian Head

SUBDIVISION _____ SECTION _____ LOT _____

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown moist mod fine sand some silt	0	10	
Brown wet loose fine sand. some silt	10	20	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED (yes / no): no (N)

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M G D 0 1 7

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: ___ ___ D ___ ___ ___

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes (Y) no (N) (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT (CM) BENTONITE CLAY (BC) (45 46)

NO. OF BAGS 2 NO. OF POUNDS 20

GALLONS OF WATER 15

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48–52 TOP) ft. to 8 (54–58 BOTTOM) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL; CO CONCRETE; PL PLASTIC; OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60–61)	2 (63–64)	10 (66–70)

EACH CASING — OTHER CASING (if used)

	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below

ST STEEL; BR BRASS BRONZE; HO OPEN HOLE; PL PLASTIC; OT OTHER

C 2 — DEPTH (nearest ft.)

EACH SCREEN

		DEPTH (nearest ft.)	
1	PL (8–9)	10 (11–15)	20 (17–21)
2	(23–24)	(26–30)	(32–36)
3	(38–39)	(41–45)	(47–51)

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 2 (56–60) (NEAREST INCH)

GRAVEL PACK — from 8 to 20

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8–9)

PUMPING RATE (gal. per min.) 1 (11–15)

METHOD USED TO MEASURE PUMPING RATE _____

WATER LEVEL (distance from land surface)

BEFORE PUMPING 1 (17–20) ft.

WHEN PUMPING 1 (22–25) ft.

TYPE OF PUMP USED (for test)

A air; P piston; T turbine; C centrifugal; R rotary; O other (describe below); J jet; S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES (NO)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31–35)

PUMP HORSE POWER (37–41)

PUMP COLUMN LENGTH (nearest ft.) (43–47)

CASING HEIGHT (circle appropriate box and enter casing height)

(+) above; (–) below (49) LAND SURFACE

3 (nearest foot) (50 51)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

See map

TS66 MW-02

DENV-CR00

DRILLER

C 1 | 8055 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 46064

ST/CO USE ONLY
DATE Received MM DD YY
6 13

DATE WELL COMPLETED MM 07 DD 20 YY 10 (15 20)

Depth of Well 22 20 26 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" CH - 95 - 1384 (28 29 30 31 32 33 34 35 36 37)

OWNER US Navy (last name)
STREET OR RFD NSF Indian Head (first name) TOWN Indian Head
SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown Moist Med Fine Sand Some Silt	0	12	
Brown Wet Loose Fine Sand Some Silt Trace Clay	12	20	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED yes [Y] no [N]

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M D 0 1 7
DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)
LIC. NO.: __ __ D __ __ __

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) yes [Y] (44) no [N] (44)

TYPE OF GROUTING MATERIAL (Circle one)
CEMENT [CM] (45 46) BENTONITE CLAY [BC] (45 46)

NO. OF BAGS 2 NO. OF POUNDS 10
GALLONS OF WATER 15
DEPTH OF GROUT SEAL (to nearest foot)
from 0 (48 TOP 52) ft. to 8 (54 BOTTOM 58) ft.
(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below
[ST] STEEL [CO] CONCRETE [PL] PLASTIC [OT] OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	10 (66 70)

OTHER CASING (if used) — EACH CASING

	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below
[ST] STEEL [BR] BRASS [HO] OPEN HOLE [BRONZE] [PL] PLASTIC [OT] OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN		from	to
1	PL (8 9)	10 (11 15)	20 (17 21)
2	(23 24)	(26 30)	(32 36)
3	(38 39)	(41 45)	(47 51)

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 2 (56 60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 — from 8 to 20 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)
T (70) (E.R.O.S.) (72) W Q (74 75 76)
TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)
PUMPING RATE (gal. per min.) 1 (11 15)
METHOD USED TO MEASURE PUMPING RATE
WATER LEVEL (distance from land surface)
BEFORE PUMPING 1 (17 20) ft.
WHEN PUMPING 1 (22 25) ft.

TYPE OF PUMP USED (for test)
[A] air (27) [P] piston (27) [T] turbine (27)
[C] centrifugal (27) [R] rotary (27) [O] other (describe below) (27)
[J] jet (27) [S] submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) YES (NO)
IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.
TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)
CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31 35)
PUMP HORSE POWER (37 41)
PUMP COLUMN LENGTH (nearest ft.) (43 47)
CASING HEIGHT (circle appropriate box and enter casing height)
[+] above (49) LAND SURFACE
[–] below (49)
3 (50 51) (nearest foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

See MAP

ISGG MW-03

DRILLER

DENV-CR00

C 1 8057 — SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT

FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 46064

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM DD YY (15–20): 09 08 10

Depth of Well (22–26): 24 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" (28–37): CH 95 1386

OWNER (last name) US Navy (first name)

STREET OR RFD NSF Indian Head TOWN Indian Head

SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown moist med Fine Sand & Silt	0	14	
Brown wet med Fine Sand Some Silt Trace clay	14	24	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED (yes / no): no

CIRCLE APPROPRIATE LETTER
- A — A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E — ELECTRIC LOG OBTAINED
- P — TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M 6 D 0 1 7

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: __ __ D __ __ __

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) (44): yes Y / no N

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT C M (45 46) BENTONITE CLAY B C

NO. OF BAGS 3 NO. OF POUNDS 75 (45 46)

GALLONS OF WATER 21

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48 TOP 52) ft. to 13 (54 BOTTOM 58) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

S T STEEL; C O CONCRETE; P L PLASTIC; O T OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
P L (60 61)	2 (63 64)	14 (66–70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	to

SCREEN RECORD
screen type or open hole — insert appropriate code below

S T STEEL; B R BRASS BRONZE; H O OPEN HOLE; P L PLASTIC; O T OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN		from	to
1	P L (8 9)	14 (11–15)	24 (17–21)
2	(23 24)	(26–30)	(32–36)
3	(38 39)	(41–45)	(47–51)

SLOT SIZE 1 010 2 ____ 3 ____

DIAMETER OF SCREEN 2 (56–60) (NEAREST INCH)

GRAVEL PACK IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68: from 13 to 24 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING | LOG INDICATOR | OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 1 (11–15)

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING 1 (17–20) ft.

WHEN PUMPING 1 (22–25) ft.

TYPE OF PUMP USED (for test)

A air (27); P piston (27); T turbine (27); C centrifugal (27); R rotary (27); O other (describe below) (27); J jet (27); S submersible (27)

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO): YES / (NO)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31–35)

PUMP HORSE POWER (37–41)

PUMP COLUMN LENGTH (nearest ft.) (43–47)

CASING HEIGHT (circle appropriate box and enter casing height)

+ (49) above / – (49) below LAND SURFACE

3 (50 51) (nearest foot)

LOCATION OF WELL ON LOT

SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

See map

ES66 MW-04

DRILLER

DENV-CR00

C 1 | 8056 | SEQUENCE NO. (MDE USE ONLY)

1 2 3 6 (THIS NUMBER IS TO BE PUNCHED IN COLS. 3-6 ON ALL CARDS)

STATE OF MARYLAND
WELL COMPLETION REPORT
FILL IN THIS FORM COMPLETELY
PLEASE TYPE

THIS REPORT MUST BE SUBMITTED WITHIN 45 DAYS AFTER WELL IS COMPLETED.

COUNTY NUMBER 46064

ST/CO USE ONLY
DATE Received MM DD YY (8–13)

DATE WELL COMPLETED MM 09 DD 09 YY 10 (15–20)

Depth of Well (22–26) 32 (TO NEAREST FOOT)

PERMIT NO. FROM "PERMIT TO DRILL WELL" (28–37) CH - 95 - 1385

OWNER US Navy

STREET OR RFD (last name) NSF Indian Head (first name) TOWN Indian Head

SUBDIVISION SECTION LOT

WELL LOG
Not required for driven wells

STATE THE KIND OF FORMATIONS PENETRATED, THEIR COLOR, DEPTH, THICKNESS AND IF WATER BEARING

DESCRIPTION (Use additional sheets if needed)	FEET FROM	FEET TO	check if water bearing
Brown moist med Fine Sand some silt, Little Fine Gravel	0	16	
Brown wet med Fine Sand some silt	16	32	✓

NUMBER OF UNSUCCESSFUL WELLS: 0

WELL HYDROFRACTURED (yes / no) — no: N

CIRCLE APPROPRIATE LETTER
- A A WELL WAS ABANDONED AND SEALED WHEN THIS WELL WAS COMPLETED
- E ELECTRIC LOG OBTAINED
- P TEST WELL CONVERTED TO PRODUCTION WELL

I HEREBY CERTIFY THAT THIS WELL HAS BEEN CONSTRUCTED IN ACCORDANCE WITH COMAR 26.04.04 "WELL CONSTRUCTION" AND IN CONFORMANCE WITH ALL CONDITIONS STATED IN THE ABOVE CAPTIONED PERMIT, AND THAT THE INFORMATION PRESENTED HEREIN IS ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE.

DRILLERS LIC. NO.: M-D-017

DRILLERS SIGNATURE (MUST MATCH SIGNATURE ON APPLICATION)

LIC. NO.: ___ D ___

SITE SUPERVISOR (sign. of driller or journeyman responsible for sitework if different from permittee)

GROUTING RECORD
WELL HAS BEEN GROUTED (Circle Appropriate Box) — yes: Y (44) / no: N (44)

TYPE OF GROUTING MATERIAL (Circle one)

CEMENT (CM) (45 46) BENTONITE CLAY (BC) (45 46)

NO. OF BAGS 3 NO. OF POUNDS 75

GALLONS OF WATER 21

DEPTH OF GROUT SEAL (to nearest foot)

from 0 (48 TOP 52) ft. to 20 (54 BOTTOM 58) ft.

(enter 0 if from surface)

CASING RECORD
casing types insert appropriate code below

ST STEEL; CO CONCRETE; PL PLASTIC; OT OTHER

MAIN CASING TYPE	Nominal diameter top (main) casing (nearest inch)!	Total depth of main casing (nearest foot)
PL (60 61)	2 (63 64)	22 (66 70)

OTHER CASING (if used)

EACH CASING	diameter inch	depth (feet) from	depth (feet) to

SCREEN RECORD
screen type or open hole — insert appropriate code below

ST STEEL; BR BRASS BRONZE; HO OPEN HOLE; PL PLASTIC; OT OTHER

C 2 (1 2)

DEPTH (nearest ft.)

EACH SCREEN			
1	PL (8 9)	22 (11–15)	32 (17–21)
2	(23 24)	(26–30)	(32–36)
3	(38 39)	(41–45)	(47–51)

SLOT SIZE 1 010 2 ___ 3 ___

DIAMETER OF SCREEN 2 (56–60) (NEAREST INCH)

GRAVEL PACK — from 20 to 32

IF WELL DRILLED WAS FLOWING WELL INSERT F IN BOX 68 (68)

MDE USE ONLY (NOT TO BE FILLED IN BY DRILLER)

T (70) (E.R.O.S.) (72) W Q (74 75 76)

TELESCOPE CASING — LOG INDICATOR — OTHER DATA

C 3 (1 2)

PUMPING TEST
HOURS PUMPED (nearest hour) 1 (8 9)

PUMPING RATE (gal. per min.) 1 • (11–15)

METHOD USED TO MEASURE PUMPING RATE

WATER LEVEL (distance from land surface)

BEFORE PUMPING 1 (17–20) ft.

WHEN PUMPING 1 (22–25) ft.

TYPE OF PUMP USED (for test)

A (27) air; P (27) piston; T (27) turbine; C (27) centrifugal; R (27) rotary; O (27) other (describe below); J (27) jet; S (27) submersible

PUMP INSTALLED
DRILLER INSTALLED PUMP (CIRCLE) (YES or NO) — YES / (NO)

IF DRILLER INSTALLS PUMP, THIS SECTION MUST BE COMPLETED FOR ALL WELLS.

TYPE OF PUMP INSTALLED PLACE (A,C,J,P,R,S,T,O) IN BOX 29. (29)

CAPACITY: GALLONS PER MINUTE (to nearest gallon) (31–35)

PUMP HORSE POWER (37–41)

PUMP COLUMN LENGTH (nearest ft.) (43–47)

CASING HEIGHT (circle appropriate box and enter casing height)

(+) (49) above; (–) (49) below LAND SURFACE

3 (50 51) (nearest) foot)

LOCATION OF WELL ON LOT
SHOW PERMANENT STRUCTURE SUCH AS BUILDING, SEPTIC TANKS, AND /OR LANDMARKS AND INDICATE NOT LESS THAN TWO DISTANCES (MEASUREMENTS TO WELL)

N

See map

ISGG MW-05

DRILLER

DENV-CR00

Appendix E
Laboratory Data Validation Report

Indian Head
CTO JU04
Site 66 Turkey Run

Memo

To: Indian Head CTO JU04 Site 66 Turkey Run Project Team

From: Hillary Ott/Anita Dodson

Date: 6/17/2011

Re: Site 66 Sample ID Update Action

The purpose of this memo is to document the sample ID changes for Indian Head, CTO-JU04 Site 66 Turkey Run.

The sampler's table in the project instructions provided incorrect sample IDs that did not match the approved UFP-SAP. As a result, the sample IDs on the Form 1s in both the Lab Report and Data Validation Report were reported with the incorrect sample IDs.

The attached crosswalk table has been created and identifies the changes that have been made to the samples IDs so that they reflect the correct sample IDs that are provided in the approved UFP-SAP. This memo, along with the crosswalk table, will be attached to the laboratory data packages as well as the applicable data validation report.

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Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services SDG JU04-1.

Samples were analyzed using the following analytical methods:

- SW6010/6020 Metals
- SW7470A/7471A Mercury
- SW8081A Pesticides
- SW8082 PCBs
- SW8260C Volatiles
- SW8270C and 8270C SIM Semivolatiles
- SW8330 Explosives
- 9012 Cyanide

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66DP380001	SD5842-001
IS66DP381213	SD5842-002
IS66FB092210	SD5842-003
IS66EB092210	SD5842-004
IS66DP300001	SD5842-005
IS66DP300910	SD5842-006
IS66AH07	SD5842-007
IS66AH08	SD5842-008
IS66AH09	SD5842-009
IS66EB02-092110	SD5842-010
IS66EB01-092110	SD5842-011
IS66S0420001	SD5842-013
IS66S042P0001	SD5842-014
IS66S0430001	SD5842-015
IS66S0440001	SD5842-016
IS66S0450001	SD5842-017
IS66DP380001-01	SD5842-18
IS66DP381213-01	SD5842-19
IS66AH04	SD5842-020
IS66AH04P	SD5842-021
IS66AH05	SD5842-022
IS66AH06	SD5842-023

The original Sample IDs as submitted to the laboratory were incorrect. A cross-reference table with the correct Sample IDs is provided at the end of this report.

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), National Functional Guidelines for Inorganic Methods Data Review (EPA 2004), Region III Modifications for Organic Data Review (EPA 1994), and Region III Modifications for Inorganic Data Review (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Serial Dilutions
- Dual Column Confirmation
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data that has been qualified are summarized in **Attachment 1.**

Attachment 2 lists the specific non-conformance issues, such as the %Difference, Relative Percent Differences (RPD) and recoveries for data in this SDG.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/21/10 and 9/22/10. Samples were received at the laboratory on 9/23/10. All sample preparation analysis was performed within holding time requirements.

Calibration

Initial and continuing calibration were outside of criteria for the compounds listed below. Affected data are summarized in **Attachment 1**.

Sample ID	Compound
IS66DP380001	Benzaldehyde
IS66EB01-092110	Benzaldehyde
IS66EB01-092110	2,4,6-Trichlorophenol
IS66EB01-092110	2,4-Dinitrophenol
IS66S0420001	Benzaldehyde
IS66S042P0001	Benzaldehyde
IS66S0430001	Benzaldehyde
IS66S0440001	Benzaldehyde
IS66S0450001	Benzaldehyde
IS66DP380001-01	Acetone
IS66DP381213-01	Acetone
IS66DP381213	Benzaldehyde
IS66FB092210	2,4,6-Trichlorophenol
IS66FB092210	2,4-Dinitrophenol
IS66EB092210	2,4,6-Trichlorophenol
IS66EB092210	2,4-Dinitrophenol
IS66DP300001	Benzaldehyde
IS66DP300910	Benzaldehyde

Blanks

Various compounds in methods 6020, 6010B, 8260B, and 8270C SIM were detected in field blanks, method blanks, and calibration blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Units	Action Level	Units
8260 - VOC					
WG82585 – MB – 9/24	Carbon Disulfide	1.4	ug/L	7.0	ug/Kg
WG82627 – MB –	Carbon	1.5	ug/L	7.5	ug/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
9/27	Disulfide				
8270 SIM					
WG82508-1 – MB – 9/24	BEHP	0.82	ug/L	8.2	ug/L
WG82584-1 – MB – 9/27	BEHP	150	ug/kg	1500	ug/Kg
WG82584-1 – MB – 9/27	Dimethyl phthalate	1.6	ug/kg	16	ug/Kg
Metals – 6010/6020 - Waters					
PBWAI24ICW0 - PB	Aluminum	15.66	ug/L	78.3	ug/L
PBWAI24ICW0 - PB	Barium	0.677	ug/L	3.385	ug/L
PBWAI24ICW0 - PB	Calcium	86.26	ug/L	431.3	ug/L
PBWAI24ICW0 - PB	Copper	1.88	ug/L	9.4	ug/L
PBWAI24ICW0 - PB	Iron	31.3	ug/L	156.5	ug/L
PBWAI24ICW0 - PB	Magnesium	38.85	ug/L	194.3	ug/L
PBWAI24ICW0 - PB	Manganese	1.597	ug/L	7.99	ug/L
PBWAI24ICW0 - PB	Zinc	1.797	ug/L	8.99	ug/L
PBWAI24IMW0 - PB	Chromium	1.322	ug/L	6.61	ug/L
PBWAI24IMW0 - PB	Vanadium	0.748	ug/L	3.74	ug/L
CCB 100410 1449	Cadmium	0.01	ug/L	0.05	ug/L
CCB 100410 1449	Thallium	0.01	ug/L	0.05	ug/L
CCB 092410 1740	Sodium	53.91	ug/L	270	ug/L
CCB 092410 1830	Lead	1.38	ug/L	157	ug/L
CCB 092410 1830	Nickel	0.7	ug/L	3.5	ug/L
Metals – 6010/6020 - Soils					
ISSEB01-092110 (soil)	Arsenic	1.4	ug/L	0.7	mg/Kg
ISSEB01-092210 (soil)	Arsenic	0.92	ug/L	0.46	mg/Kg
	Cadmium	0.07	ug/L	0.035	mg/Kg
	Cobalt	0.07	ug/L	0.035	mg/Kg
ISSEB02-092110 (ash)	Arsenic	1.5	ug/L	0.75	mg/Kg
ISSFB092210	Arsenic	1.8	ug/L	0.9	mg/Kg
	Cadmium	0.1	ug/L	0.05	mg/Kg
PBSAI29IMS0	Arsenic	0.178	mg/Kg	0.89	mg/Kg
PBSAI29IMS0	Chromium	0.212	mg/Kg	1.06	mg/Kg
PBSAI29IMS0	Vanadium	0.131	mg/Kg	.655	mg/Kg
PBSAI29ICS0	Calcium	6.48	mg/Kg	32.4	mg/Kg
CCB 093010 1448	Aluminum	19.19	ug/L	9.6	mg/Kg
CCB 093010 1448	Beryllium	0.3	ug/L	0.15	mg/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
CCB 093010 1448	Cadmium	0.36	ug/L	.18	mg/Kg
CCB 093010 1448	Iron	12.69	ug/L	6.345	mg/Kg
CCB 093010 1731	Lead	2.0	ug/L	1.0	mg/Kg
CCB 093010 1448	Magnesium	10.45	ug/L	5.225	mg/Kg
CCB 093010 1448	Manganese	2.27	ug/L	1.135	mg/Kg
CCB 093010 1354	Nickel	0.73	ug/L	.365	mg/Kg
CCB 093010 1300	Sodium	17.61	ug/L	8.81	mg/Kg
CCB 100410 1449	Thallium	0.01	ug/L	0.005	mg/Kg
CCB 093010 1300	Zinc	1.97	ug/L	0.985	mg/Kg

Lab Control Sample/Lab Control Duplicate

Dimethyl phthalate and bis(2-Chloroethyl-ether) were qualified due to low recoveries in the LCS/LCSD. Affected data are summarized in **Attachment 1**.

Matrix Spike/Spike Duplicate

Manganese, Antimony and Mercury were qualified due to low recoveries in the MS/MSD. Affected data are summarized in **Attachment 1.**

Surrogates

Surrogates for the samples listed below exhibited recoveries below the lower control limits for methods 8081A and 8082 and 8260B. Affected data are summarized in **Attachment 1**.

Sample ID
IS66S0420001
IS66S0420001
IS66S042P0001
IS66S042P0001
IS66S0430001
IS66S0430001
IS66S0440001
IS66S0440001
IS66S0450001

IS66S0450001
IS66S0450001
IS66DP380001
IS66DP380001
IS66DP381213
IS66DP300001
IS66DP300001
IS66DP300910
IS66DP300910

Field Duplicate Precision
Precision was not met for various compounds in the metals for samples IS66S0420001 and IS66042P0001. Affected data are summarized in **Attachment 1.**

Internal Standards
Internal standard D12-Perylene was low for the samples below. The compounds below were affected by the low internal standard and are summarized in **Attachment 1.**

Sample ID	Compound
IS66S042P0001	Benzo(b)Fluoranthene
IS66S042P0001	Benzo(k)fluoranthene
IS66S042P0001	Benzo(a)pyrene
IS66S042P0001	Dibenz(a,h)anthracene
IS66S042P0001	Benzo(g,h,i)perylene
IS66S0430001	Benzo(b)Fluoranthene
IS66S0430001	Benzo(k)fluoranthene
IS66S0430001	Benzo(a)pyrene
IS66S0430001	Dibenz(a,h)anthracene
IS66S0430001	Benzo(g,h,i)perylene
IS66DP300001	Benzo(b)Fluoranthene
IS66DP300001	Benzo(k)fluoranthene
IS66DP300001	Benzo(a)pyrene
IS66DP300001	Dibenz(a,h)anthracene
IS66DP300001	Benzo(g,h,i)perylene

Serial Dilution
Zinc and Lead were qualified for sample IS66AH07 due to serial dilution <10%. Affected data are summarized in **Attachment 1.**

Other Quality Control Issues
From the Case Narrative – "All of the soil samples had concentrations of Tetrachloroethene above the MDL. Upon investigation, Katahdin found that the freezer blank stored in the freezer at the same time as these samples had a Tetrachloroethene concentration of 15 ug/kg. Upon further investigation, Katahdin discovered that another client's sample which was also stored in the same freezer had an extremely high concentration of Tetrachloroethene. It is believed that this sample is the source of contamination. The sample was removed from the storage freezer and the subsequent freezer storage blank had no detection of Tetrachloroethene above the MDL." Therefore, qualify all detected Tetrachloroethene results as "J-OT".

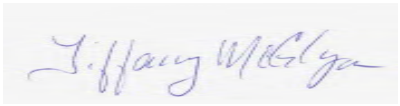
Re-extractions and Dilutions
All qualified data are summarized in Attachment 1 except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Sample ID Cross-Reference Table

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-1
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66DP380001	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG82555	24-SEP-10 15:32:01	SW846 M9012	24-SEP-10	
Total Solids	95. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:04:00	ASTM D2216	23-SEP-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-2
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB381213	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82555	24-SEP-10 15:32:02	SW846 M9012	24-SEP-10	
Total Solids	85. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:05:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-3
Report Date: 12-OCT-10
Client PO: 935177 386329 N624 70
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66FB092210	AQ	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82553	24-SEP-10 11:25:30	SW846 M9012	24-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-4
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66EB092210	AQ	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82553	24-SEP-10 11:25:31	SW846 M9012	24-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-5
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS300001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG82555	24-SEP-10 15:32:03	SW846 M9012	24-SEP-10	
Total Solids	92. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:06:00	ASTM D2216	23-SEP-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-6
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB300910	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82555	24-SEP-10 15:32:04	SW846 M9012	24-SEP-10	
Total Solids	85. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:07:00	ASTM D2216	23-SEP-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-7
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66AH07	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG82555	24-SEP-10 15:32:05	SW846 M9012	24-SEP-10	
Total Solids	77. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:02:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-8
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66AH08	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.76 mg/Kgdrywt	0.95	0.76	SW846 M9012A	WG82555	24-SEP-10 15:32:06	SW846 M9012	24-SEP-10	
Total Solids	49. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:08:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-9
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66AH09	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.56 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG82555	24-SEP-10 15:34:51	SW846 M9012	24-SEP-10	
Total Solids	72. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:09:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-11
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66EB01-092110	AQ	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ng/L	10.	8.0	SW846 M9012A	WG82553	24-SEP-10 16:27:40	SW846 M9012	24-SEP-10	

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-13
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66SS0420001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82555	24-SEP-10 15:34:52	SW846 M9012	24-SEP-10	
Total Solids	85. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:10:00	ASTM D2216	23-SEP-10	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-14
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66SS042P0001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82555	24-SEP-10 16:27:41	SW846 M9012	24-SEP-10	
Total Solids	90. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:11:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-15
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66SS430001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG82555	24-SEP-10 16:27:42	SW846 M9012	24-SEP-10	
Total Solids	91.%	1	N/A	SM2540G	WG82613	24-SEP-10 11:12:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-16
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66SS440001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82555	24-SEP-10 16:27:43	SW846 M9012	24-SEP-10	
Total Solids	87. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:13:00	ASTM D2216	23-SEP-10	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-17
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
SS IS66S0450001	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82555	24-SEP-10 16:27:44	SW846 M9012	24-SEP-10	
Total Solids	88. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:15:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-18
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66BP380001-01 SS	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	95. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:04:00	ASTM D2216	23-SEP-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
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Lab Sample ID: SD5842-19
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66DP381213-01 SB	SL	22-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Solids	85. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:05:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-20
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66AH04	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82742	29-SEP-10 14:37:17	SW846 M9012	29-SEP-10	
Total Solids	86. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:16:00	ASTM D2216	23-SEP-10	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-21
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66AH04P	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82555	24-SEP-10 16:27:45	SW846 M9012	24-SEP-10	
Total Solids	79. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:17:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-22
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
IS66AH05	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG82742	29-SEP-10 14:37:18	SW846 M9012	29-SEP-10	
Total Solids	72. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:18:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5842-23
Report Date: 12-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-1

Sample Description	Matrix	Date Sampled	Date Received
1S66AH06	SL	21-SEP-10	23-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.56 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG82742	29-SEP-10 14:37:19	SW846 M9012	29-SEP-10	
Total Solids	71. %	1	N/A	SM2540G	WG82613	24-SEP-10 11:19:00	ASTM D2216	23-SEP-10	

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-1
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 95.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	48.	ug/Kgdrywt	1	100	95.	8.2	48.
RDX	U	48.	ug/Kgdrywt	1	100	95.	6.5	48.
1,3,5-Trinitrobenzene	U	48.	ug/Kgdrywt	1	100	95.	6.4	48.
1,3-Dinitrobenzene	U	48.	ug/Kgdrywt	1	100	95.	5.9	48.
Tetryl	U	48.	ug/Kgdrywt	1	100	95.	5.2	48.
Nitrobenzene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	95.	21.	48.
Nitroglycerin	U	380	ug/Kgdrywt	1	800	760	120	380
2,4,6-Trinitrotoluene	U	48.	ug/Kgdrywt	1	100	95.	6.4	48.
4-Am-DNT	U	48.	ug/Kgdrywt	1	100	95.	16.	48.
2-Am-DNT	U	48.	ug/Kgdrywt	1	100	95.	20.	48.
2,6-Dinitrotoluene	U	48.	ug/Kgdrywt	1	100	95.	26.	48.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	95.	14.	48.
2-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	95.	11.	48.
4-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	95.	26.	48.
3-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	95.	7.5	48.
1,2-Dinitrobenzene		87.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	54.	ug/Kgdrywt	1	100	110	9.3	54.
RDX	U	54.	ug/Kgdrywt	1	100	110	7.4	54.
1,3,5-Trinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
1,3-Dinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	6.7	54.
Tetryl	U	54.	ug/Kgdrywt	1	100	110	5.9	54.
Nitrobenzene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	24.	54.
Nitroglycerin	U	430	ug/Kgdrywt	1	800	870	130	430
2,4,6-Trinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
4-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	18.	54.
2-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	23.	54.
2,6-Dinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	16.	54.
2-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	13.	54.
4-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
3-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
1,2-Dinitrobenzene		89.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 28-SEP-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG82645

Analysis Date: 29-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	129.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 28-SEP-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG82645

Analysis Date: 29-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	127.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	54.	ug/Kgdrywt	1	100	110	9.3	54.
RDX	U	54.	ug/Kgdrywt	1	100	110	7.3	54.
1,3,5-Trinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
1,3-Dinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	6.7	54.
Tetryl	U	54.	ug/Kgdrywt	1	100	110	5.8	54.
Nitrobenzene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	24.	54.
Nitroglycerin	U	430	ug/Kgdrywt	1	800	860	130	430
2,4,6-Trinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
4-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	18.	54.
2-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	23.	54.
2,6-Dinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	16.	54.
2-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	13.	54.
4-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
3-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	8.5	54.
1,2-Dinitrobenzene		89.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	50.	ug/Kgdrywt	1	100	100	8.6	50.
RDX	U	50.	ug/Kgdrywt	1	100	100	6.8	50.
1,3,5-Trinitrobenzene	U	50.	ug/Kgdrywt	1	100	100	6.7	50.
1,3-Dinitrobenzene	U	50.	ug/Kgdrywt	1	100	100	6.2	50.
Tetryl	U	50.	ug/Kgdrywt	1	100	100	5.4	50.
Nitrobenzene	EXCLUDE-RE ~~U~~	50.	ug/Kgdrywt	1	100	100	22.	50.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	800	120	400
2,4,6-Trinitrotoluene	U	50.	ug/Kgdrywt	1	100	100	6.7	50.
4-Am-DNT	U	50.	ug/Kgdrywt	1	100	100	17.	50.
2-Am-DNT	U	50.	ug/Kgdrywt	1	100	100	21.	50.
2,6-Dinitrotoluene	U	50.	ug/Kgdrywt	1	100	100	27.	50.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	50.	ug/Kgdrywt	1	100	100	15.	50.
2-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	12.	50.
4-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	27.	50.
3-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	8.0	50.
1,2-Dinitrobenzene		82.1	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: 1S66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 28-SEP-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG82645

Analysis Date: 29-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	125.	%					

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REISSUE

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Katahdin Analytical Services A0000486

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH NELAC
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	54.	ug/Kgdrywt	1	100	110	9.2	54.
RDX	U	54.	ug/Kgdrywt	1	100	110	7.3	54.
1,3,5-Trinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
1,3-Dinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
Tetryl	U	54.	ug/Kgdrywt	1	100	110	5.8	54.
Nitrobenzene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	24.	54.
Nitroglycerin	U	430	ug/Kgdrywt	1	800	860	130	430
2,4,6-Trinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
4-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	18.	54.
2-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	22.	54.
2,6-Dinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	16.	54.
2-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	13.	54.
4-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
3-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	8.5	54.
1,2-Dinitrobenzene		91.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	51.	ug/Kgdrywt	1	100	100	8.8	51.
RDX	U	51.	ug/Kgdrywt	1	100	100	7.0	51.
1,3,5-Trinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
1,3-Dinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.4	51.
Tetryl	U	51.	ug/Kgdrywt	1	100	100	5.6	51.
Nitrobenzene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	23.	51.
Nitroglycerin	U	410	ug/Kgdrywt	1	800	820	130	410
2,4,6-Trinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
4-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	17.	51.
2-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	22.	51.
2,6-Dinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	28.	51.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	15.	51.
2-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	12.	51.
4-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	28.	51.
3-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	8.1	51.
1,2-Dinitrobenzene		91.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	49.	ug/Kgdrywt	1	100	98.	8.4	49.
RDX	U	49.	ug/Kgdrywt	1	100	98.	6.7	49.
1,3,5-Trinitrobenzene	U	49.	ug/Kgdrywt	1	100	98.	6.6	49.
1,3-Dinitrobenzene	U	49.	ug/Kgdrywt	1	100	98.	6.1	49.
Tetryl	U	49.	ug/Kgdrywt	1	100	98.	5.3	49.
Nitrobenzene	EXCLUDE-RE ~~U~~	49.	ug/Kgdrywt	1	100	98.	22.	49.
Nitroglycerin	U	390	ug/Kgdrywt	1	800	790	120	390
2,4,6-Trinitrotoluene	U	49.	ug/Kgdrywt	1	100	98.	6.6	49.
4-Am-DNT	U	49.	ug/Kgdrywt	1	100	98.	17.	49.
2-Am-DNT	U	49.	ug/Kgdrywt	1	100	98.	21.	49.
2,6-Dinitrotoluene	U	49.	ug/Kgdrywt	1	100	98.	26.	49.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	49.	ug/Kgdrywt	1	100	98.	15.	49.
2-Nitrotoluene	U	49.	ug/Kgdrywt	1	100	98.	12.	49.
4-Nitrotoluene	U	49.	ug/Kgdrywt	1	100	98.	26.	49.
3-Nitrotoluene	U	49.	ug/Kgdrywt	1	100	98.	7.8	49.
1,2-Dinitrobenzene		90.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site €
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 05-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	57.	ug/Kgdrywt	1	100	110	9.8	57.
RDX	U	57.	ug/Kgdrywt	1	100	110	7.8	57.
1,3,5-Trinitrobenzene	U	57.	ug/Kgdrywt	1	100	110	7.7	57.
1,3-Dinitrobenzene	U	57.	ug/Kgdrywt	1	100	110	7.1	57.
Tetryl	U	57.	ug/Kgdrywt	1	100	110	6.2	57.
Nitrobenzene	EXCLUDE-RE ~~U~~	57.	ug/Kgdrywt	1	100	110	25.	57.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	910	140	460
2,4,6-Trinitrotoluene	U	57.	ug/Kgdrywt	1	100	110	7.7	57.
4-Am-DNT	U	57.	ug/Kgdrywt	1	100	110	19.	57.
2-Am-DNT	U	57.	ug/Kgdrywt	1	100	110	24.	57.
2,6-Dinitrotoluene	U	57.	ug/Kgdrywt	1	100	110	31.	57.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	57.	ug/Kgdrywt	1	100	110	17.	57.
2-Nitrotoluene	U	57.	ug/Kgdrywt	1	100	110	14.	57.
4-Nitrotoluene	U	57.	ug/Kgdrywt	1	100	110	31.	57.
3-Nitrotoluene	U	57.	ug/Kgdrywt	1	100	110	9.0	57.
1,2-Dinitrobenzene		88.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	52.	ug/Kgdrywt	1	100	100	9.0	52.
RDX	U	52.	ug/Kgdrywt	1	100	100	7.1	52.
1,3,5-Trinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
1,3-Dinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	6.5	52.
Tetryl	U	52.	ug/Kgdrywt	1	100	100	5.7	52.
Nitrobenzene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	23.	52.
Nitroglycerin	U	420	ug/Kgdrywt	1	800	840	130	420
2,4,6-Trinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
4-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	18.	52.
2-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	22.	52.
2,6-Dinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	16.	52.
2-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	12.	52.
4-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
3-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	8.3	52.
1,2-Dinitrobenzene		84.0	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66DP380001 (SS)
Matrix: SOIL
SDG Name: JU04-1
Percent Solids: 95.4
Lab Sample ID: SD5842-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	5550			P	1	26	1.33	8.6
7440-36-0	ANTIMONY, TOTAL	0.43	U		P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	1.8			MS	5	0.43	0.10	0.34
7440-39-3	BARIUM, TOTAL	23.4			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	0.27	J		P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.26	U		P	1	0.86	0.007	0.26
7440-70-2	CALCIUM, TOTAL	218			P	1	8.6	0.91	6.9
7440-47-3	CHROMIUM, TOTAL	10.2			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	2.9			MS	5	0.086	0.003	0.026
7440-50-8	COPPER, TOTAL	8.2			P	1	2.1	0.06	0.86
7439-89-6	IRON, TOTAL	8740			P	1	8.6	0.28	6.9
7439-92-1	LEAD, TOTAL	18.1			P	1	0.43	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	428			P	1	8.6	0.31	6.9
7439-96-5	MANGANESE, TOTAL	77.1			P	1	0.43	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.03			CV	1	0.032	0.001	0.016
7440-02-0	NICKEL, TOTAL	5.0			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	492			P	1	86	8.85	43
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.07	J		MS	5	0.086	0.009	0.034
7440-23-5	SODIUM, TOTAL	19.8	J	B<MBL	P	1	86	1.43	43
7440-28-0	THALLIUM, TOTAL	0.08	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	19.7			MS	5	0.43	0.06	0.34
7440-66-6	ZINC, TOTAL	24.1			P	1	2.1	0.05	0.86

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB381213

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 85.4 **Lab Sample ID:** SD5842-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	11400			P	1	26	1.33	8.6
7440-36-0	ANTIMONY, TOTAL	0.43	U		P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	5.8			MS	5	0.43	0.10	0.34
7440-39-3	BARIUM, TOTAL	104			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	1.0			P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.05	J	B&CCBL	P	1	0.86	0.007	0.26
7440-70-2	CALCIUM, TOTAL	684			P	1	8.6	0.91	6.9
7440-47-3	CHROMIUM, TOTAL	20.2			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	16.4			MS	5	0.086	0.003	0.026
7440-50-8	COPPER, TOTAL	15.1			P	1	2.2	0.06	0.86
7439-89-6	IRON, TOTAL	15300			P	1	8.6	0.28	6.9
7439-92-1	LEAD, TOTAL	5.7			P	1	0.43	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	1860			P	1	8.6	0.31	6.9
7439-96-5	MANGANESE, TOTAL	37.1			P	1	0.43	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	31.6			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	575			P	1	86	8.86	43
7782-49-2	SELENIUM, TOTAL	0.47			MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.086	0.009	0.034
7440-23-5	SODIUM, TOTAL	112			P	1	86	1.44	43
7440-28-0	THALLIUM, TOTAL	0.13	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	18.9			MS	5	0.43	0.06	0.34
7440-66-6	ZINC, TOTAL	73.3			P	1	2.2	0.05	0.86

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66FB092210

Matrix: WATER **SDG Name:** JU04-1

Percent Solids: 0.00 **Lab Sample ID:** SD5842-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.10	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.8	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.1	J	J	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	80	U		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.0	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.11	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.62	J	B-MBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	1.3	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	80	U		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	0.80	J	B-MBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.45	J	B-CCBL	P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	222	J	B-CCBL	P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	0.75	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: 1S66EB092210

Matrix: WATER
SDG Name: JU04-1

Percent Solids: 0.00
Lab Sample ID: SD5842-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	0.92	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.07	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	80	U		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.5	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.07	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.72	J	B-MBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	80	U		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	1.0	J	B-MBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.42	J	B-CCBL	P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	49.6	J	B-CCBL	P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.0	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SS300001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 91.7 **Lab Sample ID:** SD5842-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9370			P	1	25	1.28	8.2
7440-36-0	ANTIMONY, TOTAL	0.41	U		P	1	0.66	0.09	0.41
7440-38-2	ARSENIC, TOTAL	5.5			MS	5	0.41	0.09	0.33
7440-39-3	BARIUM, TOTAL	46.3			P	1	0.41	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.51			P	1	0.41	0.007	0.041
7440-43-9	CADMIUM, TOTAL	0.04	J		P	1	0.82	0.007	0.25
7440-70-2	CALCIUM, TOTAL	286			P	1	8.2	0.88	6.6
7440-47-3	CHROMIUM, TOTAL	13.7			MS	5	0.41	0.05	0.16
7440-48-4	COBALT, TOTAL	8.6			MS	5	0.082	0.003	0.025
7440-50-8	COPPER, TOTAL	34.8			P	1	2.1	0.06	0.82
7439-89-6	IRON, TOTAL	11600			P	1	8.2	0.27	6.6
7439-92-1	LEAD, TOTAL	29.5			P	1	0.41	0.09	0.33
7439-95-4	MAGNESIUM, TOTAL	722			P	1	8.2	0.30	6.6
7439-96-5	MANGANESE, TOTAL	274			P	1	0.41	0.05	0.33
7439-97-6	MERCURY, TOTAL	0.06			CV	1	0.035	0.001	0.018
7440-02-0	NICKEL, TOTAL	7.3			P	1	3.3	0.04	0.33
7440-09-7	POTASSIUM, TOTAL	650			P	1	82	8.51	41
7782-49-2	SELENIUM, TOTAL	0.40	J		MS	5	0.41	0.03	0.25
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.082	0.008	0.033
7440-23-5	SODIUM, TOTAL	28.3	J		P	1	82	1.38	41
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.16	0.004	0.033
7440-62-2	VANADIUM, TOTAL	26.4			MS	5	0.41	0.06	0.33
7440-66-6	ZINC, TOTAL	25.8			P	1	2.1	0.05	0.82

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** 1S66~~DP~~SB300910

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 84.9 **Lab Sample ID:** SD5842-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	13100			P	1	27	1.38	8.9
7440-36-0	ANTIMONY, TOTAL	0.45	U		P	1	0.71	0.10	0.45
7440-38-2	ARSENIC, TOTAL	3.3			MS	5	0.45	0.10	0.36
7440-39-3	BARIUM, TOTAL	52.2			P	1	0.45	0.02	0.27
7440-41-7	BERYLLIUM, TOTAL	0.68			P	1	0.45	0.008	0.045
7440-43-9	CADMIUM, TOTAL	0.27	U		P	1	0.89	0.007	0.27
7440-70-2	CALCIUM, TOTAL	119			P	1	8.9	0.95	7.1
7440-47-3	CHROMIUM, TOTAL	21.9			MS	5	0.45	0.05	0.18
7440-48-4	COBALT, TOTAL	7.7			MS	5	0.089	0.004	0.027
7440-50-8	COPPER, TOTAL	13.0			P	1	2.2	0.06	0.89
7439-89-6	IRON, TOTAL	11100			P	1	8.9	0.29	7.1
7439-92-1	LEAD, TOTAL	11.1			P	1	0.45	0.09	0.36
7439-95-4	MAGNESIUM, TOTAL	1460			P	1	8.9	0.32	7.1
7439-96-5	MANGANESE, TOTAL	59.3			P	1	0.45	0.05	0.36
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.037	0.001	0.019
7440-02-0	NICKEL, TOTAL	10.2			P	1	3.6	0.05	0.36
7440-09-7	POTASSIUM, TOTAL	1220			P	1	89	9.19	45
7782-49-2	SELENIUM, TOTAL	0.35	J		MS	5	0.45	0.03	0.27
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.089	0.009	0.036
7440-23-5	SODIUM, TOTAL	48.1	J		P	1	89	1.49	45
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.18	0.004	0.036
7440-62-2	VANADIUM, TOTAL	29.6			MS	5	0.45	0.07	0.36
7440-66-6	ZINC, TOTAL	37.5			P	1	2.2	0.06	0.89

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66AH07

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 77.0 **Lab Sample ID:** SD5842-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10000			P	1	35	1.80	12
7440-36-0	ANTIMONY, TOTAL	0.34	J-	MSL	P	2	1.8	0.26	1.2
7440-38-2	ARSENIC, TOTAL	123			MS	5	0.58	0.13	0.46
7440-39-3	BARIUM, TOTAL	86.3			P	1	0.58	0.03	0.35
7440-41-7	BERYLLIUM, TOTAL	3.0			P	1	0.58	0.01	0.058
7440-43-9	CADMIUM, TOTAL	0.29	J		P	2	2.3	0.02	0.70
7440-70-2	CALCIUM, TOTAL	1740			P	1	12	1.23	9.3
7440-47-3	CHROMIUM, TOTAL	28.8			MS	5	0.58	0.07	0.23
7440-48-4	COBALT, TOTAL	17.2			MS	5	0.12	0.005	0.035
7440-50-8	COPPER, TOTAL	42.3			P	2	5.8	0.17	2.3
7439-89-6	IRON, TOTAL	51300			P	2	23	0.75	18
7439-92-1	LEAD, TOTAL	25.2	J-SD		P	2	1.2	0.24	0.93
7439-95-4	MAGNESIUM, TOTAL	279			P	2	23	0.84	18
7439-96-5	MANGANESE, TOTAL	98.3	L-MSL		P	2	1.2	0.13	0.93
7439-97-6	MERCURY, TOTAL	0.67	L-MSL		CV	1	0.040	0.001	0.020
7440-02-0	NICKEL, TOTAL	37.2			P	2	9.3	0.13	0.93
7440-09-7	POTASSIUM, TOTAL	396			P	1	120	11.94	58
7782-49-2	SELENIUM, TOTAL	6.1			MS	5	0.58	0.04	0.35
7440-22-4	SILVER, TOTAL	0.11	J		MS	5	0.12	0.01	0.046
7440-23-5	SODIUM, TOTAL	58.3	J		P	1	120	1.93	58
7440-28-0	THALLIUM, TOTAL	1.9			MS	5	0.23	0.006	0.046
7440-62-2	VANADIUM, TOTAL	86.9			MS	5	0.58	0.09	0.46
7440-66-6	ZINC, TOTAL	40.6	J-SD		P	1	2.9	0.07	1.2

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** 1S66AH08

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 49.0 **Lab Sample ID:** SD5842-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	11100			P	1	54	2.78	18
7440-36-0	ANTIMONY, TOTAL	0.90	U		P	1	1.4	0.20	0.90
7440-38-2	ARSENIC, TOTAL	49.4			MS	5	0.90	0.21	0.72
7440-39-3	BARIUM, TOTAL	201			P	1	0.90	0.05	0.54
7440-41-7	BERYLLIUM, TOTAL	2.4			P	1	0.90	0.02	0.090
7440-43-9	CADMIUM, TOTAL	0.42	J		P	1	1.8	0.01	0.54
7440-70-2	CALCIUM, TOTAL	5310			P	1	18	1.90	14
7440-47-3	CHROMIUM, TOTAL	20.6			MS	5	0.90	0.11	0.36
7440-48-4	COBALT, TOTAL	11.0			MS	5	0.18	0.007	0.054
7440-50-8	COPPER, TOTAL	40.2			P	1	4.5	0.13	1.8
7439-89-6	IRON, TOTAL	42500			P	1	18	0.58	14
7439-92-1	LEAD, TOTAL	39.3			P	1	0.90	0.18	0.72
7439-95-4	MAGNESIUM, TOTAL	922			P	1	18	0.65	14
7439-96-5	MANGANESE, TOTAL	150			P	1	0.90	0.10	0.72
7439-97-6	MERCURY, TOTAL	0.24			CV	1	0.065	0.002	0.033
7440-02-0	NICKEL, TOTAL	38.4			P	1	7.2	0.10	0.72
7440-09-7	POTASSIUM, TOTAL	1090			P	1	180	18.44	90
7782-49-2	SELENIUM, TOTAL	2.3			MS	5	0.90	0.06	0.54
7440-22-4	SILVER, TOTAL	0.1	J		MS	5	0.18	0.02	0.072
7440-23-5	SODIUM, TOTAL	384			P	1	180	2.99	90
7440-28-0	THALLIUM, TOTAL	1.4			MS	5	0.36	0.009	0.072
7440-62-2	VANADIUM, TOTAL	80.3			MS	5	0.90	0.13	0.72
7440-66-6	ZINC, TOTAL	53.8			P	1	4.5	0.11	1.8

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66AH09

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 71.8 **Lab Sample ID:** SD5842-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	5960			P	1	32	1.66	11
7440-36-0	ANTIMONY, TOTAL	0.37	J		P	2	1.7	0.24	1.1
7440-38-2	ARSENIC, TOTAL	37.7			MS	5	0.54	0.12	0.43
7440-39-3	BARIUM, TOTAL	108			P	1	0.54	0.03	0.32
7440-41-7	BERYLLIUM, TOTAL	1.7			P	1	0.54	0.010	0.054
7440-43-9	CADMIUM, TOTAL	0.22	J		P	2	2.1	0.02	0.64
7440-70-2	CALCIUM, TOTAL	1970			P	1	11	1.14	8.6
7440-47-3	CHROMIUM, TOTAL	16.1			MS	5	0.54	0.06	0.21
7440-48-4	COBALT, TOTAL	7.4			MS	5	0.11	0.004	0.032
7440-50-8	COPPER, TOTAL	38.6			P	2	5.4	0.15	2.1
7439-89-6	IRON, TOTAL	28600			P	2	21	0.69	17
7439-92-1	LEAD, TOTAL	36.9			P	2	1.1	0.22	0.86
7439-95-4	MAGNESIUM, TOTAL	418			P	2	21	0.78	17
7439-96-5	MANGANESE, TOTAL	455			P	2	1.1	0.12	0.86
7439-97-6	MERCURY, TOTAL	0.28			CV	1	0.044	0.002	0.022
7440-02-0	NICKEL, TOTAL	36.1			P	2	8.6	0.12	0.86
7440-09-7	POTASSIUM, TOTAL	539			P	1	110	11.03	54
7782-49-2	SELENIUM, TOTAL	8.1			MS	5	0.54	0.04	0.32
7440-22-4	SILVER, TOTAL	0.09	J		MS	5	0.11	0.01	0.043
7440-23-5	SODIUM, TOTAL	399			P	1	110	1.79	54
7440-28-0	THALLIUM, TOTAL	0.76			MS	5	0.21	0.005	0.043
7440-62-2	VANADIUM, TOTAL	150			MS	5	0.54	0.08	0.43
7440-66-6	ZINC, TOTAL	30.0			P	1	2.7	0.07	1.1

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-092110

Matrix: WATER | SDG Name: JU04-1

Percent Solids: 0.00 | Lab Sample ID: SD5842-010

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.5	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.04	J	B-CCBL	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	22.2	J	B-MBL	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.0	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.54	J	B-MBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	0.99	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	7.6	J	B-MBL	P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	0.46	J	B-MBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.31	J	B-CCBL	P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.0	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	1.0	J	B-MBL	P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB01-092110

Matrix: WATER | SDG Name: JU04-1

Percent Solids: 0.00 | Lab Sample ID: SD5842-011

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	LOQ	ADJUSTED MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.4	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.03	J	B CCBL	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	16.9	J	B-MBL	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.4	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.56	J	B-MBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	8.8	J	B-MBL	P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	80	U		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	1.1	J	B-MBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	0.72	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	0.97	J	B-MBL	P	1	25	0.50	10

Bottle ID: D

Comments:

I

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SS IS66S0420001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 84.8 **Lab Sample ID:** SD5842-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10900			P	1	24	1.23	7.9
7440-36-0	ANTIMONY, TOTAL	0.40	U		P	1	0.63	0.09	0.40
7440-38-2	ARSENIC, TOTAL	2.9			MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	60.2			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.46			P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.17	J		P	1	0.79	0.006	0.24
7440-70-2	CALCIUM, TOTAL	2260			P	1	7.9	0.84	6.3
7440-47-3	CHROMIUM, TOTAL	13.7			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	5.8			MS	5	0.079	0.003	0.024
7440-50-8	COPPER, TOTAL	11.0			P	1	2.0	0.06	0.79
7439-89-6	IRON, TOTAL	13900			P	1	7.9	0.25	6.3
7439-92-1	LEAD, TOTAL	18.6			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	883			P	1	7.9	0.29	6.3
7439-96-5	MANGANESE, TOTAL	217			P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.09			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	10.2			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	991			P	1	79	8.15	40
7782-49-2	SELENIUM, TOTAL	0.42			MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.079	0.008	0.032
7440-23-5	SODIUM, TOTAL	36.2	J		P	1	79	1.32	40
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	29.6			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	35.5			P	1	2.0	0.05	0.79

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SS42P0001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 90.1 **Lab Sample ID:** SD5842-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10800			P	1	24	1.26	8.1
7440-36-0	ANTIMONY, TOTAL	0.40	U		P	1	0.65	0.09	0.40
7440-38-2	ARSENIC, TOTAL	2.4			MS	5	0.33	0.08	0.26
7440-39-3	BARIUM, TOTAL	55.7			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.42			P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.03	J-B	COBL	P	1	0.81	0.006	0.24
7440-70-2	CALCIUM, TOTAL	814	J-FD		P	1	8.1	0.86	6.5
7440-47-3	CHROMIUM, TOTAL	12.0			MS	5	0.33	0.04	0.13
7440-48-4	COBALT, TOTAL	3.7	J-FD		MS	5	0.066	0.003	0.020
7440-50-8	COPPER, TOTAL	10.3			P	1	2.0	0.06	0.81
7439-89-6	IRON, TOTAL	14800			P	1	8.1	0.26	6.5
7439-92-1	LEAD, TOTAL	38.0	J-FD		P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	786			P	1	8.1	0.29	6.5
7439-96-5	MANGANESE, TOTAL	97.2	J-FD		P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.05	J-FD		CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	8.4			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	998			P	1	81	8.34	40
7782-49-2	SELENIUM, TOTAL	0.26	J		MS	5	0.33	0.02	0.20
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.066	0.007	0.026
7440-23-5	SODIUM, TOTAL	27.0	J		P	1	81	1.35	40
7440-28-0	THALLIUM, TOTAL	0.10	J		MS	5	0.13	0.003	0.026
7440-62-2	VANADIUM, TOTAL	27.0			MS	5	0.33	0.05	0.26
7440-66-6	ZINC, TOTAL	27.6			P	1	2.0	0.05	0.81

Bottle ID: B

Comments:

I

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SS IS66S0430001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 90.8 **Lab Sample ID:** SD5842-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10800			P	1	20	1.01	6.5
7440-36-0	ANTIMONY, TOTAL	0.32	U		P	1	0.52	0.07	0.32
7440-38-2	ARSENIC, TOTAL	2.8			MS	5	0.32	0.07	0.26
7440-39-3	BARIUM, TOTAL	33.6			P	1	0.32	0.02	0.20
7440-41-7	BERYLLIUM, TOTAL	0.33			P	1	0.32	0.006	0.032
7440-43-9	CADMIUM, TOTAL	0.07	J		P	1	0.65	0.005	0.20
7440-70-2	CALCIUM, TOTAL	669			P	1	6.5	0.69	5.2
7440-47-3	CHROMIUM, TOTAL	13.4			MS	5	0.32	0.04	0.13
7440-48-4	COBALT, TOTAL	4.0			MS	5	0.065	0.003	0.020
7440-50-8	COPPER, TOTAL	8.4			P	1	1.6	0.05	0.65
7439-89-6	IRON, TOTAL	13700			P	1	6.5	0.21	5.2
7439-92-1	LEAD, TOTAL	14.1			P	1	0.32	0.07	0.26
7439-95-4	MAGNESIUM, TOTAL	705			P	1	6.5	0.24	5.2
7439-96-5	MANGANESE, TOTAL	44.3			P	1	0.32	0.04	0.26
7439-97-6	MERCURY, TOTAL	0.05			CV	1	0.035	0.001	0.018
7440-02-0	NICKEL, TOTAL	8.1			P	1	2.6	0.04	0.26
7440-09-7	POTASSIUM, TOTAL	815			P	1	65	6.71	32
7782-49-2	SELENIUM, TOTAL	0.31	J		MS	5	0.32	0.02	0.20
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.065	0.007	0.026
7440-23-5	SODIUM, TOTAL	33.5	J		P	1	65	1.09	32
7440-28-0	THALLIUM, TOTAL	0.13	J		MS	5	0.13	0.003	0.026
7440-62-2	VANADIUM, TOTAL	28.2			MS	5	0.32	0.05	0.26
7440-66-6	ZINC, TOTAL	24.0			P	1	1.6	0.04	0.65

Bottle ID: B

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SS440001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 87.4 **Lab Sample ID:** SD5842-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10700			P	1	21	1.11	7.1
7440-36-0	ANTIMONY, TOTAL	0.36	U		P	1	0.57	0.08	0.36
7440-38-2	ARSENIC, TOTAL	5.6			MS	5	0.36	0.08	0.28
7440-39-3	BARIUM, TOTAL	58.5			P	1	0.36	0.02	0.21
7440-41-7	BERYLLIUM, TOTAL	0.47			P	1	0.36	0.006	0.036
7440-43-9	CADMIUM, TOTAL	0.15	J		P	1	0.71	0.006	0.21
7440-70-2	CALCIUM, TOTAL	2280			P	1	7.1	0.76	5.7
7440-47-3	CHROMIUM, TOTAL	14.6			MS	5	0.36	0.04	0.14
7440-48-4	COBALT, TOTAL	6.3			MS	5	0.071	0.003	0.021
7440-50-8	COPPER, TOTAL	12.0			P	1	1.8	0.05	0.71
7439-89-6	IRON, TOTAL	14600			P	1	7.1	0.23	5.7
7439-92-1	LEAD, TOTAL	17.0			P	1	0.36	0.07	0.28
7439-95-4	MAGNESIUM, TOTAL	969			P	1	7.1	0.26	5.7
7439-96-5	MANGANESE, TOTAL	193			P	1	0.36	0.04	0.28
7439-97-6	MERCURY, TOTAL	0.07			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	8.6			P	1	2.8	0.04	0.28
7440-09-7	POTASSIUM, TOTAL	928			P	1	71	7.36	36
7782-49-2	SELENIUM, TOTAL	0.41			MS	5	0.36	0.03	0.21
7440-22-4	SILVER, TOTAL	0.06	J		MS	5	0.071	0.007	0.028
7440-23-5	SODIUM, TOTAL	33.8	J		P	1	71	1.19	36
7440-28-0	THALLIUM, TOTAL	0.11	J		MS	5	0.14	0.004	0.028
7440-62-2	VANADIUM, TOTAL	26.4			MS	5	0.36	0.05	0.28
7440-66-6	ZINC, TOTAL	41.9			P	1	1.8	0.05	0.71

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SS0450001

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 88.4 **Lab Sample ID:** SD5842-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	13600			P	1	25	1.30	8.4
7440-36-0	ANTIMONY, TOTAL	0.42	U		P	1	0.67	0.09	0.42
7440-38-2	ARSENIC, TOTAL	2.6			MS	5	0.42	0.10	0.34
7440-39-3	BARIUM, TOTAL	64.0			P	1	0.42	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.49			P	1	0.42	0.008	0.042
7440-43-9	CADMIUM, TOTAL	0.23	J		P	1	0.84	0.007	0.25
7440-70-2	CALCIUM, TOTAL	2090			P	1	8.4	0.89	6.7
7440-47-3	CHROMIUM, TOTAL	18.6			MS	5	0.42	0.05	0.17
7440-48-4	COBALT, TOTAL	5.7			MS	5	0.084	0.003	0.025
7440-50-8	COPPER, TOTAL	12.1			P	1	2.1	0.06	0.84
7439-89-6	IRON, TOTAL	17700			P	1	8.4	0.27	6.7
7439-92-1	LEAD, TOTAL	13.7			P	1	0.42	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	1080			P	1	8.4	0.30	6.7
7439-96-5	MANGANESE, TOTAL	388			P	1	0.42	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.08			CV	1	0.035	0.001	0.018
7440-02-0	NICKEL, TOTAL	10.5			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	1120			P	1	84	8.64	42
7782-49-2	SELENIUM, TOTAL	0.40	J		MS	5	0.42	0.03	0.25
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.084	0.008	0.034
7440-23-5	SODIUM, TOTAL	32.8	J		P	1	84	1.40	42
7440-28-0	THALLIUM, TOTAL	0.15	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	31.7			MS	5	0.42	0.06	0.34
7440-66-6	ZINC, TOTAL	38.7			P	1	2.1	0.05	0.84

Bottle ID: B

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66AH04
Matrix: SOIL
SDG Name: JU04-1
Percent Solids: 86.1
Lab Sample ID: SD5842-020

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	6240			P	1	32	1.67	11
7440-36-0	ANTIMONY, TOTAL	1.1	U		P	2	1.7	0.24	1.1
7440-38-2	ARSENIC, TOTAL	96.5			MS	5	0.54	0.12	0.43
7440-39-3	BARIUM, TOTAL	68.7			P	1	0.54	0.03	0.32
7440-41-7	BERYLLIUM, TOTAL	1.9			P	1	0.54	0.010	0.054
7440-43-9	CADMIUM, TOTAL	0.45	J		P	2	2.2	0.02	0.64
7440-70-2	CALCIUM, TOTAL	3300			P	1	11	1.14	8.6
7440-47-3	CHROMIUM, TOTAL	19.9			MS	5	0.54	0.06	0.22
7440-48-4	COBALT, TOTAL	17.0			MS	5	0.11	0.004	0.032
7440-50-8	COPPER, TOTAL	36.0			P	2	5.4	0.15	2.2
7439-89-6	IRON, TOTAL	42900			P	2	22	0.69	17
7439-92-1	LEAD, TOTAL	17.4			P	2	1.1	0.22	0.86
7439-95-4	MAGNESIUM, TOTAL	366			P	2	22	0.78	17
7439-96-5	MANGANESE, TOTAL	130			P	2	1.1	0.12	0.86
7439-97-6	MERCURY, TOTAL	0.32			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	35.9			P	2	8.6	0.12	0.86
7440-09-7	POTASSIUM, TOTAL	391			P	1	110	11.08	54
7782-49-2	SELENIUM, TOTAL	1.8			MS	5	0.54	0.04	0.32
7440-22-4	SILVER, TOTAL	0.08	J		MS	5	0.11	0.01	0.043
7440-23-5	SODIUM, TOTAL	57.2	J		P	1	110	1.79	54
7440-28-0	THALLIUM, TOTAL	1.5			MS	5	0.22	0.005	0.043
7440-62-2	VANADIUM, TOTAL	86.6			MS	5	0.54	0.08	0.43
7440-66-6	ZINC, TOTAL	53.8			P	1	2.7	0.07	1.1

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66AH04P

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 79.3 **Lab Sample ID:** SD5842-021

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	5970			P	1	37	1.92	12
7440-36-0	ANTIMONY, TOTAL	1.2	U		P	2	2.0	0.28	1.2
7440-38-2	ARSENIC, TOTAL	86.9			MS	5	0.62	0.14	0.49
7440-39-3	BARIUM, TOTAL	69.6			P	2	1.2	0.06	0.74
7440-41-7	BERYLLIUM, TOTAL	1.8			P	1	0.62	0.01	0.062
7440-43-9	CADMIUM, TOTAL	0.38	J		P	2	2.5	0.02	0.74
7440-70-2	CALCIUM, TOTAL	3770			P	1	12	1.31	9.9
7440-47-3	CHROMIUM, TOTAL	20.3			MS	5	0.62	0.07	0.25
7440-48-4	COBALT, TOTAL	17.2			MS	5	0.12	0.005	0.037
7440-50-8	COPPER, TOTAL	34.8			P	2	6.2	0.18	2.5
7439-89-6	IRON, TOTAL	45000			P	2	25	0.80	20
7439-92-1	LEAD, TOTAL	17.1			P	2	1.2	0.25	0.99
7439-95-4	MAGNESIUM, TOTAL	389			P	2	25	0.90	20
7439-96-5	MANGANESE, TOTAL	139			P	2	1.2	0.14	0.99
7439-97-6	MERCURY, TOTAL	0.29			CV	1	0.041	0.001	0.021
7440-02-0	NICKEL, TOTAL	35.8			P	2	9.9	0.13	0.99
7440-09-7	POTASSIUM, TOTAL	417			P	1	120	12.74	62
7782-49-2	SELENIUM, TOTAL	1.6			MS	5	0.62	0.04	0.37
7440-22-4	SILVER, TOTAL	0.08	J		MS	5	0.12	0.01	0.049
7440-23-5	SODIUM, TOTAL	66.4	J		P	1	120	2.06	62
7440-28-0	THALLIUM, TOTAL	1.2			MS	5	0.25	0.006	0.049
7440-62-2	VANADIUM, TOTAL	80.8			MS	5	0.62	0.09	0.49
7440-66-6	ZINC, TOTAL	55.1			P	1	3.1	0.08	1.2

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66AH05

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 72.4 **Lab Sample ID:** SD5842-022

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	8420			P	1	37	1.91	12
7440-36-0	ANTIMONY, TOTAL	1.2	U		P	2	2.0	0.28	1.2
7440-38-2	ARSENIC, TOTAL	24.9			MS	5	0.62	0.14	0.49
7440-39-3	BARIUM, TOTAL	120			P	1	0.62	0.03	0.37
7440-41-7	BERYLLIUM, TOTAL	1.4			P	1	0.62	0.01	0.062
7440-43-9	CADMIUM, TOTAL	0.49	J		P	2	2.5	0.02	0.74
7440-70-2	CALCIUM, TOTAL	4540			P	1	12	1.31	9.9
7440-47-3	CHROMIUM, TOTAL	19.8			MS	5	0.62	0.07	0.25
7440-48-4	COBALT, TOTAL	9.4			MS	5	0.12	0.005	0.037
7440-50-8	COPPER, TOTAL	38.8			P	2	6.2	0.18	2.5
7439-89-6	IRON, TOTAL	35100			P	1	12	0.40	9.9
7439-92-1	LEAD, TOTAL	49.0			P	2	1.2	0.25	0.99
7439-95-4	MAGNESIUM, TOTAL	960			P	2	25	0.90	20
7439-96-5	MANGANESE, TOTAL	378			P	2	1.2	0.14	0.99
7439-97-6	MERCURY, TOTAL	0.23			CV	1	0.042	0.001	0.021
7440-02-0	NICKEL, TOTAL	36.6			P	2	9.9	0.13	0.99
7440-09-7	POTASSIUM, TOTAL	615			P	1	120	12.71	62
7782-49-2	SELENIUM, TOTAL	3.0			MS	5	0.62	0.04	0.37
7440-22-4	SILVER, TOTAL	0.14			MS	5	0.12	0.01	0.049
7440-23-5	SODIUM, TOTAL	120	J		P	1	120	2.06	62
7440-28-0	THALLIUM, TOTAL	0.99			MS	5	0.25	0.006	0.049
7440-62-2	VANADIUM, TOTAL	76.4			MS	5	0.62	0.09	0.49
7440-66-6	ZINC, TOTAL	59.0			P	1	3.1	0.08	1.2

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** 1S66AH06

Matrix: SOIL **SDG Name:** JU04-1

Percent Solids: 70.8 **Lab Sample ID:** SD5842-023

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	6890			P	1	39	2.01	13
7440-36-0	ANTIMONY, TOTAL	0.65	U		P	1	1.0	0.15	0.65
7440-38-2	ARSENIC, TOTAL	49.0			MS	5	0.65	0.15	0.52
7440-39-3	BARIUM, TOTAL	108			P	1	0.65	0.03	0.39
7440-41-7	BERYLLIUM, TOTAL	1.4			P	1	0.65	0.01	0.065
7440-43-9	CADMIUM, TOTAL	0.21	J		P	1	1.3	0.01	0.39
7440-70-2	CALCIUM, TOTAL	1190			P	1	13	1.37	10
7440-47-3	CHROMIUM, TOTAL	14.8			MS	5	0.65	0.08	0.26
7440-48-4	COBALT, TOTAL	10.4			MS	5	0.13	0.005	0.039
7440-50-8	COPPER, TOTAL	43.6			P	1	3.2	0.09	1.3
7439-89-6	IRON, TOTAL	23000			P	1	13	0.42	10
7439-92-1	LEAD, TOTAL	26.0			P	1	0.65	0.13	0.52
7439-95-4	MAGNESIUM, TOTAL	356			P	1	13	0.47	10
7439-96-5	MANGANESE, TOTAL	232			P	1	0.65	0.08	0.52
7439-97-6	MERCURY, TOTAL	0.66			CV	1	0.045	0.002	0.023
7440-02-0	NICKEL, TOTAL	23.7			P	1	5.2	0.07	0.52
7440-09-7	POTASSIUM, TOTAL	626			P	1	130	13.35	65
7782-49-2	SELENIUM, TOTAL	3.1			MS	5	0.65	0.05	0.39
7440-22-4	SILVER, TOTAL	0.08	J		MS	5	0.13	0.01	0.052
7440-23-5	SODIUM, TOTAL	112	J		P	1	130	2.16	65
7440-28-0	THALLIUM, TOTAL	0.70			MS	5	0.26	0.006	0.052
7440-62-2	VANADIUM, TOTAL	50.5			MS	5	0.65	0.10	0.52
7440-66-6	ZINC, TOTAL	26.5			P	1	3.2	0.08	1.3

Bottle ID: A

Comments:

Katahdin Analytical Services

Client Sample ID: IS66SS380001-01

HPLC

Lot-Sample #...: G0I240614-004	Work Order #...: L7G9P1AD	Matrix.....:	SOLID
Date Sampled...: 09/21/10	Date Received..: 09/24/10		
Prep Date.....: 10/04/10	Analysis Date..: 10/06/10		
Prep Batch #...: 0277222			
Dilution Factor: 1			
% Moisture.....: 2.7	Method.....: SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP380001-01 SS

HPLC

Lot-Sample #...:	G0I240614-004	Work Order #...:	L7G9P2AD	Matrix.....:	SOLID
Date Sampled...:	09/21/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1.01				
% Moisture.....:	2.7	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 J EXCLUDE RE	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SB381213-01

HPLC

Lot-Sample #...:	G0I240614-005	Work Order #...:	L7G9Q1AD	Matrix.....: SOLID
Date Sampled...:	09/21/10	Date Received..:	09/24/10	
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10	
Prep Batch #...:	0277222			
Dilution Factor:	0.98			
% Moisture.....:	13	Method.....:	SW846 8330 (Modif	

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

SB

Client Sample ID: IS66DP381213-01

HPLC

Lot-Sample #...:	G0I240614-005	Work Order #...:	L7G9Q2AD	Matrix.....:	SOLID
Date Sampled...:	09/21/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Exclude-RE

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS300001

HPLC

Lot-Sample #...: G0I240614-006	Work Order #...: L7G9R1AD		Matrix.....: SOLID	
Date Sampled...: 09/22/10	Date Received..: 09/24/10			
Prep Date.....: 10/04/10	Analysis Date..: 10/06/10			
Prep Batch #...: 0277222				
Dilution Factor: 1				
% Moisture.....: 8.0	Method.....: SW846 8330 (Modif			

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP300001 SS

HPLC

Lot-Sample #...:	G0I240614-006	Work Order #...:	L7G9R2AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1.01				
% Moisture.....:	8.0	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66DP300910 SB

HPLC

Lot-Sample #...:	G0I240614-007	Work Order #...:	L7G9T1AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	15	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: SB IS66DP300910

HPLC

Lot-Sample #...:	G0I240614-007	Work Order #...:	L7G9T2AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.96				
% Moisture.....:	15	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.038 U	0.24	mg/kg	0.019

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66S0420001 SS

HPLC

Lot-Sample #...:	G0I240614-008	Work Order #...:	L7G9V1AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	13	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

SS

Client Sample ID: IS66S0420001

HPLC

Lot-Sample #...:	G0I240614-008	Work Order #...:	L7G9V2AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Exclude-RE

Katahdin Analytical Services

SS

Client Sample ID: IS66S042P0001

HPLC

Lot-Sample #...:	G0I240614-009	Work Order #...:	L7G9W1AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.97				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.019

Katahdin Analytical Services

SS

Client Sample ID: IS66S042P0001

HPLC

Lot-Sample #...:	G0I240614-009	Work Order #...:	L7G9W2AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.97				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.019

Exclude-RE

Katahdin Analytical Services

Client Sample ID: IS66S0430001 SS

HPLC

Lot-Sample #...:	G0I240614-010	Work Order #...:	L7G9X1AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	9.1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66S0430001 SS

HPLC

Lot-Sample #...:	G0I240614-010	Work Order #...:	L7G9X2AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1				
% Moisture.....:	9.1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Exclude-RE

Katahdin Analytical Services

SS

Client Sample ID: IS66S0440001

HPLC

Lot-Sample #...:	G0I240614-011	Work Order #...:	L7G901AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66S0440001 SS

HPLC

Lot-Sample #...:	G0I240614-011	Work Order #...:	L7G902AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.97				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.019

Exclude-RE

Katahdin Analytical Services

SS

Client Sample ID: IS66S0450001

HPLC

Lot-Sample #...:	G0I240614-012	Work Order #...:	L7G911AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	12	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SS0450001

HPLC

Lot-Sample #...:	G0I240614-012	Work Order #...:	L7G912AD	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.96				
% Moisture.....:	12	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.038 U	0.24	mg/kg	0.019

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66FB092210

Dissolved HPLC

Lot-Sample #...:	G0I240614-001	Work Order #...:	L7G9L2AC	Matrix.....:	WATER
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	10/13/10	Analysis Date..:	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66EB01-092110

Dissolved HPLC

Lot-Sample #...:	G0I240614-003	**Work Order #...:**	L7G9N2AC	**Matrix.....:**	WATER
Date Sampled...:	09/21/10	**Date Received..:**	09/24/10		
Prep Date.....:	10/13/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**6.0 U**	**20**	**ug/L**	**2.4**

Katahdin Analytical Services

Client Sample ID: IS66EB092210

Dissolved HPLC

Lot-Sample #...: G0I240614-002 **Work Order #...:** L7G9M2AC **Matrix.....:** WATER
Date Sampled...: 09/22/10 **Date Received..:** 09/24/10
Prep Date.....: 10/13/10 **Analysis Date..:** 10/16/10
Prep Batch #...: 0286457
Dilution Factor: 1 **Method.....:** SW846 8330 (Modif

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**6.0 U**	**20**	**ug/L**	**2.4**

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-1RA
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 95.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	UJ-SSL	8.1	ug/Kgdrywt	1	17	16.	5.8	8.1
Aroclor-1221	U	8.1	ug/Kgdrywt	1	17	16.	7.6	8.1
Aroclor-1232	U	9.6	ug/Kgdrywt	1	17	16.	8.9	9.6
Aroclor-1242	U	8.1	ug/Kgdrywt	1	17	16.	5.6	8.1
Aroclor-1248	U	8.1	ug/Kgdrywt	1	17	16.	5.8	8.1
Aroclor-1254	U	8.1	ug/Kgdrywt	1	17	16.	4.5	8.1
Aroclor-1260	U	8.1	ug/Kgdrywt	1	17	16.	5.8	8.1
Tetrachloro-M-Xylene	*	47.6	%					
Decachlorobiphenyl		71.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.9	ug/Kgdrywt	1	17	20.	7.0	9.9
Aroclor-1221	U	9.9	ug/Kgdrywt	1	17	20.	9.2	9.9
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	9.9	ug/Kgdrywt	1	17	20.	6.7	9.9
Aroclor-1248	U	9.9	ug/Kgdrywt	1	17	20.	7.1	9.9
Aroclor-1254	U	9.9	ug/Kgdrywt	1	17	20.	5.5	9.9
Aroclor-1260	U	9.9	ug/Kgdrywt	1	17	20.	7.0	9.9
Tetrachloro-M-Xylene		60.2	%					
Decachlorobiphenyl		77.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82511

Analysis Date: 27-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.48	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.48	0.086	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.48	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.48	0.080	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.48	0.16	0.24
Tetrachloro-M-Xylene		92.1	%					
Decachlorobiphenyl		70.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82511

Analysis Date: 27-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.27	ug/L	1	.5	0.55	0.16	0.27
Aroclor-1221	U	0.27	ug/L	1	.5	0.55	0.22	0.27
Aroclor-1232	U	0.27	ug/L	1	.5	0.55	0.098	0.27
Aroclor-1242	U	0.27	ug/L	1	.5	0.55	0.20	0.27
Aroclor-1248	U	0.27	ug/L	1	.5	0.55	0.22	0.27
Aroclor-1254	U	0.27	ug/L	1	.5	0.55	0.090	0.27
Aroclor-1260	U	0.27	ug/L	1	.5	0.55	0.19	0.27
Tetrachloro-M-Xylene		79.4	%					
Decachlorobiphenyl		49.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.8	ug/Kgdrywt	1	17	18.	6.2	8.8
Aroclor-1221	U	8.8	ug/Kgdrywt	1	17	18.	8.2	8.8
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.7	10.
Aroclor-1242	U	8.8	ug/Kgdrywt	1	17	18.	6.0	8.8
Aroclor-1248	U	8.8	ug/Kgdrywt	1	17	18.	6.4	8.8
Aroclor-1254	U	8.8	ug/Kgdrywt	1	17	18.	4.9	8.8
Aroclor-1260	U	8.8	ug/Kgdrywt	1	17	18.	6.2	8.8
Tetrachloro-M-Xylene		62.5	%					
Decachlorobiphenyl		79.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Aroclor-1221	U	9.1	ug/Kgdrywt	1	17	18.	8.4	9.1
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.1	ug/Kgdrywt	1	17	18.	6.2	9.1
Aroclor-1248	U	9.1	ug/Kgdrywt	1	17	18.	6.5	9.1
Aroclor-1254	U	9.1	ug/Kgdrywt	1	17	18.	5.0	9.1
Aroclor-1260	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Tetrachloro-M-Xylene		69.9	%					
Decachlorobiphenyl		89.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: 1S66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82511

Analysis Date: 27-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.29	ug/L	1	.5	0.59	0.18	0.29
Aroclor-1221	U	0.29	ug/L	1	.5	0.59	0.24	0.29
Aroclor-1232	U	0.29	ug/L	1	.5	0.59	0.10	0.29
Aroclor-1242	U	0.29	ug/L	1	.5	0.59	0.21	0.29
Aroclor-1248	U	0.29	ug/L	1	.5	0.59	0.24	0.29
Aroclor-1254	U	0.29	ug/L	1	.5	0.59	0.096	0.29
Aroclor-1260	U	0.29	ug/L	1	.5	0.59	0.20	0.29
Tetrachloro-M-Xylene		96.6	%					
Decachlorobiphenyl		63.0	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.7	ug/Kgdrywt	1	17	19.	6.9	9.7
Aroclor-1221	U	9.7	ug/Kgdrywt	1	17	19.	9.0	9.7
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	11.	11.
Aroclor-1242	U	9.7	ug/Kgdrywt	1	17	19.	6.6	9.7
Aroclor-1248	U	9.7	ug/Kgdrywt	1	17	19.	7.0	9.7
Aroclor-1254	U	9.7	ug/Kgdrywt	1	17	19.	5.4	9.7
Aroclor-1260	U	9.7	ug/Kgdrywt	1	17	19.	6.9	9.7
Tetrachloro-M-Xylene		66.7	%					
Decachlorobiphenyl		76.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14RA
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Aroclor-1221	U	9.1	ug/Kgdrywt	1	17	18.	8.4	9.1
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.1	ug/Kgdrywt	1	17	18.	6.2	9.1
Aroclor-1248	U	9.1	ug/Kgdrywt	1	17	18.	6.5	9.1
Aroclor-1254	U	9.1	ug/Kgdrywt	1	17	18.	5.0	9.1
Aroclor-1260	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Tetrachloro-M-Xylene		58.4	%					
Decachlorobiphenyl		80.9	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.3	ug/Kgdrywt	1	17	18.	6.5	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	18.	8.6	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	18.	6.3	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	18.	6.6	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	18.	5.1	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	18.	6.5	9.3
Tetrachloro-M-Xylene		64.5	%					
Decachlorobiphenyl		74.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Aroclor-1221	U	9.1	ug/Kgdrywt	1	17	18.	8.4	9.1
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	9.9	11.
Aroclor-1242	U	9.1	ug/Kgdrywt	1	17	18.	6.2	9.1
Aroclor-1248	U	9.1	ug/Kgdrywt	1	17	18.	6.5	9.1
Aroclor-1254	U	9.1	ug/Kgdrywt	1	17	18.	5.0	9.1
Aroclor-1260	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Tetrachloro-M-Xylene		64.3	%					
Decachlorobiphenyl		68.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82587

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.7	ug/Kgdrywt	1	17	17.	6.1	8.7
Aroclor-1221	U	8.7	ug/Kgdrywt	1	17	17.	8.0	8.7
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.5	10.
Aroclor-1242	U	8.7	ug/Kgdrywt	1	17	17.	5.9	8.7
Aroclor-1248	U	8.7	ug/Kgdrywt	1	17	17.	6.2	8.7
Aroclor-1254	U	8.7	ug/Kgdrywt	1	17	17.	4.8	8.7
Aroclor-1260	U	8.7	ug/Kgdrywt	1	17	17.	6.1	8.7
Tetrachloro-M-Xylene	*	54.4	%					
Decachlorobiphenyl		66.5	%					

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Client Sample ID: IS66SSP380001-01

HPLC

Lot-Sample #...:	G01240614-004	Work Order #...:	L7G9P1AC	Matrix.....:	SOLID
Date Sampled...:	09/21/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/05/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.98				
% Moisture.....:	2.7	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.70 J	5.0	ug/kg	0.26

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

SB

Client Sample ID: IS66~~PP~~381213-01

EPLC

Lot-Sample #...:	G0I240614-005	Work Order #...:	L7G9Q1AC	Matrix.....:	SOLID
Date Sampled...:	09/21/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/05/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.94				
% Moisture.....:	13	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	1.1 J	5.4	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

SS

Client Sample ID: IS66DP300001

HPLC

Lot-Sample #...:	G0I240614-006	Work Order #...:	L7G9R1AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/05/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.98				
% Moisture.....:	8.0	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	66	5.3	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP300910 SB

HPLC

Lot-Sample #...:	G0I240614-007	Work Order #...:	L7G9T1AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	9.77				
% Moisture.....:	15	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	230	57	ug/kg	3.0

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SS0420001

HPLC

Lot-Sample #...:	G0I240614-008	Work Order #...:	L7G9V1AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.98 J	5.7	ug/kg	0.30

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66SS042P0001

HPLC

Lot-Sample #...:	G0I240614-009	Work Order #...:	L7G9W1AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.98				
% Moisture.....:	11	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.77 J	5.5	ug/kg	0.29

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66SS430001

HPLC

Lot-Sample #...:	G0I240614-010	Work Order #...:	L7G9X1AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.99				
% Moisture.....:	9.1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.78 J	5.4	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

SS

Client Sample ID: IS6620440001

HPLC

Lot-Sample #...:	G0I240614-011	Work Order #...:	L7G901AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.96				
% Moisture.....:	11	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	2.8 J	5.4	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66SS0450001

HPLC

Lot-Sample #...:	G0I240614-012	Work Order #...:	L7G911AC	Matrix.....:	SOLID
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.96				
% Moisture.....:	12	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	2.3 J	5.5	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66FB092210

Dissolved HPLC

Lot-Sample #...:	G0I240614-001	Work Order #...:	L7G9L1AA	Matrix.....:	WATER
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/29/10	Analysis Date..:	10/02/10		
Prep Batch #...:	0271393				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB092210

Dissolved HPLC

Lot-Sample #...:	G0I240614-002	Work Order #...:	L7G9M1AA	Matrix.....:	WATER
Date Sampled...:	09/22/10	Date Received..:	09/24/10		
Prep Date.....:	09/29/10	Analysis Date..:	10/02/10		
Prep Batch #...:	0271393				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB01-092110

Dissolved HPLC

Lot-Sample #...:	G0I240614-003	Work Order #...:	L7G9N1AA	Matrix.....:	WATER
Date Sampled...:	09/21/10	Date Received..:	09/24/10		
Prep Date.....:	09/29/10	Analysis Date..:	10/02/10		
Prep Batch #...:	0271393				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-1
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 30-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	0.81	ug/Kgdrywt	1	1.7	1.6	0.32	0.81
gamma-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.26	0.81
Heptachlor	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.28	0.81
Aldrin	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.27	0.81
beta-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.32	0.81
delta-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.31	0.81
Heptachlor Epoxide	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.21	0.81
Endosulfan I	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.23	0.81
Gamma-Chlordane	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.22	0.81
Alpha-Chlordane	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.20	0.81
4,4'-DDE	J	0.42	ug/Kgdrywt	1	3.3	3.2	0.18	1.6
Dieldrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.21	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.81	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.19	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.32	1.6
4,4'-DDT	J	0.51	ug/Kgdrywt	1	3.3	3.2	0.30	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.47	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.56	1.6
Methoxychlor	U	8.1	ug/Kgdrywt	1	17	16.	0.48	8.1
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.38	1.6
Toxaphene	U	15.	ug/Kgdrywt	1	33	32.	6.7	15.
Tetrachloro-M-Xylene	*	52.0	%					
Decachlorobiphenyl		65.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-1RE
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.85	ug/Kgdrywt	1	1.7	1.7	0.34	0.85
gamma-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.27	0.85
Heptachlor	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.29	0.85
Aldrin	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.28	0.85
beta-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.33	0.85
delta-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.32	0.85
Heptachlor Epoxide	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.22	0.85
Endosulfan I	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.24	0.85
Gamma-Chlordane	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.23	0.85
Alpha-Chlordane	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.21	0.85
4,4'-DDE	J J-SSL	0.22	ug/Kgdrywt	1	3.3	3.3	0.19	1.6
Dieldrin	U UJ-SSL	1.6	ug/Kgdrywt	1	3.3	3.3	0.22	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.85	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.20	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.34	1.6
4,4'-DDT	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.31	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.49	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.58	1.6
Methoxychlor	U	8.5	ug/Kgdrywt	1	17	17.	0.50	8.5
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.40	1.6
Toxaphene	U	16.	ug/Kgdrywt	1	33	33.	7.0	16.
Tetrachloro-M-Xylene	*	46.1	%					
Decachlorobiphenyl		63.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.40	0.99
gamma-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.31	0.99
Heptachlor	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.34	0.99
Aldrin	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.32	0.99
beta-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.38	0.99
delta-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.37	0.99
Heptachlor Epoxide	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.26	0.99
Endosulfan I	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.28	0.99
Gamma-Chlordane	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.27	0.99
Alpha-Chlordane	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.24	0.99
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.26	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.99	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.40	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.57	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.9	ug/Kgdrywt	1	17	20.	0.58	9.9
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.1	18.
Tetrachloro-M-Xylene	*	61.0	%					
Decachlorobiphenyl		73.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2RE
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.30	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.25	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.96	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.35	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.55	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.65	1.8
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.56	9.6
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.45	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	58.1	%					
Decachlorobiphenyl		76.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82510

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	.024	ug/L	1	.05	0.048	0.0067	0.024
Gamma-BHC	U	0.024	ug/L	1	.05	0.048	0.0070	0.024
Heptachlor	U	0.024	ug/L	1	.05	0.048	0.0078	0.024
Aldrin	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
beta-BHC	U	0.024	ug/L	1	.05	0.048	0.0061	0.024
delta-BHC	U	0.024	ug/L	1	.05	0.048	0.013	0.024
Heptachlor Epoxide	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
Endosulfan I	U	0.024	ug/L	1	.05	0.048	0.0062	0.024
Gamma-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0058	0.024
Alpha-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0074	0.024
4,4'-DDE	U	0.048	ug/L	1	.1	0.097	0.0048	0.048
Dieldrin	U	0.048	ug/L	1	.1	0.097	0.0063	0.048
Endrin	U	0.048	ug/L	1	.1	0.097	0.0082	0.048
4,4'-DDD	U	0.048	ug/L	1	.1	0.097	0.0087	0.048
Endosulfan II	U	0.048	ug/L	1	.1	0.097	0.0055	0.048
4,4'-DDT	U	0.048	ug/L	1	.1	0.097	0.0086	0.048
Endrin Aldehyde	U	0.048	ug/L	1	.1	0.097	0.0060	0.048
Endosulfan Sulfate	U	0.048	ug/L	1	.1	0.097	0.0065	0.048
Methoxychlor	U	0.24	ug/L	1	.5	0.48	0.0082	0.24
Endrin Ketone	U	0.048	ug/L	1	.1	0.097	0.0076	0.048
Toxaphene	U	0.48	ug/L	1	1	0.97	0.16	0.48
Tetrachloro-M-Xylene		84.8	%					
Decachlorobiphenyl		70.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82510

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.027	ug/L	1	.05	0.055	0.0076	0.027
Gamma-BHC	U	0.027	ug/L	1	.05	0.055	0.0079	0.027
Heptachlor	U	0.027	ug/L	1	.05	0.055	0.0088	0.027
Aldrin	U	0.027	ug/L	1	.05	0.055	0.0081	0.027
beta-BHC	U	0.027	ug/L	1	.05	0.055	0.0069	0.027
delta-BHC	U	0.027	ug/L	1	.05	0.055	0.014	0.027
Heptachlor Epoxide	U	0.027	ug/L	1	.05	0.055	0.0081	0.027
Endosulfan I	U	0.027	ug/L	1	.05	0.055	0.0070	0.027
Gamma-Chlordane	U	0.027	ug/L	1	.05	0.055	0.0066	0.027
Alpha-Chlordane	U	0.027	ug/L	1	.05	0.055	0.0084	0.027
4,4'-DDE	U	0.055	ug/L	1	.1	0.11	0.0054	0.055
Dieldrin	U	0.055	ug/L	1	.1	0.11	0.0071	0.055
Endrin	U	0.055	ug/L	1	.1	0.11	0.0092	0.055
4,4'-DDD	U	0.055	ug/L	1	.1	0.11	0.0099	0.055
Endosulfan II	U	0.055	ug/L	1	.1	0.11	0.0063	0.055
4,4'-DDT	U	0.055	ug/L	1	.1	0.11	0.0098	0.055
Endrin Aldehyde	U	0.055	ug/L	1	.1	0.11	0.0068	0.055
Endosulfan Sulfate	U	0.055	ug/L	1	.1	0.11	0.0074	0.055
Methoxychlor	U	0.27	ug/L	1	.5	0.55	0.0092	0.27
Endrin Ketone	U	0.055	ug/L	1	.1	0.11	0.0086	0.055
Toxaphene	U	0.55	ug/L	1	1	1.1	0.19	0.55
Tetrachloro-M-Xylene		70.5	%					
Decachlorobiphenyl		45.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 30-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude PE	0.88	ug/Kgdrywt	1	1.7	1.8	0.35	0.88
gamma-BHC	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.28	0.88
Heptachlor	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.30	0.88
Aldrin	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.29	0.88
beta-BHC	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.34	0.88
delta-BHC	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.33	0.88
Heptachlor Epoxide	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.23	0.88
Endosulfan I	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.25	0.88
Gamma-Chlordane	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.24	0.88
Alpha-Chlordane	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.22	0.88
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.88	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	J	1.1	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.51	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.60	1.7
Methoxychlor	U	8.8	ug/Kgdrywt	1	17	18.	0.52	8.8
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	34.	7.3	17.
Tetrachloro-M-Xylene	*	64.0	%					
Decachlorobiphenyl		76.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5RE
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.88	ug/Kgdrywt	1	1.7	1.8	0.35	0.88
gamma-BHC	J J-SSL	0.44	ug/Kgdrywt	1	1.7	1.8	0.28	0.88
Heptachlor	U UJ-SSL	0.88	ug/Kgdrywt	1	1.7	1.8	0.30	0.88
Aldrin	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.29	0.88
beta-BHC	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.34	0.88
delta-BHC	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.33	0.88
Heptachlor Epoxide	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.23	0.88
Endosulfan I	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.25	0.88
Gamma-Chlordane	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.24	0.88
Alpha-Chlordane	U	0.88	ug/Kgdrywt	1	1.7	1.8	0.22	0.88
4,4'-DDE	J J-SSL	0.26	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Dieldrin	U UJ-SSL	1.7	ug/Kgdrywt	1	3.3	3.4	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.88	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	J J-SSL	0.87	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U UJ-SSL	1.7	ug/Kgdrywt	1	3.3	3.4	0.51	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.60	1.7
Methoxychlor	U	8.8	ug/Kgdrywt	1	17	18.	0.52	8.8
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	34.	7.3	17.
Tetrachloro-M-Xylene	*	43.8	%					
Decachlorobiphenyl		73.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 30-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.36	0.91
gamma-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.29	0.91
Heptachlor	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.31	0.91
Aldrin	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.30	0.91
beta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.35	0.91
delta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.34	0.91
Heptachlor Epoxide	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.24	0.91
Endosulfan I	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.26	0.91
Gamma-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.25	0.91
Alpha-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.22	0.91
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.91	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.1	ug/Kgdrywt	1	17	18.	0.54	9.1
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.5	17.
Tetrachloro-M-Xylene		70.5	%					
Decachlorobiphenyl		83.1	%					

Exclude LF

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6RE
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	55.5	%					
Decachlorobiphenyl		84.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: 1S66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82510

Analysis Date: 29-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.029	ug/L	1	.05	0.059	0.0081	0.029
Gamma-BHC	U	0.029	ug/L	1	.05	0.059	0.0085	0.029
Heptachlor	U	0.029	ug/L	1	.05	0.059	0.0094	0.029
Aldrin	U	0.029	ug/L	1	.05	0.059	0.0087	0.029
beta-BHC	U	0.029	ug/L	1	.05	0.059	0.0074	0.029
delta-BHC	U	0.029	ug/L	1	.05	0.059	0.015	0.029
Heptachlor Epoxide	U	0.029	ug/L	1	.05	0.059	0.0087	0.029
Endosulfan I	U	0.029	ug/L	1	.05	0.059	0.0075	0.029
Gamma-Chlordane	U	0.029	ug/L	1	.05	0.059	0.0070	0.029
Alpha-Chlordane	U	0.029	ug/L	1	.05	0.059	0.0089	0.029
4,4'-DDE	U	0.059	ug/L	1	.1	0.12	0.0058	0.059
Dieldrin	U	0.059	ug/L	1	.1	0.12	0.0076	0.059
Endrin	U	0.059	ug/L	1	.1	0.12	0.0099	0.059
4,4'-DDD	U	0.059	ug/L	1	.1	0.12	0.010	0.059
Endosulfan II	U	0.059	ug/L	1	.1	0.12	0.0067	0.059
4,4'-DDT	U	0.059	ug/L	1	.1	0.12	0.010	0.059
Endrin Aldehyde	U	0.059	ug/L	1	.1	0.12	0.0073	0.059
Endosulfan Sulfate	U	0.059	ug/L	1	.1	0.12	0.0079	0.059
Methoxychlor	U	0.29	ug/L	1	.5	0.59	0.0099	0.29
Endrin Ketone	U	0.059	ug/L	1	.1	0.12	0.0092	0.059
Toxaphene	U	0.59	ug/L	1	1	1.2	0.20	0.59
Tetrachloro-M-Xylene		83.7	%					
Decachlorobiphenyl		58.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 30-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.39	0.97
gamma-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.31	0.97
Heptachlor	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.33	0.97
Aldrin	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.32	0.97
beta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.38	0.97
delta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.37	0.97
Heptachlor Epoxide	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.25	0.97
Endosulfan I	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.27	0.97
Gamma-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.26	0.97
Alpha-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.24	0.97
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.97	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.66	1.9
Methoxychlor	U	9.7	ug/Kgdrywt	1	17	19.	0.57	9.7
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.0	18.
Tetrachloro-M-Xylene	*	63.5	%					
Decachlorobiphenyl		73.0	%					

Exclude 25

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13RE
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.40	0.99
gamma-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.31	0.99
Heptachlor	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.34	0.99
Aldrin	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.32	0.99
beta-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.38	0.99
delta-BHC	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.37	0.99
Heptachlor Epoxide	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.26	0.99
Endosulfan I	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.28	0.99
Gamma-Chlordane	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.27	0.99
Alpha-Chlordane	U	0.99	ug/Kgdrywt	1	1.7	2.0	0.24	0.99
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.26	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.99	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.40	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.57	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.9	ug/Kgdrywt	1	17	20.	0.58	9.9
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	19.	ug/Kgdrywt	1	33	38.	8.1	19.
Tetrachloro-M-Xylene	*	54.5	%					
Decachlorobiphenyl		78.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 30-SEP-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.36	0.91
gamma-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.29	0.91
Heptachlor	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.31	0.91
Aldrin	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.30	0.91
beta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.35	0.91
delta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.34	0.91
Heptachlor Epoxide	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.24	0.91
Endosulfan I	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.26	0.91
Gamma-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.25	0.91
Alpha-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.22	0.91
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.91	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.1	ug/Kgdrywt	1	17	18.	0.54	9.1
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.5	17.
Tetrachloro-M-Xylene	*	67.1	%					
Decachlorobiphenyl		74.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14RE
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.84	ug/Kgdrywt	1	1.7	1.7	0.34	0.84
gamma-BHC	J J-SSL	0.35	ug/Kgdrywt	1	1.7	1.7	0.27	0.84
Heptachlor	U UJ-SSL	0.84	ug/Kgdrywt	1	1.7	1.7	0.29	0.84
Aldrin	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.28	0.84
beta-BHC	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.33	0.84
delta-BHC	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.32	0.84
Heptachlor Epoxide	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.22	0.84
Endosulfan I	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.24	0.84
Gamma-Chlordane	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.23	0.84
Alpha-Chlordane	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.21	0.84
4,4'-DDE	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.19	1.6
Dieldrin	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.22	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.84	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.20	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.34	1.6
4,4'-DDT	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.31	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.49	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.58	1.6
Methoxychlor	U	8.4	ug/Kgdrywt	1	17	17.	0.50	8.4
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.40	1.6
Toxaphene	U	16.	ug/Kgdrywt	1	33	33.	7.0	16.
Tetrachloro-M-Xylene	*	42.0	%					
Decachlorobiphenyl	*	54.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.29	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.54	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	65.0	%					
Decachlorobiphenyl		72.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15RE
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.28	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.90	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.36	1.7
4,4'-DDT	J J-SSL	0.60	ug/Kgdrywt	1	3.3	3.5	0.33	1.7
Endrin Aldehyde	U UJ-SSL	1.7	ug/Kgdrywt	1	3.3	3.5	0.52	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.61	1.7
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	50.6	%					
Decachlorobiphenyl		71.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude PE	0.91	ug/Kgdrywt	1	1.7	1.8	0.36	0.91
gamma-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.29	0.91
Heptachlor	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.31	0.91
Aldrin	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.30	0.91
beta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.35	0.91
delta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.34	0.91
Heptachlor Epoxide	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.24	0.91
Endosulfan I	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.26	0.91
Gamma-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.24	0.91
Alpha-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.22	0.91
4,4'-DDE	J	1.8	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.91	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	J	2.4	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.1	ug/Kgdrywt	1	17	18.	0.53	9.1
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.5	17.
Tetrachloro-M-Xylene	*	62.6	%					
Decachlorobiphenyl		66.8	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16RE
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.29	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	J J-SSL	0.42	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U UJ-SSL	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	J J-SSL	1.2	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U UJ-SSL	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J J-SSL	2.1	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U UJ-SSL	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	61.0	%					
Decachlorobiphenyl		78.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82586

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-BE	0.87	ug/Kgdrywt	1	1.7	1.7	0.35	0.87
gamma-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.28	0.87
Heptachlor	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.30	0.87
Aldrin	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.28	0.87
beta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.34	0.87
delta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.33	0.87
Heptachlor Epoxide	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.22	0.87
Endosulfan I	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.24	0.87
Gamma-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.23	0.87
Alpha-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.21	0.87
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.19	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.22	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.87	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.50	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.59	1.7
Methoxychlor	U	8.7	ug/Kgdrywt	1	17	17.	0.51	8.7
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.41	1.7
Toxaphene	U	16.	ug/Kgdrywt	1	33	34.	7.1	16.
Tetrachloro-M-Xylene	*	53.8	%					
Decachlorobiphenyl		65.3	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17RE
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 08-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.29	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.23	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.90	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.42	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	47.0	%					
Decachlorobiphenyl		68.8	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-1RA
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	50.	ug/Kgdrywt	1	100	99.	6.0	50.
bis(2-Chloroethyl)ether	U	9.9	ug/Kgdrywt	1	20	20.	1.7	9.9
2-Chlorophenol	U	50.	ug/Kgdrywt	1	100	99.	5.2	50.
2-Methylphenol	U	50.	ug/Kgdrywt	1	100	99.	8.4	50.
3&4-Methylphenol	U	50.	ug/Kgdrywt	1	100	99.	9.8	50.
n-Nitroso-di-n-propylamine	U	9.9	ug/Kgdrywt	1	20	20.	1.9	9.9
Nitrobenzene	U	9.9	ug/Kgdrywt	1	20	20.	4.8	9.9
2,4-Dimethylphenol	U	9.9	ug/Kgdrywt	1	20	20.	3.2	9.9
2,4-Dichlorophenol	U	9.9	ug/Kgdrywt	1	20	20.	2.2	9.9
Naphthalene	U	9.9	ug/Kgdrywt	1	20	20.	2.6	9.9
Hexachlorobutadiene	U	9.9	ug/Kgdrywt	1	20	20.	2.3	9.9
2-Methylnaphthalene	U	9.9	ug/Kgdrywt	1	20	20.	2.2	9.9
Hexachlorocyclopentadiene	U	9.9	ug/Kgdrywt	1	20	20.	1.5	9.9
2,4,6-Trichlorophenol	U	50.	ug/Kgdrywt	1	100	99.	3.3	50.
2,4,5-Trichlorophenol	U	50.	ug/Kgdrywt	1	100	99.	2.5	50.
Dimethyl phthalate	J B-MBL	1.7	ug/Kgdrywt	1	20	20.	1.4	9.9
Acenaphthylene	U	9.9	ug/Kgdrywt	1	20	20.	1.2	9.9
Acenaphthene	U	9.9	ug/Kgdrywt	1	20	20.	1.5	9.9
4-Nitrophenol	U	50.	ug/Kgdrywt	1	100	99.	7.9	50.
2,4-Dinitrotoluene	U	9.9	ug/Kgdrywt	1	20	20.	6.9	9.9
Fluorene	U	9.9	ug/Kgdrywt	1	20	20.	3.2	9.9
4,6-Dinitro-2-methylphenol	U	150	ug/Kgdrywt	1	310	310	99.	150
Hexachlorobenzene	U	9.9	ug/Kgdrywt	1	20	20.	1.8	9.9
Atrazine	U	9.9	ug/Kgdrywt	1	20	20.	0.99	9.9
Pentachlorophenol	U	50.	ug/Kgdrywt	1	100	99.	14.	50.
Phenanthrene	J	12.	ug/Kgdrywt	1	20	20.	1.8	9.9
Anthracene	J	1.4	ug/Kgdrywt	1	20	20.	1.2	9.9
Fluoranthene		23.	ug/Kgdrywt	1	20	20.	1.8	9.9
Pyrene		22.	ug/Kgdrywt	1	20	20.	2.1	9.9
3,3'-Dichlorobenzidine	U	9.9	ug/Kgdrywt	1	20	20.	3.0	9.9
Benzo (a) anthracene	J	10.	ug/Kgdrywt	1	20	20.	1.9	9.9
Chrysene	J	12.	ug/Kgdrywt	1	20	20.	1.7	9.9
bis(2-Ethylhexyl)phthalate	B B-MBL	190	ug/Kgdrywt	1	100	99.	32.	50.
Di-n-octylphthalate	U	50.	ug/Kgdrywt	1	100	99.	46.	50.
Benzo (b) Fluoranthene	J	19.	ug/Kgdrywt	1	20	20.	2.4	9.9

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-1RA
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	7.2	ug/Kgdrywt	1	20	20.	3.1	9.9
Benzo(a)pyrene	J	9.6	ug/Kgdrywt	1	20	20.	3.3	9.9
Indeno (1,2,3-cd) pyrene	J	6.6	ug/Kgdrywt	1	20	20.	1.9	9.9
Dibenzo (a,h) anthracene	U	9.9	ug/Kgdrywt	1	20	20.	1.8	9.9
Benzo(g,h,i)perylene	J	8.0	ug/Kgdrywt	1	20	20.	2.0	9.9
2-Methylnaphthalene-D10		48.4	%					
Fluorene-D10		34.8	%					
Pyrene-D10		84.6	%					
2,4-Dibromophenol		56.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2RA
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	57.	ug/Kgdrywt	1	100	110	6.9	57.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
2-Chlorophenol	U	57.	ug/Kgdrywt	1	100	110	6.0	57.
2-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	9.6	57.
3&4-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	11.	57.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	23.	5.4	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	23.	3.6	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	23.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	23.	2.6	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	23.	1.7	11.
2,4,6-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	3.7	57.
2,4,5-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	2.8	57.
Dimethyl phthalate	J B-MBL	2.1	ug/Kgdrywt	1	20	23.	1.6	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	23.	1.7	11.
4-Nitrophenol	U	57.	ug/Kgdrywt	1	100	110	9.0	57.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	23.	7.9	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	23.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	23.	1.1	11.
Pentachlorophenol	U	57.	ug/Kgdrywt	1	100	110	16.	57.
Phenanthrene	J	7.7	ug/Kgdrywt	1	20	23.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Pyrene	J	3.4	ug/Kgdrywt	1	20	23.	2.4	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	23.	3.4	11.
Benzo (a) anthracene	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
bis(2-Ethylhexyl)phthalate	B B-MBL	250	ug/Kgdrywt	1	100	110	36.	57.
Di-n-octylphthalate	U	57.	ug/Kgdrywt	1	100	110	52.	57.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2RA
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	3.5	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	23.	3.7	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	23.	2.3	11.
2-Methylnaphthalene-D10		51.5	%					
Fluorene-D10		34.8	%					
Pyrene-D10		82.2	%					
2,4-Dibromophenol		53.6	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82508

Analysis Date: 02-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U UL-BSL	0.11	ug/L	1	.2	0.22	0.044	0.11
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.22	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.22	0.079	0.11
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.22	0.14	0.16
Naphthalene	J	0.15	ug/L	1	.2	0.22	0.070	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.22	0.094	0.11
2,4,6-Trichlorophenol	U UJ-CCL	0.54	ug/L	1	1	1.1	0.13	0.54
2-Nitroaniline	U	0.16	ug/L	1	.2	0.22	0.13	0.16
2,6-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.076	0.11
2,4-Dinitrophenol	U UJ-ICB	0.54	ug/L	1	1	1.1	0.26	0.54
4-Nitrophenol	U	0.54	ug/L	1	1	1.1	0.25	0.54
Dibenzofuran	U	0.11	ug/L	1	.2	0.22	0.074	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.038	0.11
4-Nitroaniline	U	0.11	ug/L	1	.2	0.22	0.071	0.11
4,6-Dinitro-2-methylphenol	U	0.82	ug/L	1	1	1.1	0.54	0.82
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.22	0.060	0.11
Atrazine	U	0.11	ug/L	1	.2	0.22	0.041	0.11
Pentachlorophenol	U	0.54	ug/L	1	1	1.1	0.36	0.54
3,3'-Dichlorobenzidine	U	0.11	ug/L	1	.2	0.22	0.061	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.22	0.050	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
bis(2-Ethylhexyl)phthalate	JB CB-MBL	0.72	ug/L	1	1	1.1	0.54	0.54
Benzo(b)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.097	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.22	0.072	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.22	0.076	0.11
2-Methylnaphthalene-D10		74.0	%					
Fluorene-D10		43.0	%					
pyrene-d10		93.7	%					
2,4-Dibromophenol		59.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82508

Analysis Date: 02-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	UUL-BSL	0.10	ug/L	1	.2	0.20	0.041	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.20	0.088	0.10
2,4,6-Trichlorophenol	~~U~~UJ-CCL	0.50	ug/L	1	1	1.0	0.12	0.50
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2,4-Dinitrophenol	~~U~~UJ-ICB	0.50	ug/L	1	1	1.0	0.24	0.50
4-Nitrophenol	U	0.50	ug/L	1	1	1.0	0.23	0.50
Dibenzofuran	U	0.10	ug/L	1	.2	0.20	0.069	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.035	0.10
4-Nitroaniline	U	0.10	ug/L	1	.2	0.20	0.066	0.10
4,6-Dinitro-2-methylphenol	U	0.76	ug/L	1	1	1.0	0.50	0.76
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.038	0.10
Pentachlorophenol	U	0.50	ug/L	1	1	1.0	0.33	0.50
3,3'-Dichlorobenzidine	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
bis(2-Ethylhexyl)phthalate	JB B-MBL	0.62	ug/L	1	1	1.0	0.50	0.50
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.090	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2-Methylnaphthalene-D10		64.0	%					
Fluorene-D10		37.1	%					
pyrene-d10		83.3	%					
2,4-Dibromophenol		43.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.8	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.3	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	~~J~~ B-FBL	5.8	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	J	6.6	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	~~J~~ B-MBL	2.4	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	J	21.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	54.	ug/Kgdrywt	1	100	110	8.7	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	J	9.2	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene		140	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene		25.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene		210	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene		210	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene		99.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene		83.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate	~~EB~~ CR	900	ug/Kgdrywt	1	100	110	35.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene	J-ISL	150	ug/Kgdrywt	1	20	22.	2.6	11.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J-ISL	49.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	J-ISL	95.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		62.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	J-ISL	20.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	J-ISL	69.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		43.6	%					
Fluorene-D10		31.5	%					
Pyrene-D10		89.0	%					
2,4-Dibromophenol		41.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5DL
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-BL	330	ug/Kgdrywt	6	100	650	40.	330
bis(2-Chloroethyl)ether	U	65.	ug/Kgdrywt	6	20	130	11.	65.
2-Chlorophenol	U	330	ug/Kgdrywt	6	100	650	35.	330
2-Methylphenol	U	330	ug/Kgdrywt	6	100	650	56.	330
3&4-Methylphenol	U	330	ug/Kgdrywt	6	100	650	65.	330
n-Nitroso-di-n-propylamine	U	65.	ug/Kgdrywt	6	20	130	12.	65.
Nitrobenzene	U	65.	ug/Kgdrywt	6	20	130	31.	65.
2,4-Dimethylphenol	U	65.	ug/Kgdrywt	6	20	130	21.	65.
2,4-Dichlorophenol	U	65.	ug/Kgdrywt	6	20	130	14.	65.
Naphthalene	U	65.	ug/Kgdrywt	6	20	130	17.	65.
Hexachlorobutadiene	U	65.	ug/Kgdrywt	6	20	130	15.	65.
2-Methylnaphthalene	U	65.	ug/Kgdrywt	6	20	130	14.	65.
Hexachlorocyclopentadiene	U	65.	ug/Kgdrywt	6	20	130	9.8	65.
2,4,6-Trichlorophenol	U	330	ug/Kgdrywt	6	100	650	22.	330
2,4,5-Trichlorophenol	U	330	ug/Kgdrywt	6	100	650	16.	330
Dimethyl phthalate	U	65.	ug/Kgdrywt	6	20	130	9.2	65.
Acenaphthylene	U	65.	ug/Kgdrywt	6	20	130	7.8	65.
Acenaphthene	J	31.	ug/Kgdrywt	6	20	130	9.8	65.
4-Nitrophenol	U	330	ug/Kgdrywt	6	100	650	52.	330
2,4-Dinitrotoluene	U	65.	ug/Kgdrywt	6	20	130	46.	65.
Fluorene	U	65.	ug/Kgdrywt	6	20	130	21.	65.
4,6-Dinitro-2-methylphenol	U	980	ug/Kgdrywt	6	310	2000	650	980
Hexachlorobenzene	U	65.	ug/Kgdrywt	6	20	130	12.	65.
Atrazine	U	65.	ug/Kgdrywt	6	20	130	6.5	65.
Pentachlorophenol	U	330	ug/Kgdrywt	6	100	650	92.	330
Phenanthrene		140	ug/Kgdrywt	6	20	130	12.	65.
Anthracene	J	29.	ug/Kgdrywt	6	20	130	7.8	65.
Fluoranthene		220	ug/Kgdrywt	6	20	130	12.	65.
Pyrene		180	ug/Kgdrywt	6	20	130	14.	65.
3,3'-Dichlorobenzidine	U	65.	ug/Kgdrywt	6	20	130	20.	65.
Benzo (a) anthracene	J	110	ug/Kgdrywt	6	20	130	12.	65.
Chrysene	J	100	ug/Kgdrywt	6	20	130	11.	65.
bis(2-Ethylhexyl)phthalate	~~B~~ B-mBL	1200	ug/Kgdrywt	6	100	650	210	330
Di-n-octylphthalate	~~U~~ Exclude-DL	330	ug/Kgdrywt	6	100	650	300	330
Benzo (b) Fluoranthene		150	ug/Kgdrywt	6	20	130	16.	65.

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5DL
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J Exclude-D	52.	ug/Kgdrywt	6	20	130	20.	65.
Benzo(a)pyrene	J	100	ug/Kgdrywt	6	20	130	22.	65.
Indeno (1,2,3-cd) pyrene	J	59.	ug/Kgdrywt	6	20	130	12.	65.
Dibenzo (a,h) anthracene	U	65.	ug/Kgdrywt	6	20	130	12.	65.
Benzo(g,h,i)perylene	J	63.	ug/Kgdrywt	6	20	130	13.	65.
2-Methylnaphthalene-D10		60.9	%					
Fluorene-D10		39.2	%					
Pyrene-D10		79.5	%					
2,4-Dibromophenol		56.7	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	56.	ug/Kgdrywt	1	100	110	6.8	56.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	56.	ug/Kgdrywt	1	100	110	5.9	56.
2-Methylphenol	U	56.	ug/Kgdrywt	1	100	110	9.5	56.
3&4-Methylphenol	U	56.	ug/Kgdrywt	1	100	110	11.	56.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.4	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.7	11.
2,4,6-Trichlorophenol	U	56.	ug/Kgdrywt	1	100	110	3.7	56.
2,4,5-Trichlorophenol	U	56.	ug/Kgdrywt	1	100	110	2.8	56.
Dimethyl phthalate	J B-MBL	1.8	ug/Kgdrywt	1	20	22.	1.6	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	22.	1.7	11.
4-Nitrophenol	U	56.	ug/Kgdrywt	1	100	110	8.9	56.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.8	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	56.	ug/Kgdrywt	1	100	110	16.	56.
Phenanthrene	J	7.5	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	J	1.4	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	J	12.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo (a) anthracene	J	5.6	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	J	5.4	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	EB Equip-Blk	970	ug/Kgdrywt	1	100	110	36.	56.
Di-n-octylphthalate	U	56.	ug/Kgdrywt	1	100	110	51.	56.
Benzo (b) Fluoranthene	J	9.0	ug/Kgdrywt	1	20	22.	2.7	11.

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HK 12/9/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
Benzo(a)pyrene	J	5.9	ug/Kgdrywt	1	20	22.	3.7	11.
Indeno (1,2,3-cd) pyrene	J	4.2	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		59.7	%					
Fluorene-D10		34.6	%					
Pyrene-D10		88.3	%					
2,4-Dibromophenol		50.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6DL
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 18-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	340	ug/Kgdrywt	6	100	670	41.	340
bis(2-Chloroethyl)ether	U	67.	ug/Kgdrywt	6	20	130	11.	67.
2-Chlorophenol	U	340	ug/Kgdrywt	6	100	670	36.	340
2-Methylphenol	U	340	ug/Kgdrywt	6	100	670	57.	340
3&4-Methylphenol	U	340	ug/Kgdrywt	6	100	670	66.	340
n-Nitroso-di-n-propylamine	U	67.	ug/Kgdrywt	6	20	130	13.	67.
Nitrobenzene	U	67.	ug/Kgdrywt	6	20	130	32.	67.
2,4-Dimethylphenol	U	67.	ug/Kgdrywt	6	20	130	21.	67.
2,4-Dichlorophenol	U	67.	ug/Kgdrywt	6	20	130	15.	67.
Naphthalene	U	67.	ug/Kgdrywt	6	20	130	17.	67.
Hexachlorobutadiene	U	67.	ug/Kgdrywt	6	20	130	15.	67.
2-Methylnaphthalene	U	67.	ug/Kgdrywt	6	20	130	15.	67.
Hexachlorocyclopentadiene	U	67.	ug/Kgdrywt	6	20	130	10.	67.
2,4,6-Trichlorophenol	U	340	ug/Kgdrywt	6	100	670	22.	340
2,4,5-Trichlorophenol	U	340	ug/Kgdrywt	6	100	670	17.	340
Dimethyl phthalate	U	67.	ug/Kgdrywt	6	20	130	9.4	67.
Acenaphthylene	U	67.	ug/Kgdrywt	6	20	130	8.0	67.
Acenaphthene	U	67.	ug/Kgdrywt	6	20	130	10.	67.
4-Nitrophenol	U	340	ug/Kgdrywt	6	100	670	54.	340
2,4-Dinitrotoluene	U	67.	ug/Kgdrywt	6	20	130	47.	67.
Fluorene	U	67.	ug/Kgdrywt	6	20	130	21.	67.
4,6-Dinitro-2-methylphenol	U	1000	ug/Kgdrywt	6	310	2100	670	1000
Hexachlorobenzene	U	67.	ug/Kgdrywt	6	20	130	12.	67.
Atrazine	U	67.	ug/Kgdrywt	6	20	130	6.7	67.
Pentachlorophenol	U	340	ug/Kgdrywt	6	100	670	94.	340
Phenanthrene	U	67.	ug/Kgdrywt	6	20	130	12.	67.
Anthracene	U	67.	ug/Kgdrywt	6	20	130	8.0	67.
Fluoranthene	J	12.	ug/Kgdrywt	6	20	130	12.	67.
Pyrene	U	67.	ug/Kgdrywt	6	20	130	14.	67.
3,3'-Dichlorobenzidine	U	67.	ug/Kgdrywt	6	20	130	20.	67.
Benzo (a) anthracene	U	67.	ug/Kgdrywt	6	20	130	13.	67.
Chrysene	U	67.	ug/Kgdrywt	6	20	130	11.	67.
bis(2-Ethylhexyl)phthalate	B B-MBL	1100	ug/Kgdrywt	6	100	670	210	340
Di-n-octylphthalate	U Exclude-DL	340	ug/Kgdrywt	6	100	670	310	340
Benzo (b) Fluoranthene	U	67.	ug/Kgdrywt	6	20	130	16.	67.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6DL
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 18-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	67.	ug/Kgdrywt	6	20	130	21.	67.
Benzo(a)pyrene	U	67.	ug/Kgdrywt	6	20	130	22.	67.
Indeno (1,2,3-cd) pyrene	U	67.	ug/Kgdrywt	6	20	130	13.	67.
Dibenzo (a,h) anthracene	U	67.	ug/Kgdrywt	6	20	130	12.	67.
Benzo(g,h,i)perylene	U	67.	ug/Kgdrywt	6	20	130	13.	67.
2-Methylnaphthalene-D10		62.7	%					
Fluorene-D10		38.1	%					
Pyrene-D10		81.6	%					
2,4-Dibromophenol		53.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: IS66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82508

Analysis Date: 02-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	UUL-BSL	0.11	ug/L	1	.2	0.22	0.044	0.11
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.22	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.22	0.077	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.22	0.078	0.11
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.22	0.14	0.16
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.069	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.22	0.094	0.11
2,4,6-Trichlorophenol	UUJ-CCL	0.54	ug/L	1	1	1.1	0.13	0.54
2-Nitroaniline	U	0.16	ug/L	1	.2	0.22	0.13	0.16
2,6-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.075	0.11
2,4-Dinitrophenol	UUJ-ICB	0.54	ug/L	1	1	1.1	0.26	0.54
4-Nitrophenol	U	0.54	ug/L	1	1	1.1	0.25	0.54
Dibenzofuran	U	0.11	ug/L	1	.2	0.22	0.073	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.038	0.11
4-Nitroaniline	U	0.11	ug/L	1	.2	0.22	0.070	0.11
4,6-Dinitro-2-methylphenol	U	0.81	ug/L	1	1	1.1	0.54	0.81
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.22	0.059	0.11
Atrazine	U	0.11	ug/L	1	.2	0.22	0.041	0.11
Pentachlorophenol	U	0.54	ug/L	1	1	1.1	0.35	0.54
3,3'-Dichlorobenzidine	U	0.11	ug/L	1	.2	0.22	0.060	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.22	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
bis(2-Ethylhexyl)phthalate	U	0.54	ug/L	1	1	1.1	0.54	0.54
Benzo(b)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.096	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.053	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.22	0.071	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.22	0.056	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.22	0.075	0.11
2-Methylnaphthalene-D10		67.1	%					
Fluorene-D10		40.6	%					
pyrene-d10		88.8	%					
2,4-Dibromophenol		56.3	%					

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REISSUE

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13RA
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.0	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.1	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.8	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	11.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.5	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	~~J~~ B-MBL	2.7	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
4-Nitrophenol	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.1	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	360	120	170
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	J	10.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	J	1.6	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J	20.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	J	20.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	U	12.	ug/Kgdrywt	1	20	23.	3.4	12.
Benzo (a) anthracene	J	11.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	J	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	~~B~~ B-MBL	210	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	53.	58.
Benzo (b) Fluoranthene		24.	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13RA
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	6.5	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	J	11.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	J	8.0	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	J	8.4	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		62.2	%					
Fluorene-D10		36.8	%					
Pyrene-D10		83.6	%					
2,4-Dibromophenol		56.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	51.	ug/Kgdrywt	1	100	100	6.2	51.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	20.	1.7	10.
2-Chlorophenol	U	51.	ug/Kgdrywt	1	100	100	5.4	51.
2-Methylphenol	U	51.	ug/Kgdrywt	1	100	100	8.7	51.
3&4-Methylphenol	U	51.	ug/Kgdrywt	1	100	100	10.	51.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	20.	1.9	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	20.	4.9	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	20.	2.2	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	20.	2.6	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	20.	2.3	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	20.	2.2	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	20.	1.5	10.
2,4,6-Trichlorophenol	J	5.5	ug/Kgdrywt	1	100	100	3.4	51.
2,4,5-Trichlorophenol	U	51.	ug/Kgdrywt	1	100	100	2.6	51.
Dimethyl phthalate	~~J~~ JB-MBL	2.0	ug/Kgdrywt	1	20	20.	1.4	10.
Acenaphthylene	U	10.	ug/Kgdrywt	1	20	20.	1.2	10.
Acenaphthene	U	10.	ug/Kgdrywt	1	20	20.	1.5	10.
4-Nitrophenol	U	51.	ug/Kgdrywt	1	100	100	8.2	51.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	20.	7.1	10.
Fluorene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
4,6-Dinitro-2-methylphenol	U	150	ug/Kgdrywt	1	310	320	100	150
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	20.	1.8	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	20.	1.0	10.
Pentachlorophenol	U	51.	ug/Kgdrywt	1	100	100	14.	51.
Phenanthrene	J	5.3	ug/Kgdrywt	1	20	20.	1.8	10.
Anthracene	U	10.	ug/Kgdrywt	1	20	20.	1.2	10.
Fluoranthene	J	12.	ug/Kgdrywt	1	20	20.	1.8	10.
Pyrene	J	17.	ug/Kgdrywt	1	20	20.	2.1	10.
3,3'-Dichlorobenzidine	U	10.	ug/Kgdrywt	1	20	20.	3.1	10.
Benzo (a) anthracene	J	6.4	ug/Kgdrywt	1	20	20.	1.9	10.
Chrysene	J	8.8	ug/Kgdrywt	1	20	20.	1.7	10.
bis(2-Ethylhexyl)phthalate	~~EB~~ Exclude LL	570	ug/Kgdrywt	1	100	100	33.	51.
Di-n-octylphthalate	U	51.	ug/Kgdrywt	1	100	100	47.	51.
Benzo (b) Fluoranthene	~~J~~ J-ISL	15.	ug/Kgdrywt	1	20	20.	2.4	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	~~J~~ J-ISL	5.1	ug/Kgdrywt	1	20	20.	3.2	10.
Benzo(a)pyrene	~~J~~ J-ISL	7.4	ug/Kgdrywt	1	20	20.	3.4	10.
Indeno (1,2,3-cd) pyrene	J	6.5	ug/Kgdrywt	1	20	20.	1.9	10.
Dibenzo (a,h) anthracene	~~U~~ UJ-ISL	10.	ug/Kgdrywt	1	20	20.	1.8	10.
Benzo(g,h,i)perylene	~~J~~ J-ISL	2.5	ug/Kgdrywt	1	20	20.	2.0	10.
2-Methylnaphthalene-D10		45.2	%					
Fluorene-D10		34.9	%					
Pyrene-D10		107.	%					
2,4-Dibromophenol		52.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14DL
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	200	ug/Kgdrywt	4	100	410	25.	200
bis(2-Chloroethyl)ether	U	41.	ug/Kgdrywt	4	20	82.	6.9	41.
2-Chlorophenol	U	200	ug/Kgdrywt	4	100	410	22.	200
2-Methylphenol	U	200	ug/Kgdrywt	4	100	410	35.	200
3&4-Methylphenol	U	200	ug/Kgdrywt	4	100	410	40.	200
n-Nitroso-di-n-propylamine	U	41.	ug/Kgdrywt	4	20	82.	7.8	41.
Nitrobenzene	U	41.	ug/Kgdrywt	4	20	82.	20.	41.
2,4-Dimethylphenol	U	41.	ug/Kgdrywt	4	20	82.	13.	41.
2,4-Dichlorophenol	U	41.	ug/Kgdrywt	4	20	82.	9.0	41.
Naphthalene	U	41.	ug/Kgdrywt	4	20	82.	11.	41.
Hexachlorobutadiene	U	41.	ug/Kgdrywt	4	20	82.	9.4	41.
2-Methylnaphthalene	U	41.	ug/Kgdrywt	4	20	82.	9.0	41.
Hexachlorocyclopentadiene	U	41.	ug/Kgdrywt	4	20	82.	6.1	41.
2,4,6-Trichlorophenol	U	200	ug/Kgdrywt	4	100	410	13.	200
2,4,5-Trichlorophenol	U	200	ug/Kgdrywt	4	100	410	10.	200
Dimethyl phthalate	U	41.	ug/Kgdrywt	4	20	82.	5.7	41.
Acenaphthylene	U	41.	ug/Kgdrywt	4	20	82.	4.9	41.
Acenaphthene	U	41.	ug/Kgdrywt	4	20	82.	6.1	41.
4-Nitrophenol	U	200	ug/Kgdrywt	4	100	410	33.	200
2,4-Dinitrotoluene	U	41.	ug/Kgdrywt	4	20	82.	28.	41.
Fluorene	U	41.	ug/Kgdrywt	4	20	82.	13.	41.
4,6-Dinitro-2-methylphenol	U	610	ug/Kgdrywt	4	310	1300	410	610
Hexachlorobenzene	U	41.	ug/Kgdrywt	4	20	82.	7.4	41.
Atrazine	U	41.	ug/Kgdrywt	4	20	82.	4.1	41.
Pentachlorophenol	U	200	ug/Kgdrywt	4	100	410	57.	200
Phenanthrene	U	41.	ug/Kgdrywt	4	20	82.	7.4	41.
Anthracene	U	41.	ug/Kgdrywt	4	20	82.	4.9	41.
Fluoranthene	J	14.	ug/Kgdrywt	4	20	82.	7.4	41.
Pyrene	J	12.	ug/Kgdrywt	4	20	82.	8.6	41.
3,3'-Dichlorobenzidine	U	41.	ug/Kgdrywt	4	20	82.	12.	41.
Benzo (a) anthracene	U	41.	ug/Kgdrywt	4	20	82.	7.8	41.
Chrysene	J	8.9	ug/Kgdrywt	4	20	82.	6.9	41.
bis(2-Ethylhexyl)phthalate	B B-MBL	530	ug/Kgdrywt	4	100	410	130	200
Di-n-octylphthalate	U Exclude-DL	200	ug/Kgdrywt	4	100	410	190	200
Benzo (b) Fluoranthene	J	16.	ug/Kgdrywt	4	20	82.	9.8	41.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-14DL
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Excludes-DL	41.	ug/Kgdrywt	4	20	82.	13.	41.
Benzo(a)pyrene	U	41.	ug/Kgdrywt	4	20	82.	13.	41.
Indeno (1,2,3-cd) pyrene	U	41.	ug/Kgdrywt	4	20	82.	7.8	41.
Dibenzo (a,h) anthracene	U	41.	ug/Kgdrywt	4	20	82.	7.4	41.
Benzo(g,h,i)perylene	U	41.	ug/Kgdrywt	4	20	82.	8.2	41.
2-Methylnaphthalene-D10		62.7	%					
Fluorene-D10		35.8	%					
Pyrene-D10		75.9	%					
2,4-Dibromophenol		54.3	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.2	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	J B-mBL	1.7	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.5	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene	J	4.9	ug/Kgdrywt	1	20	22.	1.9	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J	10.	ug/Kgdrywt	1	20	22.	1.9	11.
Pyrene	J	12.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.2	11.
Benzo (a) anthracene	J	4.8	ug/Kgdrywt	1	20	22.	2.0	11.
Chrysene	J	6.0	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate	~~EB~~ Evaluate 300		ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene	J J-ISL	11.	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 04-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	~~U~~ UJ-ISL	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo(a)pyrene	~~J~~ J-ISL	6.2	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	J	4.4	ug/Kgdrywt	1	20	22.	2.0	11.
Dibenzo (a,h) anthracene	~~U~~ UJ-ISL	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(g,h,i)perylene	~~U~~ UJ-ISL	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		44.7	%					
Fluorene-D10		34.8	%					
Pyrene-D10		97.5	%					
2,4-Dibromophenol		52.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15DL
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	110	ug/Kgdrywt	2	100	220	13.	110
bis(2-Chloroethyl)ether	U	22.	ug/Kgdrywt	2	20	43.	3.7	22.
2-Chlorophenol	U	110	ug/Kgdrywt	2	100	220	11.	110
2-Methylphenol	U	110	ug/Kgdrywt	2	100	220	18.	110
3&4-Methylphenol	U	110	ug/Kgdrywt	2	100	220	21.	110
n-Nitroso-di-n-propylamine	U	22.	ug/Kgdrywt	2	20	43.	4.1	22.
Nitrobenzene	U	22.	ug/Kgdrywt	2	20	43.	10.	22.
2,4-Dimethylphenol	U	22.	ug/Kgdrywt	2	20	43.	6.9	22.
2,4-Dichlorophenol	U	22.	ug/Kgdrywt	2	20	43.	4.7	22.
Naphthalene	U	22.	ug/Kgdrywt	2	20	43.	5.6	22.
Hexachlorobutadiene	U	22.	ug/Kgdrywt	2	20	43.	5.0	22.
2-Methylnaphthalene	U	22.	ug/Kgdrywt	2	20	43.	4.7	22.
Hexachlorocyclopentadiene	U	22.	ug/Kgdrywt	2	20	43.	3.2	22.
2,4,6-Trichlorophenol	U	110	ug/Kgdrywt	2	100	220	7.1	110
2,4,5-Trichlorophenol	U	110	ug/Kgdrywt	2	100	220	5.4	110
Dimethyl phthalate	U	22.	ug/Kgdrywt	2	20	43.	3.0	22.
Acenaphthylene	U	22.	ug/Kgdrywt	2	20	43.	2.6	22.
Acenaphthene	U	22.	ug/Kgdrywt	2	20	43.	3.2	22.
4-Nitrophenol	U	110	ug/Kgdrywt	2	100	220	17.	110
2,4-Dinitrotoluene	U	22.	ug/Kgdrywt	2	20	43.	15.	22.
Fluorene	U	22.	ug/Kgdrywt	2	20	43.	6.9	22.
4,6-Dinitro-2-methylphenol	U	320	ug/Kgdrywt	2	310	670	220	320
Hexachlorobenzene	U	22.	ug/Kgdrywt	2	20	43.	3.9	22.
Atrazine	U	22.	ug/Kgdrywt	2	20	43.	2.2	22.
Pentachlorophenol	U	110	ug/Kgdrywt	2	100	220	30.	110
Phenanthrene	J	5.4	ug/Kgdrywt	2	20	43.	3.9	22.
Anthracene	U	22.	ug/Kgdrywt	2	20	43.	2.6	22.
Fluoranthene	J	12.	ug/Kgdrywt	2	20	43.	3.9	22.
Pyrene	J	10.	ug/Kgdrywt	2	20	43.	4.5	22.
3,3'-Dichlorobenzidine	U	22.	ug/Kgdrywt	2	20	43.	6.4	22.
Benzo (a) anthracene	J	6.3	ug/Kgdrywt	2	20	43.	4.1	22.
Chrysene	J	6.4	ug/Kgdrywt	2	20	43.	3.7	22.
bis(2-Ethylhexyl)phthalate	~~B~~ B-MBL	290	ug/Kgdrywt	2	100	220	69.	110
Di-n-octylphthalate	U Exclude-DL	110	ug/Kgdrywt	2	100	220	99.	110
Benzo (b) Fluoranthene	J	10.	ug/Kgdrywt	2	20	43.	5.2	22.

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15DL
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude-DL	22.	ug/Kgdrywt	2	20	43.	6.7	22.
Benzo(a)pyrene	U	22.	ug/Kgdrywt	2	20	43.	7.1	22.
Indeno (1,2,3-cd) pyrene	J	4.3	ug/Kgdrywt	2	20	43.	4.1	22.
Dibenzo (a,h) anthracene	U	22.	ug/Kgdrywt	2	20	43.	3.9	22.
Benzo(g,h,i)perylene	J	4.7	ug/Kgdrywt	2	20	43.	4.3	22.
2-Methylnaphthalene-D10		68.4	%					
Fluorene-D10		37.0	%					
Pyrene-D10		78.7	%					
2,4-Dibromophenol		56.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-16RA
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	52.	ug/Kgdrywt	1	100	100	6.3	52.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	52.	ug/Kgdrywt	1	100	100	5.5	52.
2-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	8.8	52.
3&4-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	10.	52.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	3.4	52.
2,4,5-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	2.6	52.
Dimethyl phthalate	~~J~~ JB MBL	1.6	ug/Kgdrywt	1	20	21.	1.4	10.
Acenaphthylene	U	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Acenaphthene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	U	52.	ug/Kgdrywt	1	100	100	8.3	52.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.3	10.
Fluorene	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	320	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	52.	ug/Kgdrywt	1	100	100	14.	52.
Phenanthrene	J	16.	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	J	3.4	ug/Kgdrywt	1	20	21.	1.2	10.
Fluoranthene		42.	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene		54.	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U	10.	ug/Kgdrywt	1	20	21.	3.1	10.
Benzo (a) anthracene		32.	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene		33.	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	JB B-MBL	100	ug/Kgdrywt	1	100	100	33.	52.
Di-n-octylphthalate	U	52.	ug/Kgdrywt	1	100	100	48.	52.
Benzo (b) Fluoranthene		68.	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16RA
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		22.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo(a)pyrene		29.	ug/Kgdrywt	1	20	21.	3.4	10.
Indeno (1,2,3-cd) pyrene	J	19.	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	J	6.3	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	J	19.	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		52.4	%					
Fluorene-D10		33.3	%					
Pyrene-D10		79.1	%					
2,4-Dibromophenol		51.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-17RA
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 88.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	52.	ug/Kgdrywt	1	100	100	6.3	52.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	52.	ug/Kgdrywt	1	100	100	5.5	52.
2-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	8.8	52.
3&4-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	10.	52.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	3.4	52.
2,4,5-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	2.6	52.
Dimethyl phthalate	J B-MBL	1.9	ug/Kgdrywt	1	20	21.	1.4	10.
Acenaphthylene	U	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Acenaphthene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	U	52.	ug/Kgdrywt	1	100	100	8.3	52.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.2	10.
Fluorene	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	320	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	52.	ug/Kgdrywt	1	100	100	14.	52.
Phenanthrene	J	7.0	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	U	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Fluoranthene	J	19.	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene		23.	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U	10.	ug/Kgdrywt	1	20	21.	3.1	10.
Benzo (a) anthracene	J	12.	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene	J	12.	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	JB B-MBL	86.	ug/Kgdrywt	1	100	100	33.	52.
Di-n-octylphthalate	U	52.	ug/Kgdrywt	1	100	100	48.	52.
Benzo (b) Fluoranthene	J	18.	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID:SD5842-17RA
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site E
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By:JCG
Extraction Method: SW846 3550
Lab Prep Batch: WG82584

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 88.
Report Date: 08-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	5.8	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo(a)pyrene	J	9.4	ug/Kgdrywt	1	20	21.	3.4	10.
Indeno (1,2,3-cd) pyrene	J	5.2	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	J	5.6	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		54.5	%					
Fluorene-D10		34.3	%					
Pyrene-D10		81.4	%					
2,4-Dibromophenol		52.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-1
Client ID: ~~IS66DP380001~~ IS66SS380001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 95.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ-CCV	240	ug/Kgdrywt	1	330	330	120	240
2,2'-Oxybis(1-Chloropropane)	U	240	ug/Kgdrywt	1	330	330	88.	240
Acetophenone	U	240	ug/Kgdrywt	1	330	330	180	240
Hexachloroethane	U	240	ug/Kgdrywt	1	330	330	95.	240
Isophorone	U	240	ug/Kgdrywt	1	330	330	74.	240
2-Nitrophenol	U	240	ug/Kgdrywt	1	330	330	160	240
Bis(2-Chloroethoxy) Methane	U	240	ug/Kgdrywt	1	330	330	95.	240
4-Chloroaniline	U	240	ug/Kgdrywt	1	330	330	120	240
Caprolactam	U	240	ug/Kgdrywt	1	330	330	140	240
4-Chloro-3-Methylphenol	U	240	ug/Kgdrywt	1	330	330	160	240
1,1'-Biphenyl	U	240	ug/Kgdrywt	1	330	330	72.	240
2-Chloronaphthalene	U	240	ug/Kgdrywt	1	330	330	86.	240
2-Nitroaniline	U	610	ug/Kgdrywt	1	820	810	74.	610
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	240	ug/Kgdrywt	1	330	330	78.	240
3-Nitroaniline	U	610	ug/Kgdrywt	1	820	810	93.	610
2,4-Dinitrophenol	U	610	ug/Kgdrywt	1	820	810	370	610
Dibenzofuran	U	240	ug/Kgdrywt	1	330	330	78.	240
Diethylphthalate	U	240	ug/Kgdrywt	1	330	330	79.	240
4-Chlorophenyl-Phenylether	U	240	ug/Kgdrywt	1	330	330	77.	240
4-Nitroaniline	U	610	ug/Kgdrywt	1	820	810	130	610
N-Nitrosodiphenylamine	U	240	ug/Kgdrywt	1	330	330	220	240
4-Bromophenyl-Phenylether	U	240	ug/Kgdrywt	1	330	330	84.	240
Carbazole	U	240	ug/Kgdrywt	1	330	330	110	240
Di-N-Butylphthalate	U	240	ug/Kgdrywt	1	330	330	100	240
Butylbenzylphthalate	U	240	ug/Kgdrywt	1	330	330	92.	240
2-Fluorophenol		58.2	%					
Phenol-D6		63.6	%					
Nitrobenzene-d5		60.6	%					
2-Fluorobiphenyl		63.0	%					
2,4,6-Tribromophenol		64.8	%					
Terphenyl-d14		81.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-2
Client ID: ~~IS66DP381213~~ IS66SB381213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U us-ecl	280	ug/Kgdrywt	1	330	370	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	370	100	280
Acetophenone	U	280	ug/Kgdrywt	1	330	370	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	370	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	370	85.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	370	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	370	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	370	130	280
Caprolactam	U	280	ug/Kgdrywt	1	330	370	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	370	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	370	83.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	370	98.	280
2-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	85.	700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	370	89.	280
3-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	110	700
2,4-Dinitrophenol	U	700	ug/Kgdrywt	1	820	930	430	700
Dibenzofuran	U	280	ug/Kgdrywt	1	330	370	89.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	370	90.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	88.	280
4-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	150	700
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	370	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	96.	280
Carbazole	U	280	ug/Kgdrywt	1	330	370	120	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	370	110	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	370	100	280
2-Fluorophenol		59.4	%					
Phenol-D6		67.4	%					
Nitrobenzene-d5		66.7	%					
2-Fluorobiphenyl		68.2	%					
2,4,6-Tribromophenol		62.3	%					
Terphenyl-d14		81.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 08-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	8.2	ug/L	1	10	11.	1.1	8.2
Phenol	U	8.2	ug/L	1	10	11.	2.0	8.2
2-Chlorophenol	U	8.2	ug/L	1	10	11.	3.5	8.2
2-Methylphenol	U	8.2	ug/L	1	10	11.	4.1	8.2
Acetophenone	U	8.2	ug/L	1	10	11.	4.2	8.2
3&4-Methylphenol	U	8.2	ug/L	1	10	11.	6.1	8.2
Isophorone	U	8.2	ug/L	1	10	11.	1.8	8.2
2-Nitrophenol	U	8.2	ug/L	1	10	11.	2.9	8.2
2,4-Dimethylphenol	U	8.2	ug/L	1	10	11.	4.8	8.2
Bis(2-Chloroethoxy) Methane	U	8.2	ug/L	1	10	11.	2.3	8.2
2,4-Dichlorophenol	U	8.2	ug/L	1	10	11.	3.3	8.2
4-Chloroaniline	U	8.2	ug/L	1	10	11.	2.1	8.2
Caprolactam	U	8.2	ug/L	1	10	11.	0.43	8.2
4-Chloro-3-Methylphenol	U	8.2	ug/L	1	10	11.	3.9	8.2
2-Methylnaphthalene	U	8.2	ug/L	1	10	11.	3.5	8.2
Hexachlorocyclopentadiene	U	8.2	ug/L	1	10	11.	1.3	8.2
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	27.	3.9	20.
1,1'-Biphenyl	U	8.2	ug/L	1	10	11.	2.9	8.2
2-Chloronaphthalene	U	8.2	ug/L	1	10	11.	3.2	8.2
Dimethyl Phthalate	U	8.2	ug/L	1	10	11.	2.2	8.2
Acenaphthylene	U	8.2	ug/L	1	10	11.	1.6	8.2
3-Nitroaniline	U	20.	ug/L	1	25	27.	1.6	20.
Acenaphthene	U	8.2	ug/L	1	10	11.	1.6	8.2
Diethylphthalate	U	8.2	ug/L	1	10	11.	2.2	8.2
Fluorene	U	8.2	ug/L	1	10	11.	2.3	8.2
4-Chlorophenyl-Phenylether	U	8.2	ug/L	1	10	11.	2.4	8.2
N-Nitrosodiphenylamine	U	8.2	ug/L	1	10	11.	4.0	8.2
4-Bromophenyl-Phenylether	U	8.2	ug/L	1	10	11.	2.1	8.2
Phenanthrene	U	8.2	ug/L	1	10	11.	2.6	8.2
Anthracene	U	8.2	ug/L	1	10	11.	1.8	8.2
Carbazole	U	8.2	ug/L	1	10	11.	2.3	8.2
Di-N-Butylphthalate	U	8.2	ug/L	1	10	11.	2.7	8.2
Fluoranthene	U	8.2	ug/L	1	10	11.	2.6	8.2
Pyrene	U	8.2	ug/L	1	10	11.	2.1	8.2
Butylbenzylphthalate	U	8.2	ug/L	1	10	11.	2.1	8.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 08-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.2	ug/L	1	10	11.	2.0	8.2
Benzo(g,h,i)perylene	U	8.2	ug/L	1	10	11.	1.6	8.2
2-Fluorophenol		42.5	%					
Phenol-D6		28.2	%					
Nitrobenzene-d5		80.3	%					
2-Fluorobiphenyl		81.2	%					
2,4,6-Tribromophenol		74.6	%					
Terphenyl-d14		68.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-CCL	7.6	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.2	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.8	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	3.9	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.6	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U	7.6	ug/L	1	10	10.	2.7	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.4	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.0	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.40	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.6	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.2	7.6
Hexachlorocyclopentadiene	U	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	25.	3.6	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.7	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	2.9	7.6
Dimethyl Phthalate	UJL-BSL	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	25.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.7	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.5	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		28.2	%					
Phenol-D6		20.0	%					
Nitrobenzene-d5		63.4	%					
2-Fluorobiphenyl		63.0	%					
2,4,6-Tribromophenol		64.5	%					
Terphenyl-d14		58.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~UJ~~ CCL	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	97.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	82.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	95.	270
2-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	82.	670
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	270	ug/Kgdrywt	1	330	360	86.	270
3-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	100	670
2,4-Dinitrophenol	U	670	ug/Kgdrywt	1	820	890	410	670
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	86.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	87.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	85.	270
4-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	150	670
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	93.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		53.7	%					
Phenol-D6		57.8	%					
Nitrobenzene-d5		53.4	%					
2-Fluorobiphenyl		60.4	%					
2,4,6-Tribromophenol		69.4	%					
Terphenyl-d14		79.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ-CCL	280	ug/Kgdrywt	1	330	370	130	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	370	99.	280
Acetophenone	U	280	ug/Kgdrywt	1	330	370	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	370	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	370	84.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	370	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	370	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	370	130	280
Caprolactam	U	280	ug/Kgdrywt	1	330	370	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	370	180	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	370	82.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	370	97.	280
2-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	84.	690
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	370	88.	280
3-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	100	690
2,4-Dinitrophenol	U	690	ug/Kgdrywt	1	820	920	420	690
Dibenzofuran	U	280	ug/Kgdrywt	1	330	370	88.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	370	89.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	87.	280
4-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	150	690
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	370	240	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	95.	280
Carbazole	U	280	ug/Kgdrywt	1	330	370	120	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	370	110	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	370	100	280
2-Fluorophenol		64.1	%					
Phenol-D6		70.0	%					
Nitrobenzene-d5		65.6	%					
2-Fluorobiphenyl		68.8	%					
2,4,6-Tribromophenol		71.0	%					
Terphenyl-d14		82.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: IS66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UMJ-CCL	8.1	ug/L	1	10	11.	1.1	8.1
Phenol	U	8.1	ug/L	1	10	11.	1.9	8.1
2-Chlorophenol	U	8.1	ug/L	1	10	11.	3.4	8.1
2-Methylphenol	U	8.1	ug/L	1	10	11.	4.1	8.1
Acetophenone	U	8.1	ug/L	1	10	11.	4.2	8.1
3&4-Methylphenol	U	8.1	ug/L	1	10	11.	6.0	8.1
Isophorone	U	8.1	ug/L	1	10	11.	1.8	8.1
2-Nitrophenol	U	8.1	ug/L	1	10	11.	2.9	8.1
2,4-Dimethylphenol	U	8.1	ug/L	1	10	11.	4.7	8.1
Bis(2-Chloroethoxy) Methane	U	8.1	ug/L	1	10	11.	2.2	8.1
2,4-Dichlorophenol	U	8.1	ug/L	1	10	11.	3.2	8.1
4-Chloroaniline	U	8.1	ug/L	1	10	11.	2.0	8.1
Caprolactam	U	8.1	ug/L	1	10	11.	0.43	8.1
4-Chloro-3-Methylphenol	U	8.1	ug/L	1	10	11.	3.9	8.1
2-Methylnaphthalene	U	8.1	ug/L	1	10	11.	3.4	8.1
Hexachlorocyclopentadiene	U	8.1	ug/L	1	10	11.	1.3	8.1
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	27.	3.9	20.
1,1'-Biphenyl	U	8.1	ug/L	1	10	11.	2.9	8.1
2-Chloronaphthalene	U	8.1	ug/L	1	10	11.	3.1	8.1
Dimethyl Phthalate	UAL-BSL	8.1	ug/L	1	10	11.	2.2	8.1
Acenaphthylene	U	8.1	ug/L	1	10	11.	1.6	8.1
3-Nitroaniline	U	20.	ug/L	1	25	27.	1.6	20.
Acenaphthene	U	8.1	ug/L	1	10	11.	1.6	8.1
Diethylphthalate	U	8.1	ug/L	1	10	11.	2.2	8.1
Fluorene	U	8.1	ug/L	1	10	11.	2.2	8.1
4-Chlorophenyl-Phenylether	U	8.1	ug/L	1	10	11.	2.4	8.1
N-Nitrosodiphenylamine	U	8.1	ug/L	1	10	11.	4.0	8.1
4-Bromophenyl-Phenylether	U	8.1	ug/L	1	10	11.	2.0	8.1
Phenanthrene	U	8.1	ug/L	1	10	11.	2.6	8.1
Anthracene	U	8.1	ug/L	1	10	11.	1.8	8.1
Carbazole	U	8.1	ug/L	1	10	11.	2.2	8.1
Di-N-Butylphthalate	U	8.1	ug/L	1	10	11.	2.7	8.1
Fluoranthene	U	8.1	ug/L	1	10	11.	2.6	8.1
Pyrene	U	8.1	ug/L	1	10	11.	2.0	8.1
Butylbenzylphthalate	U	8.1	ug/L	1	10	11.	2.0	8.1

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-11
Client ID: IS66EB01-092110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 21-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: CB
Extraction Method: SW846 3510
Lab Prep Batch: WG82507

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.1	ug/L	1	10	11.	1.9	8.1
Benzo(g,h,i)perylene	U	8.1	ug/L	1	10	11.	1.6	8.1
2-Fluorophenol		36.6	%					
Phenol-D6		24.8	%					
Nitrobenzene-d5		61.5	%					
2-Fluorobiphenyl		65.8	%					
2,4,6-Tribromophenol		70.0	%					
Terphenyl-d14		68.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S042000I~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UJ-CCL	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	U	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	380	86.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	380	84.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	380	100	280
2-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	86.	710
2,6-Dinitrotoluene EXCLUDE-RE	U	280	ug/Kgdrywt	1	330	380	91.	280
3-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	110	710
2,4-Dinitrophenol	U	710	ug/Kgdrywt	1	820	940	430	710
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	91.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	92.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	90.	280
4-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	150	710
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	98.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		64.8	%					
Phenol-D6		70.0	%					
Nitrobenzene-d5		68.2	%					
2-Fluorobiphenyl		69.8	%					
2,4,6-Tribromophenol		73.4	%					
Terphenyl-d14		90.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P000~~IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 10-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ-CCL	250	ug/Kgdrywt	1	330	340	120	250
2,2'-Oxybis(1-Chloropropane)	U	250	ug/Kgdrywt	1	330	340	91.	250
Acetophenone	U	250	ug/Kgdrywt	1	330	340	180	250
Hexachloroethane	U	250	ug/Kgdrywt	1	330	340	98.	250
Isophorone	U	250	ug/Kgdrywt	1	330	340	77.	250
2-Nitrophenol	U	250	ug/Kgdrywt	1	330	340	170	250
Bis(2-Chloroethoxy) Methane	U	250	ug/Kgdrywt	1	330	340	98.	250
4-Chloroaniline	U	250	ug/Kgdrywt	1	330	340	120	250
Caprolactam	U	250	ug/Kgdrywt	1	330	340	150	250
4-Chloro-3-Methylphenol	U	250	ug/Kgdrywt	1	330	340	170	250
1,1'-Biphenyl	U	250	ug/Kgdrywt	1	330	340	74.	250
2-Chloronaphthalene	U	250	ug/Kgdrywt	1	330	340	89.	250
2-Nitroaniline	U	630	ug/Kgdrywt	1	820	840	77.	630
2,6-Dinitrotoluene EXCLUDE-RE ✓	U	250	ug/Kgdrywt	1	330	340	81.	250
3-Nitroaniline	U	630	ug/Kgdrywt	1	820	840	96.	630
2,4-Dinitrophenol	U	630	ug/Kgdrywt	1	820	840	380	630
Dibenzofuran	U	250	ug/Kgdrywt	1	330	340	81.	250
Diethylphthalate	U	250	ug/Kgdrywt	1	330	340	82.	250
4-Chlorophenyl-Phenylether	U	250	ug/Kgdrywt	1	330	340	80.	250
4-Nitroaniline	U	630	ug/Kgdrywt	1	820	840	140	630
N-Nitrosodiphenylamine	U	250	ug/Kgdrywt	1	330	340	220	250
4-Bromophenyl-Phenylether	U	250	ug/Kgdrywt	1	330	340	87.	250
Carbazole	U	250	ug/Kgdrywt	1	330	340	110	250
Di-N-Butylphthalate	U	250	ug/Kgdrywt	1	330	340	100	250
Butylbenzylphthalate	U	250	ug/Kgdrywt	1	330	340	95.	250
2-Fluorophenol		55.0	%					
Phenol-D6		60.9	%					
Nitrobenzene-d5		55.6	%					
2-Fluorobiphenyl		60.6	%					
2,4,6-Tribromophenol		69.7	%					
Terphenyl-d14		78.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UJ-CCL	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	96.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	81.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	78.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	94.	270
2-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	81.	660
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	85.	270
3-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	100	660
2,4-Dinitrophenol	U	660	ug/Kgdrywt	1	820	880	400	660
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	85.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	84.	270
4-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	140	660
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	92.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		54.0	%					
Phenol-D6		57.1	%					
Nitrobenzene-d5		57.0	%					
2-Fluorobiphenyl		60.3	%					
2,4,6-Tribromophenol		64.1	%					
Terphenyl-d14		71.5	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66SS440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	JWS-ecL	260	ug/Kgdrywt	1	330	340	120	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	340	92.	260
Acetophenone	U	260	ug/Kgdrywt	1	330	340	180	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	340	100	260
Isophorone	U	260	ug/Kgdrywt	1	330	340	78.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	340	170	260
Bis(2-Chloroethoxy) Methane	U	260	ug/Kgdrywt	1	330	340	100	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	340	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	340	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	340	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	340	76.	260
2-Chloronaphthalene	U	260	ug/Kgdrywt	1	330	340	90.	260
2-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	78.	640
2,6-Dinitrotoluene	EXCLUDE-RE U	260	ug/Kgdrywt	1	330	340	82.	260
3-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	98.	640
2,4-Dinitrophenol	U	640	ug/Kgdrywt	1	820	850	390	640
Dibenzofuran	U	260	ug/Kgdrywt	1	330	340	82.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	340	83.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	81.	260
4-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	140	640
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	340	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	88.	260
Carbazole	U	260	ug/Kgdrywt	1	330	340	120	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	340	100	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	340	97.	260
2-Fluorophenol		54.3	%					
Phenol-D6		60.1	%					
Nitrobenzene-d5		57.4	%					
2-Fluorobiphenyl		62.4	%					
2,4,6-Tribromophenol		62.1	%					
Terphenyl-d14		75.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 27-SEP-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG82583

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U JUS-CCL	260	ug/Kgdrywt	1	330	340	120	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	340	92.	260
Acetophenone	U	260	ug/Kgdrywt	1	330	340	180	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	340	99.	260
Isophorone	U	260	ug/Kgdrywt	1	330	340	78.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	340	170	260
Bis(2-Chloroethoxy) Methane	U	260	ug/Kgdrywt	1	330	340	99.	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	340	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	340	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	340	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	340	76.	260
2-Chloronaphthalene	U	260	ug/Kgdrywt	1	330	340	90.	260
2-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	78.	640
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	260	ug/Kgdrywt	1	330	340	82.	260
3-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	97.	640
2,4-Dinitrophenol	U	640	ug/Kgdrywt	1	820	850	390	640
Dibenzofuran	U	260	ug/Kgdrywt	1	330	340	82.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	340	83.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	81.	260
4-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	140	640
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	340	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	88.	260
Carbazole	U	260	ug/Kgdrywt	1	330	340	110	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	340	100	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	340	96.	260
2-Fluorophenol		53.3	%					
Phenol-D6		58.8	%					
Nitrobenzene-d5		57.1	%					
2-Fluorobiphenyl		60.5	%					
2,4,6-Tribromophenol		58.0	%					
Terphenyl-d14		76.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.2	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.36	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-3
Client ID: IS66FB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		99.2	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		95.5	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.30	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-4
Client ID: IS66EB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		99.6	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		98.0	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U EXCLUDERE	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J	1.8	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone		40.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J	4.5	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	39.4	%					
Toluene-D8	*	62.4	%					
1,2-Dichloroethane-D4		75.8	%					
Dibromofluoromethane		72.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5RA
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UL-SSL	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J B-MBL	1.3	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J L-SSL	18.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J J-CT	3.1	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-5RA
Client ID: ~~IS66DP300001~~ IS66SS300001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	42.7	%					
Toluene-D8	*	57.1	%					
1,2-Dichloroethane-D4		80.9	%					
Dibromofluoromethane		70.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RE	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.4	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	U	14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J	2.7	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	55.1	%					
Toluene-D8	*	66.4	%					
1,2-Dichloroethane-D4		81.8	%					
Dibromofluoromethane		76.2	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6RA
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-MBL	1.3	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J L-SSL	24.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J J-DF	2.9	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-6RA
Client ID: ~~IS66DP300910~~ IS66SB300910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
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Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSC	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	68.6	%					
Toluene-D8	*	79.4	%					
1,2-Dichloroethane-D4		96.5	%					
Dibromofluoromethane		87.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-12
Client ID: IS66TB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.5	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-12
Client ID: IS66TB092210
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 29-SEP-10
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG82712

Analysis Date: 29-SEP-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		98.0	%					
Toluene-d8		99.7	%					
1,2-Dichloroethane-d4		96.2	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J	1.9	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	J	8.4	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J	5.0	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude PE	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene	*	26.1	%					
Toluene-D8	*	50.3	%					
1,2-Dichloroethane-D4		85.9	%					
Dibromofluoromethane		73.8	%					

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HK 12/9/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13RA
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J B-MB	1.6	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone	U	16.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J J-DT	4.8	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-13RA
Client ID: ~~IS66S0420001~~ IS66SS420001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	43.8	%					
Toluene-D8	*	64.1	%					
1,2-Dichloroethane-D4		92.6	%					
Dibromofluoromethane		80.3	%					

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J	1.7	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone	J	8.8	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J	3.9	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

Exclude RE

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-PE	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	28.4	%					
Toluene-D8	*	57.4	%					
1,2-Dichloroethane-D4		74.3	%					
Dibromofluoromethane		68.9	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14RA
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U LL-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.5	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	U	15.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J I-OT-	3.1	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-14RA
Client ID: ~~IS66S042P0001~~ IS66SS42P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	42.3	%					
Toluene-D8	*	57.9	%					
1,2-Dichloroethane-D4		88.3	%					
Dibromofluoromethane		73.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.6	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J	7.9	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J	2.9	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	42.7	%					
Toluene-D8	*	70.1	%					
1,2-Dichloroethane-D4		95.7	%					
Dibromofluoromethane		85.9	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15RA
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
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Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J B-MBL	1.3	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J L-SSL	10.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J FOT	5.0	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-15RA
Client ID: ~~IS66S0430001~~ IS66SS430001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	65.4	%					
Toluene-D8	*	74.9	%					
1,2-Dichloroethane-D4		104.	%					
Dibromofluoromethane		90.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J	7.0	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J	3.1	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude RE	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	31.5	%					
Toluene-D8	*	57.4	%					
1,2-Dichloroethane-D4		83.8	%					
Dibromofluoromethane		74.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16RA
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J B-SSL	1.7	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone	J L-SSL	17.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J J-ST-	5.1	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-16RA
Client ID: ~~IS66S0440001~~ IS66SS440001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U ML-SSL	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	64.0	%					
Toluene-D8	*	68.6	%					
1,2-Dichloroethane-D4		101.	%					
Dibromofluoromethane		83.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66SS450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	8.5	ug/Kgdrywt	1	10	17.	1.6	8.5
Chloromethane	U	8.5	ug/Kgdrywt	1	10	17.	2.4	8.5
Vinyl Chloride	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
Bromomethane	U	8.5	ug/Kgdrywt	1	10	17.	1.9	8.5
Chloroethane	U	8.5	ug/Kgdrywt	1	10	17.	2.2	8.5
Trichlorofluoromethane	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
1,1-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Carbon Disulfide	J	2.3	ug/Kgdrywt	1	5	8.5	1.3	4.2
Freon-113	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Methylene Chloride	U	21.	ug/Kgdrywt	1	25	42.	13.	21.
Acetone	J	12.	ug/Kgdrywt	1	25	42.	8.7	21.
trans-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Methyl tert-butyl Ether	U	4.2	ug/Kgdrywt	1	5	8.5	1.9	4.2
1,1-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.9	4.2
cis-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Chloroform	U	4.2	ug/Kgdrywt	1	5	8.5	0.60	4.2
Carbon Tetrachloride	U	4.2	ug/Kgdrywt	1	5	8.5	2.2	4.2
1,1,1-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	0.71	4.2
2-Butanone	U	21.	ug/Kgdrywt	1	25	42.	10.	21.
Benzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Cyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
1,2-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
Trichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,2-Dichloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
Bromodichloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
cis-1,3-Dichloropropene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Toluene	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
4-Methyl-2-Pentanone	U	21.	ug/Kgdrywt	1	25	42.	10.	21.
Tetrachloroethene	J	3.9	ug/Kgdrywt	1	5	8.5	2.0	4.2
trans-1,3-Dichloropropene	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
1,1,2-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Dibromochloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
1,2-Dibromoethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.0	4.2
2-Hexanone	U	21.	ug/Kgdrywt	1	25	42.	8.2	21.
Chlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

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Received Date: 23-SEP-10
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Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	4.2	ug/Kgdrywt	1	5	8.5	1.1	4.2
Total Xylene	U	13.	ug/Kgdrywt	1	15	26.	2.2	13.
Styrene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2
Bromoform	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Isopropylbenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
1,1,2,2-Tetrachloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.4	4.2
1,3-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,4-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.75	4.2
1,2-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
1,2-Dibromo-3-Chloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.6	4.2
1,2,4-Trichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
Methyl Acetate	U	5.1	ug/Kgdrywt	1	5	8.5	4.6	5.1
Methylcyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
p-Bromofluorobenzene	*	21.8	%					
Toluene-D8	*	54.5	%					
1,2-Dichloroethane-D4		80.1	%					
Dibromofluoromethane		71.3	%					

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HK 12/9/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17RA
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J B-MBL	1.6	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone	J L-SSL	14.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J J-CT	4.6	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U UL-SSL	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-17RA
Client ID: ~~IS66S0450001~~ IS66SS450001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date: 24-SEP-10
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 14-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U LL-SSL	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	46.6	%					
Toluene-D8	*	71.5	%					
1,2-Dichloroethane-D4		106.	%					
Dibromofluoromethane		89.1	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-18
Client ID: ~~IS66DP380001-01~~ IS66SS380001-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U EXCLUDED	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone		71.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	J	2.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J	2.8	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-18
Client ID: ~~IS66DP380001-01~~ IS66SS380001-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82585

Analysis Date: 24-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	5.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	J	0.94	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	34.7	%					
Toluene-D8	*	55.8	%					
1,2-Dichloroethane-D4		93.6	%					
Dibromofluoromethane		78.7	%					

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HK 12/9/2010

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-18RA
Client ID: ~~IS66DP380001-01~~ IS66SS380001-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-WBL	2.1	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J-CCH	34.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-CCT	7.8	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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REISSUE

HK 12/9/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-18RA
Client ID: ~~IS66DP380001-01~~ IS66SS380001-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U 4L-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	39.6	%					
Toluene-D8	*	71.6	%					
1,2-Dichloroethane-D4		96.6	%					
Dibromofluoromethane		86.0	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-19
Client ID: ~~IS66DP381213-01~~ IS66SB381213-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	2.2	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J J-CCH	6.5	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-CCT	10.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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REISSUE

HK 12/9/2010

Katahdin Analytical Services A0000043

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5842-19
Client ID: ~~IS66DP381213-01~~ IS66SB381213-01
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-1

Sample Date: 22-SEP-10
Received Date: 23-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		92.5	%					
Toluene-D8		101.	%					
1,2-Dichloroethane-D4		117.	%					
Dibromofluoromethane		105.	%					

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REISSUE

HK 12/9/2010

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001027.

The original Sample IDs as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66AH07	E1001027-001
IS66AH08	E1001027-002
IS66AH09	E1001027-003
IS66DP380001	E1001027-004
IS66DP381213	E1001027-005
IS66EB02-092110	E1001027-006
IS66FB092210	E1001027-007
IS66EB01-092110	E1001027-008
IS66EB092210	E1001027-009

Sample Name	Lab Sample ID
IS66DP300001	E1001027-010
IS66DP300910	E1001027-011
IS66S0420001	E1001027-012
IS66S042P0001	E1001027-013
IS66S0430001	E1001027-014
IS66S0440001	E1001027-015
IS66S0450001	E1001027-016

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation

- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/21/10 and 9/22/10. Samples were received at the laboratory on 9/23/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66AH07	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66AH07	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66AH07	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66AH07	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66AH07	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66AH08	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66AH09	2,3,7,8-TCDD (dioxin)
IS66AH09	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP380001	2,3,7,8-TCDD (dioxin)
IS66DP381213	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP300001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP300001	1,2,3,7,8-Pentachlorodibenzofuran

Sample ID	Compound
IS66DP300910	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66S0420001	1,2,3,7,8-Pentachlorodibenzofuran
IS66S0420001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66S042P0001	1,2,3,7,8,9-Hexachlorodibenzofuran
IS66S0430001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66S0430001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66S0430001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66S0440001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66S0450001	2,3,4,7,8-Pentachlorodibenzofuran
IS66S0450001	1,2,3,7,8,9-Hexachlorodibenzofuran
IS66S0450001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66S0450001	1,2,3,4,7,8,9-Heptachlorodibenzofuran

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66AH07	1,2,3,7,8,9-Hexachlorodibenzofuran
IS66AH07	Octachlorodibenzofuran
IS66AH08	2,3,4,7,8-Pentachlorodibenzofuran
IS66AH09	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66AH09	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66AH09	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP380001	2,3,4,7,8-Pentachlorodibenzofuran
IS66DP381213	2,3,7,8-TCDD (dioxin)
IS66DP300001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP300001	2,3,4,7,8-Pentachlorodibenzofuran
IS66DP300001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP300001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP300910	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66S0420001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66S0420001	2,3,4,7,8-Pentachlorodibenzofuran
IS66S0420001	2,3,7,8-Tetrachlorodibenzofuran
IS66S042P0001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66S042P0001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66S042P0001	2,3,4,7,8-Pentachlorodibenzofuran

Sample ID	Compound
IS66S0430001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66S0430001	2,3,4,7,8-Pentachlorodibenzofuran
IS66S0440001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66S0440001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66S0450001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66S0450001	1,2,3,7,8-Pentachlorodibenzofuran
IS66S0450001	1,2,3,6,7,8-Hexachlorodibenzofuran

Blanks

Various compounds in were detected in method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	Octachlorodibenzo-p-dioxin	0.778	7.78
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	54	270
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	56	280
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	61	305
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	61	305
Method Blank	Octachlorodibenzo-p-dioxin-C13	63	315
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	50	250
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	64	320
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	60	300
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	74	370
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1.17	5.85
Method Blank	Octachlorodibenzo-p-dioxin	9.01	90.1
Method Blank	Total heptachlorodibenzo-p-dioxin	2.95	14.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	66	330
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	73	365
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	52	260
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	57	285
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	55	275
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	45	225
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	88	440

Internal Standards
Internal standards were low for the samples below. The compounds affected by the low internal standard are summarized in **Attachment 1.**

Sample ID
IS66AH09
IS66DP380001
IS66DP381213
IS66DP300910
IS66S042P0001

Linear Range
Octachlorodibenzo-p-dioxin was outside of linear range for the samples listed below. Affected data are summarized in **Attachment 1.**

Sample ID
IS66DP300001
IS66DP300910
IS66S0420001
IS66S0430001
IS66S0440001
IS66S0450001

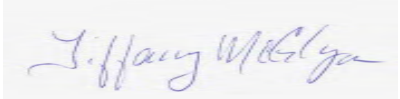
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1205
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH07	**Units:**	ng/Kg
Lab Code:	E1001027-001	**Basis:**	Dry
		Percent Solids:	76.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1447
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.257g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209692	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0531	1.27			1
1,2,3,7,8-PeCDD	**0.0639**	JK	0.0208	3.18	1.10	1.000	1
1,2,3,4,7,8-HxCDD	ND	U	0.0458	3.18			1
1,2,3,6,7,8-HxCDD	**0.184**	JK	0.0402	3.18	0.68	1.000	1
1,2,3,7,8,9-HxCDD	**0.164**	JK	0.0439	3.18	1.76	1.008	1
1,2,3,4,6,7,8-HpCDD	**4.16**	B	0.0856	3.18	0.92	1.000	1
OCDD	**89.2**	B	0.118	6.36	0.86	1.000	1
2,3,7,8-TCDF	**3.07**	C	0.0784	1.27	0.70	1.001	1
1,2,3,7,8-PeCDF	**0.911**	J	0.0290	3.18	1.48	1.000	1
2,3,4,7,8-PeCDF	**0.476**	J	0.0287	3.18	1.41	1.024	1
1,2,3,4,7,8-HxCDF	**0.429**	JK	0.0103	3.18	0.92	1.000	1
1,2,3,6,7,8-HxCDF	**0.178**	JK	0.00979	3.18	1.62	1.003	1
1,2,3,7,8,9-HxCDF	**0.0398**	JK	0.0129	3.18	1.46	1.036	1
2,3,4,6,7,8-HxCDF	**0.128**	J	0.0110	3.18	1.30	1.017	1
1,2,3,4,6,7,8-HpCDF	**0.841**	J	0.0505	3.18	1.15	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0684	3.18			1
OCDF	**1.82**	JK	0.0589	6.36	0.75	1.004	1
Total Tetra-Dioxins	**0.841**	J	0.0531	1.27	0.73		1
Total Penta-Dioxins	**0.436**	J	0.0208	3.18	1.52		1
Total Hexa-Dioxins	**1.11**	J	0.0402	3.18	1.22		1
Total Hepta-Dioxins	**9.81**		0.0856	3.18	1.08		1
Total Tetra-Furans	**18.2**		0.0784	1.27	0.75		1
Total Penta-Furans	**6.12**		0.0287	3.18	1.56		1
Total Hexa-Furans	**1.13**	J	0.00979	3.18	1.14		1
Total Hepta-Furans	**1.90**	J	0.0505	3.18	1.15		1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1205
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH07	**Units:**	ng/Kg
Lab Code:	E1001027-001	**Basis:**	Dry
		Percent Solids:	76.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1448
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.257g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137847	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**2.18**		0.278	1.27	0.73	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	430.603	43		40-135	0.81	1.061
37Cl-2,3,7,8-TCDD	800	722.009	90		40-135	NA	0.988

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1205
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH07	**Units:**	Percent
Lab Code:	E1001027-001	**Basis:**	Dry
		Percent Solids:	76.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1447
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.257g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209692	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	527.438	53		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	656.386	66		40-135	1.57	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1366.583	55		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1431.736	57		40-135	1.05	1.068
13C-OCDD	5000	2201.705	44		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	442.681	44		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	655.371	66		40-135	1.60	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1224.479	49		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1252.142	50		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	614.081	77		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1205
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH07	**Units:**	ng/Kg
Lab Code:	E1001027-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0531	1	1	
1,2,3,7,8-PeCDD	**0.0639**	0.0208	1	1	0.0639
1,2,3,4,7,8-HxCDD	ND	0.0458	1	0.1	
1,2,3,6,7,8-HxCDD	**0.184**	0.0402	1	0.1	0.0184
1,2,3,7,8,9-HxCDD	**0.164**	0.0439	1	0.1	0.0164
1,2,3,4,6,7,8-HpCDD	**4.16**	0.0856	1	0.01	0.0416
OCDD	**89.2**	0.118	1	0.0003	0.0268
2,3,7,8-TCDF	**2.18**	0.278	1	0.1	0.218
1,2,3,7,8-PeCDF	**0.911**	0.0290	1	0.03	0.0273
2,3,4,7,8-PeCDF	**0.476**	0.0287	1	0.3	0.143
1,2,3,4,7,8-HxCDF	**0.429**	0.0103	1	0.1	0.0429
1,2,3,6,7,8-HxCDF	**0.178**	0.00979	1	0.1	0.0178
1,2,3,7,8,9-HxCDF	**0.0398**	0.0129	1	0.1	0.00398
2,3,4,6,7,8-HxCDF	**0.128**	0.0110	1	0.1	0.0128
1,2,3,4,6,7,8-HpCDF	**0.841**	0.0505	1	0.01	0.00841
1,2,3,4,7,8,9-HpCDF	ND	0.0684	1	0.01	
OCDF	**1.82**	0.0589	1	0.0003	0.000546
		Total TEQ			0.642

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1230
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH08	**Units:**	ng/Kg
Lab Code:	E1001027-002	**Basis:**	Dry
		Percent Solids:	48.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 1228
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209651	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209649

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0780	2.01			1
1,2,3,7,8-PeCDD	ND	U	0.0925	5.04			1
1,2,3,4,7,8-HxCDD	ND	U	0.198	5.04			1
1,2,3,6,7,8-HxCDD	**2.01**	J	0.155	5.04	1.26	1.000	1
1,2,3,7,8,9-HxCDD	**0.621**	JK	0.187	5.04	1.86	1.008	1
1,2,3,4,6,7,8-HpCDD	**73.3**	B	0.208	5.04	1.08	1.000	1
OCDD	**654**	B	0.206	10.1	0.89	1.000	1
2,3,7,8-TCDF	**3.76**		0.130	2.01	0.81	1.001	1
1,2,3,7,8-PeCDF	**1.61**	J	0.0420	5.04	1.71	1.001	1
2,3,4,7,8-PeCDF	**0.625**	JK	0.0407	5.04	1.91	1.024	1
1,2,3,4,7,8-HxCDF	**0.816**	J	0.263	5.04	1.19	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.248	5.04			1
1,2,3,7,8,9-HxCDF	ND	U	0.334	5.04			1
2,3,4,6,7,8-HxCDF	ND	U	0.283	5.04			1
1,2,3,4,6,7,8-HpCDF	**6.36**		0.170	5.04	0.96	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.227	5.04			1
OCDF	**8.62**	J	0.201	10.1	0.79	1.004	1
Total Tetra-Dioxins	**1.74**	J	0.0780	2.01	0.75		1
Total Penta-Dioxins	ND	U	0.0925	5.04			1
Total Hexa-Dioxins	**10.5**		0.155	5.04	1.10		1
Total Hepta-Dioxins	**129**		0.208	5.04	1.05		1
Total Tetra-Furans	**18.3**		0.130	2.01	0.70		1
Total Penta-Furans	**9.64**		0.0407	5.04	1.53		1
Total Hexa-Furans	**4.65**	J	0.248	5.04	1.20		1
Total Hepta-Furans	**16.8**		0.170	5.04	0.96		1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1230
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH08	**Units:**	Percent
Lab Code:	E1001027-002	**Basis:**	Dry
		Percent Solids:	48.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 1228
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209651	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209649

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	461.035	46		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	446.139	45		40-135	1.62	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1130.086	45		40-135	1.29	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1163.093	47		40-135	1.06	1.069
13C-OCDD	5000	2330.669	47		40-135	0.93	1.147
13C-2,3,7,8-TCDF	1000	396.367	40		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	512.732	51		40-135	1.60	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1266.674	51		40-135	0.52	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1128.233	45		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	532.127	67		40-135	NA	1.009

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1230
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH08	**Units:**	ng/Kg
Lab Code:	E1001027-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0780	1	1	
1,2,3,7,8-PeCDD	ND	0.0925	1	1	
1,2,3,4,7,8-HxCDD	ND	0.198	1	0.1	
1,2,3,6,7,8-HxCDD	**2.01**	0.155	1	0.1	0.201
1,2,3,7,8,9-HxCDD	**0.621**	0.187	1	0.1	0.0621
1,2,3,4,6,7,8-HpCDD	**73.3**	0.208	1	0.01	0.733
OCDD	**654**	0.206	1	0.0003	0.196
2,3,7,8-TCDF	**2.45**	0.530	1	0.1	0.245
1,2,3,7,8-PeCDF	**1.61**	0.0420	1	0.03	0.0483
2,3,4,7,8-PeCDF	**0.625**	0.0407	1	0.3	0.188
1,2,3,4,7,8-HxCDF	**0.816**	0.263	1	0.1	0.0816
1,2,3,6,7,8-HxCDF	ND	0.248	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.334	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.283	1	0.1	
1,2,3,4,6,7,8-HpCDF	**6.36**	0.170	1	0.01	0.0636
1,2,3,4,7,8,9-HpCDF	ND	0.227	1	0.01	
OCDF	**8.62**	0.201	1	0.0003	0.00259
		Total TEQ			1.82

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1230
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH08	**Units:**	ng/Kg
Lab Code:	E1001027-002	**Basis:**	Dry
		Percent Solids:	48.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 0940
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.213g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137839	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**2.45**		0.530	2.01	0.77	1.000	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	427.573	43		40-135	0.79	1.061
37Cl-2,3,7,8-TCDD	800	616.281	77		40-135	NA	0.987

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1250
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH09	**Units:**	ng/Kg
Lab Code:	E1001027-003	**Basis:**	Dry
		Percent Solids:	81.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2211
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.425g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209662	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.196**	JK	0.0801	1.18	0.41	1.001	1
1,2,3,7,8-PeCDD	**0.319**	J	0.0418	2.94	1.34	1.001	1
1,2,3,4,7,8-HxCDD	**0.287**	JK	0.0899	2.94	0.93	0.998	1
1,2,3,6,7,8-HxCDD	**0.564**	JK	0.0789	2.94	1.48	1.000	1
1,2,3,7,8,9-HxCDD	**0.624**	JK	0.0861	2.94	0.96	1.008	1
1,2,3,4,6,7,8-HpCDD	**17.2**	B	0.112	2.94	1.04	1.000	1
OCDD	**265**	B	0.0826	5.88	0.89	1.000	1
2,3,7,8-TCDF	**24.1**	C	0.100	1.18	0.74	1.001	1
1,2,3,7,8-PeCDF	**9.41**		0.0218	2.94	1.53	1.000	1
2,3,4,7,8-PeCDF	**3.78**		0.0215	2.94	1.38	1.024	1
1,2,3,4,7,8-HxCDF	**3.04**		0.0927	2.94	1.27	1.000	1
1,2,3,6,7,8-HxCDF	**1.15**	J	0.0881	2.94	1.29	1.003	1
1,2,3,7,8,9-HxCDF	**0.193**	J	0.115	2.94	1.06	1.036	1
2,3,4,6,7,8-HxCDF	**0.463**	JK	0.0987	2.94	1.70	1.017	1
1,2,3,4,6,7,8-HpCDF	**3.11**		0.0763	2.94	1.10	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.104	2.94			1
OCDF	**8.14**		0.0748	5.88	0.84	1.004	1
Total Tetra-Dioxins	**5.26**		0.0801	1.18	0.88		1
Total Penta-Dioxins	**2.06**	J	0.0418	2.94	1.71		1
Total Hexa-Dioxins	**6.70**		0.0789	2.94	1.27		1
Total Hepta-Dioxins	**55.7**		0.112	2.94	1.06		1
Total Tetra-Furans	**155**		0.100	1.18	0.88		1
Total Penta-Furans	**71.9**		0.0215	2.94	1.50		1
Total Hexa-Furans	**10.7**		0.0881	2.94	1.13		1
Total Hepta-Furans	**7.44**		0.0763	2.94	1.10		1

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1250
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH09	**Units:**	Percent
Lab Code:	E1001027-003	**Basis:**	Dry
		Percent Solids:	81.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2211
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.425g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209662	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	475.456	48		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	554.556	55		40-135	1.58	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1166.684	47		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1169.913	47		40-135	1.07	1.068
13C-OCDD	5000	1886.902	38	Y	40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	425.815	43		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	526.951	53		40-135	1.61	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1118.688	45		40-135	0.53	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1059.578	42		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	559.955	70		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1250
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH09	**Units:**	ng/Kg
Lab Code:	E1001027-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.196**	0.0801	1	1	0.196
1,2,3,7,8-PeCDD	**0.319**	0.0418	1	1	0.319
1,2,3,4,7,8-HxCDD	**0.287**	0.0899	1	0.1	0.0287
1,2,3,6,7,8-HxCDD	**0.564**	0.0789	1	0.1	0.0564
1,2,3,7,8,9-HxCDD	**0.624**	0.0861	1	0.1	0.0624
1,2,3,4,6,7,8-HpCDD	**17.2**	0.112	1	0.01	0.172
OCDD	**265**	0.0826	1	0.0003	0.0795
2,3,7,8-TCDF	**16.8**	0.276	1	0.1	1.68
1,2,3,7,8-PeCDF	**9.41**	0.0218	1	0.03	0.282
2,3,4,7,8-PeCDF	**3.78**	0.0215	1	0.3	1.13
1,2,3,4,7,8-HxCDF	**3.04**	0.0927	1	0.1	0.304
1,2,3,6,7,8-HxCDF	**1.15**	0.0881	1	0.1	0.115
1,2,3,7,8,9-HxCDF	**0.193**	0.115	1	0.1	0.0193
2,3,4,6,7,8-HxCDF	**0.463**	0.0987	1	0.1	0.0463
1,2,3,4,6,7,8-HpCDF	**3.11**	0.0763	1	0.01	0.0311
1,2,3,4,7,8,9-HpCDF	ND	0.104	1	0.01	
OCDF	**8.14**	0.0748	1	0.0003	0.00244
		Total TEQ			4.52

2005 WHO TEFs, ND = 0

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1250
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66AH09	**Units:**	ng/Kg
Lab Code:	E1001027-003	**Basis:**	Dry
		Percent Solids:	81.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1007
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.425g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137840	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**16.8**		0.276	1.18	0.80	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	427.368	43		40-135	0.79	1.061
37Cl-2,3,7,8-TCDD	800	628.126	79		40-135	NA	0.988

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1415
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~SS380001	**Units:**	ng/Kg
Lab Code:	E1001027-004	**Basis:**	Dry
		Percent Solids:	96.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2300
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.527g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209663	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	0.139	~~JK~~ [X-EMPC]	0.0293	0.988	0.47	1.001	1
1,2,3,7,8-PeCDD	0.882	J	0.0385	2.47	1.37	1.000	1
1,2,3,4,7,8-HxCDD	1.63	~~J~~ [J-ISL]	0.140	2.47	1.43	0.998	1
1,2,3,6,7,8-HxCDD	2.92	[J-ISL]	0.123	2.47	1.42	1.000	1
1,2,3,7,8,9-HxCDD	3.89	[J-ISL]	0.135	2.47	1.16	1.008	1
1,2,3,4,6,7,8-HpCDD	120	~~B~~ [J-ISL]	0.378	2.47	1.07	1.000	1
OCDD	3350	~~BE~~ [J-ISL]	0.0908	4.94	0.89	1.000	1
2,3,7,8-TCDF	0.784	~~C~~ [Exclude-OT]	0.0341	0.988	0.81	1.001	1
1,2,3,7,8-PeCDF	0.382	J	0.0526	2.47	1.40	1.001	1
2,3,4,7,8-PeCDF	0.347	~~JK~~ [X-IRIS]	0.0520	2.47	1.89	1.024	1
1,2,3,4,7,8-HxCDF	1.44	~~J~~ [J-ISL]	0.0772	2.47	1.10	1.000	1
1,2,3,6,7,8-HxCDF	0.649	~~J~~ [J-ISL]	0.0733	2.47	1.08	1.003	1
1,2,3,7,8,9-HxCDF	ND	~~K~~ [UJ-ISL]	0.0957	2.47			1
2,3,4,6,7,8-HxCDF	0.619	~~J~~ [J-ISL]	0.0822	2.47	1.17	1.017	1
1,2,3,4,6,7,8-HpCDF	9.55	[J-ISL]	0.0776	2.47	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	0.704	~~J~~ [J-ISL]	0.106	2.47	1.01	1.033	1
OCDF	20.8		0.140	4.94	0.84	1.004	1
Total Tetra-Dioxins	0.272	J	0.0293	0.988	0.80		1
Total Penta-Dioxins	4.14		0.0385	2.47	1.38		1
Total Hexa-Dioxins	38.5		0.123	2.47	1.24		1
Total Hepta-Dioxins	399		0.378	2.47	1.05		1
Total Tetra-Furans	4.27		0.0341	0.988	0.83		1
Total Penta-Furans	6.11		0.0520	2.47	1.69		1
Total Hexa-Furans	14.5		0.0733	2.47	1.30		1
Total Hepta-Furans	27.2		0.0776	2.47	1.00		1

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1415
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~SS380001	**Units:**	Percent
Lab Code:	E1001027-004	**Basis:**	Dry
		Percent Solids:	96.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2300
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.527g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209663	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	440.060	44		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	496.528	50		40-135	1.61	1.179
13C-1,2,3,6,7,8-HxCDD	2500	933.810	37	Y	40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	916.741	37	Y	40-135	1.07	1.068
13C-OCDD	5000	1413.425	28	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	393.522	39	Y	40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	494.767	49		40-135	1.61	1.138
13C-1,2,3,4,7,8-HxCDF	2500	883.521	35	Y	40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	831.258	33	Y	40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	510.159	64		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1415
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66DP380001	**Units:**	ng/Kg
Lab Code:	E1001027-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.139**	0.0293	1	1	0.139
1,2,3,7,8-PeCDD	**0.882**	0.0385	1	1	0.882
1,2,3,4,7,8-HxCDD	**1.63**	0.140	1	0.1	0.163
1,2,3,6,7,8-HxCDD	**2.92**	0.123	1	0.1	0.292
1,2,3,7,8,9-HxCDD	**3.89**	0.135	1	0.1	0.389
1,2,3,4,6,7,8-HpCDD	**120**	0.378	1	0.01	1.20
OCDD	**3350**	0.0908	1	0.0003	1.01
2,3,7,8-TCDF	**0.438**	0.167	1	0.1	0.0438
1,2,3,7,8-PeCDF	**0.382**	0.0526	1	0.03	0.0115
2,3,4,7,8-PeCDF	**0.347**	0.0520	1	0.3	0.104
1,2,3,4,7,8-HxCDF	**1.44**	0.0772	1	0.1	0.144
1,2,3,6,7,8-HxCDF	**0.649**	0.0733	1	0.1	0.0649
1,2,3,7,8,9-HxCDF	ND	0.0957	1	0.1	
2,3,4,6,7,8-HxCDF	**0.619**	0.0822	1	0.1	0.0619
1,2,3,4,6,7,8-HpCDF	**9.55**	0.0776	1	0.01	0.0955
1,2,3,4,7,8,9-HpCDF	**0.704**	0.106	1	0.01	0.00704
OCDF	**20.8**	0.140	1	0.0003	0.00624
		Total TEQ			4.61

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1415
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~SS380001	**Units:**	ng/Kg
Lab Code:	E1001027-004	**Basis:**	Dry
		Percent Solids:	96.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1044
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.527g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137841	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.438**	J	0.167	0.988	0.84	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	439.206	44		40-135	0.81	1.061
37Cl-2,3,7,8-TCDD	800	611.089	76		40-135	NA	0.988

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~SB381213	**Units:**	ng/Kg
Lab Code:	E1001027-005	**Basis:**	Dry
		Percent Solids:	88.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2348
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.294g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209664	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.354**	~~JK~~ X-IRIS	0.0483	1.10	0.58	1.001	1
1,2,3,7,8-PeCDD	**0.150**	~~JK~~ X-EMPC	0.0399	2.75	0.92	1.001	1
1,2,3,4,7,8-HxCDD	**0.584**	J	0.157	2.75	1.37	0.998	1
1,2,3,6,7,8-HxCDD	**1.12**	J	0.138	2.75	1.10	1.000	1
1,2,3,7,8,9-HxCDD	**1.63**	J	0.151	2.75	1.16	1.008	1
1,2,3,4,6,7,8-HpCDD	**73.6**	~~B~~	0.295	2.75	1.06	1.000	1
OCDD	**3470**	~~BE~~ J-ISL	0.0655	5.51	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.0719	1.10			1
1,2,3,7,8-PeCDF	ND	U	0.0349	2.75			1
2,3,4,7,8-PeCDF	ND	U	0.0344	2.75			1
1,2,3,4,7,8-HxCDF	ND	U	0.0299	2.75			1
1,2,3,6,7,8-HxCDF	ND	U	0.0284	2.75			1
1,2,3,7,8,9-HxCDF	ND	U	0.0371	2.75			1
2,3,4,6,7,8-HxCDF	ND	U	0.0318	2.75			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0396	2.75			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0537	2.75			1
OCDF	ND	U	0.0660	5.51			1
Total Tetra-Dioxins	**26.1**		0.0483	1.10	0.87		1
Total Penta-Dioxins	**32.6**		0.0399	2.75	1.57		1
Total Hexa-Dioxins	**144**		0.138	2.75	1.24		1
Total Hepta-Dioxins	**400**		0.295	2.75	1.02		1
Total Tetra-Furans	ND	U	0.0719	1.10			1
Total Penta-Furans	ND	U	0.0344	2.75			1
Total Hexa-Furans	**0.0917**	J	0.0284	2.75	1.17		1
Total Hepta-Furans	ND	U	0.0396	2.75			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP381213 SB	**Units:**	Percent
Lab Code:	E1001027-005	**Basis:**	Dry
		Percent Solids:	88.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/1/10 2348
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.294g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209664	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	502.342	50		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	555.976	56		40-135	1.62	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1407.578	56		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1341.879	54		40-135	1.05	1.068
13C-OCDD	5000	1963.771	39	Y	40-135	0.92	1.147
13C-2,3,7,8-TCDF	1000	449.972	45		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	521.315	52		40-135	1.57	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1210.336	48		40-135	0.52	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1208.028	48		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	576.976	72		40-135	NA	1.009

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SB IS66DP381213	**Units:**	ng/Kg
Lab Code:	E1001027-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.354**	0.0483	1	1	0.354
1,2,3,7,8-PeCDD	**0.150**	0.0399	1	1	0.150
1,2,3,4,7,8-HxCDD	**0.584**	0.157	1	0.1	0.0584
1,2,3,6,7,8-HxCDD	**1.12**	0.138	1	0.1	0.112
1,2,3,7,8,9-HxCDD	**1.63**	0.151	1	0.1	0.163
1,2,3,4,6,7,8-HpCDD	**73.6**	0.295	1	0.01	0.736
OCDD	**3470**	0.0655	1	0.0003	1.04
2,3,7,8-TCDF	ND	0.0719	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0349	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0344	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0299	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0284	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0371	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0318	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0396	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0537	1	0.01	
OCDF	ND	0.0660	1	0.0003	
		Total TEQ			2.61

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1430
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB02-092110	**Units:**	pg/L
Lab Code:	E1001027-006	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2000
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209698	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.563	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.482	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.660	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.588	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.689	25.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.382	25.5			1
OCDD	3.70	BJK	0.958	51.0	1.28	1.000	1
2,3,7,8-TCDF	ND	U	0.717	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.448	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.416	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.153	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.150	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.217	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.170	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.595	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.782	25.5			1
OCDF	ND	U	0.826	51.0			1
Total Tetra-Dioxins	ND	U	0.563	10.2			1
Total Penta-Dioxins	ND	U	0.482	25.5			1
Total Hexa-Dioxins	ND	U	0.588	25.5			1
Total Hepta-Dioxins	ND	U	0.382	25.5			1
Total Tetra-Furans	ND	U	0.717	10.2			1
Total Penta-Furans	ND	U	0.416	25.5			1
Total Hexa-Furans	ND	U	0.150	25.5			1
Total Hepta-Furans	ND	U	0.595	25.5			1

B-nBL

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1430
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB02-092110	**Units:**	Percent
Lab Code:	E1001027-006	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2000
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209698	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	639.582	64		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	573.918	57		40-135	1.61	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1582.905	63		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1336.539	53		40-135	1.07	1.068
13C-OCDD	5000	2119.503	42		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	567.000	57		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	584.170	58		40-135	1.57	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1568.708	63		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1249.673	50		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	625.808	78		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1430
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB02-092110	**Units:**	pg/L
Lab Code:	E1001027-006	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.563	1	1	
1,2,3,7,8-PeCDD	ND	0.482	1	1	
1,2,3,4,7,8-HxCDD	ND	0.660	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.588	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.689	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.382	1	0.01	
OCDD	**3.70**	0.958	1	0.0003	0.00111
2,3,7,8-TCDF	ND	0.717	1	0.1	
1,2,3,7,8-PeCDF	ND	0.448	1	0.03	
2,3,4,7,8-PeCDF	ND	0.416	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.153	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.150	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.217	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.170	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.595	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.782	1	0.01	
OCDF	ND	0.826	1	0.0003	
		Total TEQ			0.00111

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.715	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.539	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.438	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.391	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.459	25.5			1
1,2,3,4,6,7,8-HpCDD	1.17	~~BJ~~	0.393	25.5	1.07	1.000	1
OCDD	8.02	BJK	1.21	51.0	1.11	1.000	1
2,3,7,8-TCDF	ND	U	0.690	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.588	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.545	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.193	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.191	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.274	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.215	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.476	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.626	25.5			1
OCDF	ND	U	0.687	51.0			1
Total Tetra-Dioxins	ND	U	0.715	10.2			1
Total Penta-Dioxins	ND	U	0.539	25.5			1
Total Hexa-Dioxins	ND	U	0.391	25.5			1
Total Hepta-Dioxins	2.35	J	0.393	25.5	1.04		1
Total Tetra-Furans	ND	U	0.690	10.2			1
Total Penta-Furans	ND	U	0.545	25.5			1
Total Hexa-Furans	ND	U	0.191	25.5			1
Total Hepta-Furans	ND	U	0.476	25.5			1

TWD 12/20/2010

Analytical Report

FB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	Percent
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	681.605	68		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	600.424	60		40-135	1.56	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1810.870	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1605.222	64		40-135	1.03	1.068
13C-OCDD	5000	2762.208	55		40-135	0.92	1.146
13C-2,3,7,8-TCDF	1000	594.302	59		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	616.696	62		40-135	1.56	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1678.519	67		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1447.825	58		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	672.757	84		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.715	1	1	
1,2,3,7,8-PeCDD	ND	0.539	1	1	
1,2,3,4,7,8-HxCDD	ND	0.438	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.391	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.459	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.17**	0.393	1	0.01	0.0117
OCDD	**8.02**	1.21	1	0.0003	0.00241
2,3,7,8-TCDF	ND	0.690	1	0.1	
1,2,3,7,8-PeCDF	ND	0.588	1	0.03	
2,3,4,7,8-PeCDF	ND	0.545	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.193	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.191	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.274	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.215	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.476	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.626	1	0.01	
OCDF	ND	0.687	1	0.0003	
		Total TEQ			0.0141

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1735
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB01-092110	**Units:**	pg/L
Lab Code:	E1001027-008	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2137
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209700	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.443	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.388	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.477	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.424	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.497	26.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.457	26.0			1
OCDD	3.97	BJ	0.420	52.1	0.98	1.000	1
2,3,7,8-TCDF	ND	U	0.724	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.333	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.309	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.124	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.122	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.177	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.138	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.234	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.307	26.0			1
OCDF	ND	U	0.689	52.1			1
Total Tetra-Dioxins	ND	U	0.443	10.4			1
Total Penta-Dioxins	ND	U	0.388	26.0			1
Total Hexa-Dioxins	ND	U	0.424	26.0			1
Total Hepta-Dioxins	ND	U	0.457	26.0			1
Total Tetra-Furans	ND	U	0.724	10.4			1
Total Penta-Furans	ND	U	0.309	26.0			1
Total Hexa-Furans	ND	U	0.122	26.0			1
Total Hepta-Furans	ND	U	0.234	26.0			1

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1735
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB01-092110	**Units:**	Percent
Lab Code:	E1001027-008	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2137
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209700	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	711.257	71		40-135	0.77	1.009
13C-1,2,3,7,8-PeCDD	1000	625.823	63		40-135	1.57	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1726.828	69		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1615.929	65		40-135	1.04	1.068
13C-OCDD	5000	2793.315	56		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	611.543	61		40-135	0.76	0.977
13C-1,2,3,7,8-PeCDF	1000	639.114	64		40-135	1.57	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1599.080	64		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1445.974	58		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	680.530	85		40-135	NA	1.009

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/21/10 1735
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB01-092110	**Units:**	pg/L
Lab Code:	E1001027-008	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.443	1	1	
1,2,3,7,8-PeCDD	ND	0.388	1	1	
1,2,3,4,7,8-HxCDD	ND	0.477	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.424	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.497	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.457	1	0.01	
OCDD	**3.97**	0.420	1	0.0003	0.00119
2,3,7,8-TCDF	ND	0.724	1	0.1	
1,2,3,7,8-PeCDF	ND	0.333	1	0.03	
2,3,4,7,8-PeCDF	ND	0.309	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.124	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.122	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.177	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.138	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.234	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.307	1	0.01	
OCDF	ND	0.689	1	0.0003	
		Total TEQ			0.00119

2005 WHO TEFs, ND = 0

45

EB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1000
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB092210	**Units:**	pg/L
Lab Code:	E1001027-009	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2226
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209701	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.353	10.0			1
1,2,3,7,8-PeCDD	ND	U	0.206	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.515	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.458	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.537	25.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.252	25.0			1
OCDD	2.11	BJ	0.554	50.0	0.98	1.001	1
2,3,7,8-TCDF	ND	U	0.589	10.0			1
1,2,3,7,8-PeCDF	ND	U	0.345	25.0			1
2,3,4,7,8-PeCDF	ND	U	0.320	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.234	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.231	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.333	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.261	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.300	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.393	25.0			1
OCDF	ND	U	0.642	50.0			1
Total Tetra-Dioxins	ND	U	0.353	10.0			1
Total Penta-Dioxins	ND	U	0.206	25.0			1
Total Hexa-Dioxins	ND	U	0.458	25.0			1
Total Hepta-Dioxins	ND	U	0.252	25.0			1
Total Tetra-Furans	ND	U	0.589	10.0			1
Total Penta-Furans	ND	U	0.320	25.0			1
Total Hexa-Furans	ND	U	0.231	25.0			1
Total Hepta-Furans	ND	U	0.300	25.0			1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1000
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB092210	**Units:**	Percent
Lab Code:	E1001027-009	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2226
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1000mL	**Instrument Name:**	F-HRMS-04
		GC Column:	db5
Data File Name:	P209701	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	705.393	71		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	628.610	63		40-135	1.57	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1760.447	70		40-135	1.23	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1611.620	64		40-135	1.04	1.068
13C-OCDD	5000	2880.157	58		40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	599.875	60		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	631.355	63		40-135	1.58	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1643.313	66		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1444.015	58		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	662.836	83		40-135	NA	1.009

EB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1000
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66EB092210	**Units:**	pg/L
Lab Code:	E1001027-009	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.353	1	1	
1,2,3,7,8-PeCDD	ND	0.206	1	1	
1,2,3,4,7,8-HxCDD	ND	0.515	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.458	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.537	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.252	1	0.01	
OCDD	**2.11**	0.554	1	0.0003	0.000633
2,3,7,8-TCDF	ND	0.589	1	0.1	
1,2,3,7,8-PeCDF	ND	0.345	1	0.03	
2,3,4,7,8-PeCDF	ND	0.320	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.234	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.231	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.333	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.261	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.300	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.393	1	0.01	
OCDF	ND	0.642	1	0.0003	
		Total TEQ			0.000633

2005 WHO TEFs, ND = 0

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1300
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP300001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001027-010	**Basis:**	Dry
		Percent Solids:	91.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0037
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.723g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209665	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0507	1.02			1
1,2,3,7,8-PeCDD	**0.201**	J	0.0419	2.56	1.56	1.001	1
1,2,3,4,7,8-HxCDD	**0.484**		0.0654	2.56	1.62	0.998	1
1,2,3,6,7,8-HxCDD	**0.982**	J	0.0574	2.56	1.24	1.000	1
1,2,3,7,8,9-HxCDD	**0.799**		0.0627	2.56	1.52	1.008	1
1,2,3,4,6,7,8-HpCDD	**42.0**		0.273	2.56	1.04	1.000	1
OCDD	**3460**		0.0602	5.12	0.89	1.000	1
2,3,7,8-TCDF	**0.286**		0.0811	1.02	0.85	1.001	1
1,2,3,7,8-PeCDF	**0.129**		0.0355	2.56	0.80	1.000	1
2,3,4,7,8-PeCDF	**0.234**		0.0351	2.56	1.27	1.024	1
1,2,3,4,7,8-HxCDF	**0.601**	J	0.0509	2.56	1.18	1.000	1
1,2,3,6,7,8-HxCDF	**0.276**		0.0483	2.56	0.94	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0631	2.56			1
2,3,4,6,7,8-HxCDF	**0.320**		0.0542	2.56	1.00	1.017	1
1,2,3,4,6,7,8-HpCDF	**3.27**		0.0551	2.56	0.97	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.351**	J	0.0747	2.56	1.07	1.033	1
OCDF	**7.03**		0.0628	5.12	0.91	1.004	1
Total Tetra-Dioxins	ND	U	0.0507	1.02			1
Total Penta-Dioxins	**1.02**	J	0.0419	2.56	1.54		1
Total Hexa-Dioxins	**9.11**		0.0574	2.56	1.31		1
Total Hepta-Dioxins	**92.2**		0.273	2.56	1.05		1
Total Tetra-Furans	**1.32**		0.0811	1.02	0.85		1
Total Penta-Furans	**1.81**	J	0.0351	2.56	1.45		1
Total Hexa-Furans	**3.40**		0.0483	2.56	1.13		1
Total Hepta-Furans	**6.70**		0.0551	2.56	0.97		1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1300
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP300001 SS	**Units:**	Percent
Lab Code:	E1001027-010	**Basis:**	Dry
		Percent Solids:	91.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0037
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.723g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209665	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	531.685	53		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	631.811	63		40-135	1.60	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1303.968	52		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1270.558	51		40-135	1.07	1.068
13C-OCDD	5000	2101.440	42		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	499.927	50		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	593.032	59		40-135	1.59	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1226.396	49		40-135	0.52	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1099.818	44		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	621.468	78		40-135	NA	1.009

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1300
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP300001 SS	**Units:**	ng/Kg
Lab Code:	E1001027-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0507	1	1	
1,2,3,7,8-PeCDD	**0.201**	0.0419	1	1	0.201
1,2,3,4,7,8-HxCDD	**0.484**	0.0654	1	0.1	0.0484
1,2,3,6,7,8-HxCDD	**0.982**	0.0574	1	0.1	0.0982
1,2,3,7,8,9-HxCDD	**0.799**	0.0627	1	0.1	0.0799
1,2,3,4,6,7,8-HpCDD	**42.0**	0.273	1	0.01	0.420
OCDD	**3460**	0.0602	1	0.0003	1.04
2,3,7,8-TCDF	ND	0.149	1	0.1	
1,2,3,7,8-PeCDF	**0.129**	0.0355	1	0.03	0.00387
2,3,4,7,8-PeCDF	**0.234**	0.0351	1	0.3	0.0702
1,2,3,4,7,8-HxCDF	**0.601**	0.0509	1	0.1	0.0601
1,2,3,6,7,8-HxCDF	**0.276**	0.0483	1	0.1	0.0276
1,2,3,7,8,9-HxCDF	ND	0.0631	1	0.1	
2,3,4,6,7,8-HxCDF	**0.320**	0.0542	1	0.1	0.0320
1,2,3,4,6,7,8-HpCDF	**3.27**	0.0551	1	0.01	0.0327
1,2,3,4,7,8,9-HpCDF	**0.351**	0.0747	1	0.01	0.00351
OCDF	**7.03**	0.0628	1	0.0003	0.00211
		Total TEQ			2.12

2005 WHO TEFs, ND = 0

Revised E1001027

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1300
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP300001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001027-010	**Basis:**	Dry
		Percent Solids:	91.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1121
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.723g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137842	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.149	1.02			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	472.891	47		40-135	0.79	1.061
37Cl-2,3,7,8-TCDD	800	645.814	81		40-135	NA	0.988

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1305
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66DP300910 SB	**Units:**	ng/Kg
Lab Code:	E1001027-011	**Basis:**	Dry
		Percent Solids:	83.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0125
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.289g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209666	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	~~U~~ UJ-ISL	0.0805	1.06			1
1,2,3,7,8-PeCDD	ND	U	0.0486	2.66			1
1,2,3,4,7,8-HxCDD	**0.145**	~~J~~ JK+JK15	0.113	2.66	1.44	0.998	1
1,2,3,6,7,8-HxCDD	**0.294**	~~J~~ JK+EMPC	0.0987	2.66	1.61	1.000	1
1,2,3,7,8,9-HxCDD	**0.440**	J	0.108	2.66	1.15	1.008	1
1,2,3,4,6,7,8-HpCDD	**10.5**	~~B~~	0.0825	2.66	1.06	1.000	1
OCDD	**1340**	~~B~~ EJ-LR	0.0992	5.32	0.89	1.000	1
2,3,7,8-TCDF	ND	UJ-ISL	0.0726	1.06			1
1,2,3,7,8-PeCDF	ND	U	0.0609	2.66			1
2,3,4,7,8-PeCDF	ND	U	0.0601	2.66			1
1,2,3,4,7,8-HxCDF	ND	U	0.0448	2.66			1
1,2,3,6,7,8-HxCDF	ND	U	0.0426	2.66			1
1,2,3,7,8,9-HxCDF	ND	U	0.0557	2.66			1
2,3,4,6,7,8-HxCDF	ND	U	0.0478	2.66			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0598	2.66			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0810	2.66			1
OCDF	ND	U	0.119	5.32			1
Total Tetra-Dioxins	ND	U	0.0805	1.06			1
Total Penta-Dioxins	**0.375**	J	0.0486	2.66	1.46		1
Total Hexa-Dioxins	**4.87**		0.0987	2.66	1.42		1
Total Hepta-Dioxins	**26.8**		0.0825	2.66	1.03		1
Total Tetra-Furans	ND	U	0.0726	1.06			1
Total Penta-Furans	ND	U	0.0601	2.66			1
Total Hexa-Furans	ND	U	0.0426	2.66			1
Total Hepta-Furans	ND	U	0.0598	2.66			1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1305
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~ SB 300910	**Units:**	Percent
Lab Code:	E1001027-011	**Basis:**	Dry
		Percent Solids:	83.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0125
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.289g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209666	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	365.573	37	Y	40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	488.835	49		40-135	1.61	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1420.354	57		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1404.481	56		40-135	1.06	1.068
13C-OCDD	5000	2013.984	40		40-135	0.92	1.147
13C-2,3,7,8-TCDF	1000	299.690	30	Y	40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	432.126	43		40-135	1.57	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1213.699	49		40-135	0.53	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1310.476	52		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	426.705	53		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1305
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~DP~~SB300910	**Units:**	ng/Kg
Lab Code:	E1001027-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0805	1	1	
1,2,3,7,8-PeCDD	ND	0.0486	1	1	
1,2,3,4,7,8-HxCDD	**0.145**	0.113	1	0.1	0.0145
1,2,3,6,7,8-HxCDD	**0.294**	0.0987	1	0.1	0.0294
1,2,3,7,8,9-HxCDD	**0.440**	0.108	1	0.1	0.0440
1,2,3,4,6,7,8-HpCDD	**10.5**	0.0825	1	0.01	0.105
OCDD	**1340**	0.0992	1	0.0003	0.402
2,3,7,8-TCDF	ND	0.0726	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0609	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0601	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0448	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0426	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0557	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0478	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0598	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0810	1	0.01	
OCDF	ND	0.119	1	0.0003	
		Total TEQ			0.595

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1530
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66S0420001	**Units:**	ng/Kg
Lab Code:	E1001027-012	**Basis:**	Dry
		Percent Solids:	85.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0214
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	12.213g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209667	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0577	0.963			1
1,2,3,7,8-PeCDD	**0.195**	J	0.0503	2.41	1.34	1.001	1
1,2,3,4,7,8-HxCDD	**0.402**	J	0.0889	2.41	1.25	0.998	1
1,2,3,6,7,8-HxCDD	**0.691**	J	0.0780	2.41	1.40	1.000	1
1,2,3,7,8,9-HxCDD	**0.795**	JK-IRIS	0.0851	2.41	1.48	1.008	1
1,2,3,4,6,7,8-HpCDD	**33.0**	B	0.272	2.41	1.06	1.000	1
OCDD	**3870**	BEJ-LR	0.0618	4.82	0.90	1.000	1
2,3,7,8-TCDF	**1.01**	C Edd-EMPC-07	0.0658	0.963	0.83	1.001	1
1,2,3,7,8-PeCDF	**0.256**	JK-EMPC-IRIS	0.0462	2.41	1.99	1.001	1
2,3,4,7,8-PeCDF	**0.401**	JK-	0.0457	2.41	1.25	1.024	1
1,2,3,4,7,8-HxCDF	**0.774**	J	0.0918	2.41	1.42	1.000	1
1,2,3,6,7,8-HxCDF	**0.258**	JK- EMPC	0.0872	2.41	0.78	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.114	2.41			1
2,3,4,6,7,8-HxCDF	**0.378**	J	0.0977	2.41	1.28	1.017	1
1,2,3,4,6,7,8-HpCDF	**2.17**	J	0.0542	2.41	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0735	2.41			1
OCDF	**3.66**	J	0.187	4.82	0.90	1.004	1
Total Tetra-Dioxins	**1.16**		0.0577	0.963	0.70		1
Total Penta-Dioxins	**2.60**		0.0503	2.41	1.34		1
Total Hexa-Dioxins	**12.5**		0.0780	2.41	1.28		1
Total Hepta-Dioxins	**83.7**		0.272	2.41	1.00		1
Total Tetra-Furans	**3.88**		0.0658	0.963	0.81		1
Total Penta-Furans	**3.62**		0.0457	2.41	1.68		1
Total Hexa-Furans	**3.40**		0.0872	2.41	1.30		1
Total Hepta-Furans	**3.93**		0.0542	2.41	1.01		1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1530
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66SS0420001	**Units:**	Percent
Lab Code:	E1001027-012	**Basis:**	Dry
		Percent Solids:	85.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0214
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	12.213g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209667	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	473.855	47		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	552.024	55		40-135	1.58	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1383.353	55		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1406.049	56		40-135	1.06	1.068
13C-OCDD	5000	2614.340	52		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	435.812	44		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	532.383	53		40-135	1.62	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1298.208	52		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1253.281	50		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	554.237	69		40-135	NA	1.009

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1530
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~SO~~420001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001027-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0577	1	1	
1,2,3,7,8-PeCDD	**0.195**	0.0503	1	1	0.195
1,2,3,4,7,8-HxCDD	**0.402**	0.0889	1	0.1	0.0402
1,2,3,6,7,8-HxCDD	**0.691**	0.0780	1	0.1	0.0691
1,2,3,7,8,9-HxCDD	**0.795**	0.0851	1	0.1	0.0795
1,2,3,4,6,7,8-HpCDD	**33.0**	0.272	1	0.01	0.330
OCDD	**3870**	0.0618	1	0.0003	1.16
2,3,7,8-TCDF	**0.357**	0.206	1	0.1	0.0357
1,2,3,7,8-PeCDF	**0.256**	0.0462	1	0.03	0.00768
2,3,4,7,8-PeCDF	**0.401**	0.0457	1	0.3	0.120
1,2,3,4,7,8-HxCDF	**0.774**	0.0918	1	0.1	0.0774
1,2,3,6,7,8-HxCDF	**0.258**	0.0872	1	0.1	0.0258
1,2,3,7,8,9-HxCDF	ND	0.114	1	0.1	
2,3,4,6,7,8-HxCDF	**0.378**	0.0977	1	0.1	0.0378
1,2,3,4,6,7,8-HpCDF	**2.17**	0.0542	1	0.01	0.0217
1,2,3,4,7,8,9-HpCDF	ND	0.0735	1	0.01	
OCDF	**3.66**	0.187	1	0.0003	0.00110
		Total TEQ			2.20

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1530
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66S0420001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001027-012	**Basis:**	Dry
		Percent Solids:	85.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1158
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	12.213g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137843	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	0.357	JK J SR15	0.206	0.963	0.63	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	368.009	37	Y	40-135	0.79	1.061
37Cl-2,3,7,8-TCDD	800	552.449	69		40-135	NA	0.988

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1600
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~3~~942P0001 SS	**Units:**	ng/Kg
Lab Code:	E1001027-013	**Basis:**	Dry
		Percent Solids:	86.4

FD for #12

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0302
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.330g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209668	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Detects too low for evaluation except for OCDD, 13,8% see OCDD meets criteria

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0398	1.12			1
1,2,3,7,8-PeCDD	**0.280**	J	0.0506	2.80	1.58	1.001	1
1,2,3,4,7,8-HxCDD	**0.507**	~~JKL~~ IRIS	0.109	2.80	1.51	0.998	1
1,2,3,6,7,8-HxCDD	**0.986**	J	0.0948	2.80	1.26	1.000	1
1,2,3,7,8,9-HxCDD	**1.15**	~~JKL~~ IRIS	0.104	2.80	1.51	1.008	1
1,2,3,4,6,7,8-HpCDD	**38.2**	~~B~~	0.387	2.80	1.02	1.000	1
OCDD	**3370**	~~BEJ~~ ISL	0.169	5.60	0.89	1.000	1
2,3,7,8-TCDF	**1.40**	C Exclude-OT	0.0676	1.12	0.74	1.000	1
1,2,3,7,8-PeCDF	**0.413**	J	0.0329	2.80	1.76	1.001	1
2,3,4,7,8-PeCDF	**0.444**	~~JKL~~ IRIS	0.0324	2.80	1.19	1.024	1
1,2,3,4,7,8-HxCDF	**1.02**	J	0.0412	2.80	1.11	1.000	1
1,2,3,6,7,8-HxCDF	**0.352**	J	0.0392	2.80	1.41	1.003	1
1,2,3,7,8,9-HxCDF	**0.0983**	~~JKL~~ EMPC	0.0511	2.80	2.37	1.036	1
2,3,4,6,7,8-HxCDF	**0.612**	J	0.0439	2.80	1.10	1.017	1
1,2,3,4,6,7,8-HpCDF	**2.52**	J	0.0760	2.80	0.95	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.103	2.80			1
OCDF	**4.22**	J	0.148	5.60	0.99	1.004	1
Total Tetra-Dioxins	**1.08**	J	0.0398	1.12	0.72		1
Total Penta-Dioxins	**3.63**		0.0506	2.80	1.48		1
Total Hexa-Dioxins	**14.0**		0.0948	2.80	1.27		1
Total Hepta-Dioxins	**97.1**		0.387	2.80	1.02		1
Total Tetra-Furans	**5.25**		0.0676	1.12	0.71		1
Total Penta-Furans	**3.91**		0.0324	2.80	1.64		1
Total Hexa-Furans	**5.29**		0.0392	2.80	1.13		1
Total Hepta-Furans	**5.22**		0.0760	2.80	0.95		1

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1600
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66~~S~~SS042P0001	**Units:**	Percent
Lab Code:	E1001027-013	**Basis:**	Dry
		Percent Solids:	86.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0302
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.330g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209668	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	508.900	51		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	604.719	60		40-135	1.60	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1207.358	48		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1235.398	49		40-135	1.06	1.069
13C-OCDD	5000	1771.219	35	Y	40-135	0.91	1.148
13C-2,3,7,8-TCDF	1000	440.323	44		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	591.254	59		40-135	1.58	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1114.280	45		40-135	0.53	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1125.861	45		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	611.704	76		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1600
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS42P0001	**Units:**	ng/Kg
Lab Code:	E1001027-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0398	1	1	
1,2,3,7,8-PeCDD	**0.280**	0.0506	1	1	0.280
1,2,3,4,7,8-HxCDD	**0.507**	0.109	1	0.1	0.0507
1,2,3,6,7,8-HxCDD	**0.986**	0.0948	1	0.1	0.0986
1,2,3,7,8,9-HxCDD	**1.15**	0.104	1	0.1	0.115
1,2,3,4,6,7,8-HpCDD	**38.2**	0.387	1	0.01	0.382
OCDD	**3370**	0.169	1	0.0003	1.01
2,3,7,8-TCDF	**0.453**	0.283	1	0.1	0.0453
1,2,3,7,8-PeCDF	**0.413**	0.0329	1	0.03	0.0124
2,3,4,7,8-PeCDF	**0.444**	0.0324	1	0.3	0.133
1,2,3,4,7,8-HxCDF	**1.02**	0.0412	1	0.1	0.102
1,2,3,6,7,8-HxCDF	**0.352**	0.0392	1	0.1	0.0352
1,2,3,7,8,9-HxCDF	**0.0983**	0.0511	1	0.1	0.00983
2,3,4,6,7,8-HxCDF	**0.612**	0.0439	1	0.1	0.0612
1,2,3,4,6,7,8-HpCDF	**2.52**	0.0760	1	0.01	0.0252
1,2,3,4,7,8,9-HpCDF	ND	0.103	1	0.01	
OCDF	**4.22**	0.148	1	0.0003	0.00127
		Total TEQ			2.36

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1600
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS042P0001	**Units:**	ng/Kg
Lab Code:	E1001027-013	**Basis:**	Dry
		Percent Solids:	86.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1235
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.330g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137844	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.453**	J	0.283	1.12	0.66	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	364.129	36	Y	40-135	0.79	1.062
37Cl-2,3,7,8-TCDD	800	576.271	72		40-135	NA	0.988

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1500
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS430001	**Units:**	ng/Kg
Lab Code:	E1001027-014	**Basis:**	Dry
		Percent Solids:	90.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0351
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.503g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209669	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0355	0.965			1
1,2,3,7,8-PeCDD	**0.164**	JK	0.0432	2.41	2.08	1.000	1
1,2,3,4,7,8-HxCDD	**0.322**	JK	0.0630	2.41	1.63	0.998	1
1,2,3,6,7,8-HxCDD	**0.617**	J	0.0552	2.41	1.33	1.000	1
1,2,3,7,8,9-HxCDD	**0.796**	JK	0.0603	2.41	1.49	1.008	1
1,2,3,4,6,7,8-HpCDD	**37.1**	~~B~~	0.127	2.41	1.04	1.000	1
OCDD	**4920**	BE	0.0911	4.82	0.90	1.000	1
2,3,7,8-TCDF	**0.683**		0.0525	0.965	0.77	1.001	1
1,2,3,7,8-PeCDF	**0.277**	J	0.0223	2.41	1.34	1.001	1
2,3,4,7,8-PeCDF	**0.269**	JK	0.0220	2.41	1.89	1.024	1
1,2,3,4,7,8-HxCDF	**0.646**	J	0.0841	2.41	1.17	1.000	1
1,2,3,6,7,8-HxCDF	**0.231**	JK	0.0799	2.41	1.56	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.105	2.41			1
2,3,4,6,7,8-HxCDF	**0.113**	J	0.0896	2.41	1.14	1.017	1
1,2,3,4,6,7,8-HpCDF	**1.62**	J	0.0629	2.41	0.95	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0852	2.41			1
OCDF	**2.96**	J	0.144	4.82	0.85	1.004	1
Total Tetra-Dioxins	**0.733**	J	0.0355	0.965	0.69		1
Total Penta-Dioxins	**2.29**	J	0.0432	2.41	1.59		1
Total Hexa-Dioxins	**10.8**		0.0552	2.41	1.31		1
Total Hepta-Dioxins	**93.3**		0.127	2.41	1.05		1
Total Tetra-Furans	**3.58**		0.0525	0.965	0.67		1
Total Penta-Furans	**2.83**		0.0220	2.41	1.39		1
Total Hexa-Furans	**2.15**	J	0.0799	2.41	1.37		1
Total Hepta-Furans	**2.80**		0.0629	2.41	0.95		1

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1500
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS430001	**Units:**	Percent
Lab Code:	E1001027-014	**Basis:**	Dry
		Percent Solids:	90.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/2/10 0351
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.503g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209669	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209659

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	599.427	60		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	724.808	72		40-135	1.61	1.178
13C-1,2,3,6,7,8-HxCDD	2500	1489.897	60		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1572.485	63		40-135	1.04	1.069
13C-OCDD	5000	2281.304	46		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	547.184	55		40-135	0.77	0.976
13C-1,2,3,7,8-PeCDF	1000	734.941	73		40-135	1.59	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1400.987	56		40-135	0.52	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1479.387	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	693.226	87		40-135	NA	1.009

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1500
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS6650430001	**Units:**	ng/Kg
Lab Code:	E1001027-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0355	1	1	
1,2,3,7,8-PeCDD	**0.164**	0.0432	1	1	0.164
1,2,3,4,7,8-HxCDD	**0.322**	0.0630	1	0.1	0.0322
1,2,3,6,7,8-HxCDD	**0.617**	0.0552	1	0.1	0.0617
1,2,3,7,8,9-HxCDD	**0.796**	0.0603	1	0.1	0.0796
1,2,3,4,6,7,8-HpCDD	**37.1**	0.127	1	0.01	0.371
OCDD	**4920**	0.0911	1	0.0003	1.48
2,3,7,8-TCDF	ND	0.211	1	0.1	
1,2,3,7,8-PeCDF	**0.277**	0.0223	1	0.03	0.00831
2,3,4,7,8-PeCDF	**0.269**	0.0220	1	0.3	0.0807
1,2,3,4,7,8-HxCDF	**0.646**	0.0841	1	0.1	0.0646
1,2,3,6,7,8-HxCDF	**0.231**	0.0799	1	0.1	0.0231
1,2,3,7,8,9-HxCDF	ND	0.105	1	0.1	
2,3,4,6,7,8-HxCDF	**0.113**	0.0896	1	0.1	0.0113
1,2,3,4,6,7,8-HpCDF	**1.62**	0.0629	1	0.01	0.0162
1,2,3,4,7,8,9-HpCDF	ND	0.0852	1	0.01	
OCDF	**2.96**	0.144	1	0.0003	0.000888
		Total TEQ			2.39

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1500
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS6650430001	**Units:**	ng/Kg
Lab Code:	E1001027-014	**Basis:**	Dry
		Percent Solids:	90.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1312
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.503g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137845	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.211	0.965			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	476.638	48		40-135	0.78	1.061
37Cl-2,3,7,8-TCDD	800	691.299	86		40-135	NA	0.988

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66S0440001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001027-015	**Basis:**	Dry
		Percent Solids:	89.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1310
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.095g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209690	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0444	1.01			1
1,2,3,7,8-PeCDD	**0.151**	~~JK~~ X-IRIS	0.0259	2.52	1.92	1.000	1
1,2,3,4,7,8-HxCDD	**0.250**	~~JK~~ X-EMPC	0.0729	2.52	0.83	0.998	1
1,2,3,6,7,8-HxCDD	**0.709**	J	0.0640	2.52	1.30	1.000	1
1,2,3,7,8,9-HxCDD	**0.551**	~~JK~~ X-IRIS	0.0699	2.52	1.01	1.008	1
1,2,3,4,6,7,8-HpCDD	**43.7**	~~B~~	0.113	2.52	1.01	1.000	1
OCDD	**4600**	~~BE~~ J-LR	0.0340	5.05	0.89	1.000	1
2,3,7,8-TCDF	**0.670**	~~CJ~~ Exclude-OT	0.0551	1.01	0.85	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0424	2.52			1
2,3,4,7,8-PeCDF	**0.315**	J	0.0419	2.52	1.72	1.025	1
1,2,3,4,7,8-HxCDF	**0.610**	J	0.0338	2.52	1.08	1.000	1
1,2,3,6,7,8-HxCDF	**0.203**	J	0.0321	2.52	1.41	1.003	1
1,2,3,7,8,9-HxCDF	**0.0667**	J	0.0419	2.52	1.21	1.037	1
2,3,4,6,7,8-HxCDF	**0.311**	J	0.0360	2.52	1.07	1.017	1
1,2,3,4,6,7,8-HpCDF	**1.93**	J	0.0429	2.52	1.09	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0582	2.52			1
OCDF	**3.55**	J	0.0611	5.05	0.91	1.004	1
Total Tetra-Dioxins	**0.356**	J	0.0444	1.01	0.84		1
Total Penta-Dioxins	**0.483**	J	0.0259	2.52	1.78		1
Total Hexa-Dioxins	**3.96**		0.0640	2.52	1.12		1
Total Hepta-Dioxins	**98.5**		0.113	2.52	1.02		1
Total Tetra-Furans	**1.90**		0.0551	1.01	0.79		1
Total Penta-Furans	**2.55**		0.0419	2.52	1.52		1
Total Hexa-Furans	**3.54**		0.0321	2.52	1.11		1
Total Hepta-Furans	**4.68**		0.0429	2.52	1.09		1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS440001	**Units:**	Percent
Lab Code:	E1001027-015	**Basis:**	Dry
		Percent Solids:	89.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1310
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.095g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209690	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	533.628	53		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	586.282	59		40-135	1.61	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1382.820	55		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1314.521	53		40-135	1.05	1.068
13C-OCDD	5000	2383.450	48		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	481.134	48		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	526.838	53		40-135	1.57	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1171.167	47		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1094.824	44		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	625.592	78		40-135	NA	1.008

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	IS66SS440001	**Units:**	ng/Kg
Lab Code:	E1001027-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0444	1	1	
1,2,3,7,8-PeCDD	**0.151**	0.0259	1	1	0.151
1,2,3,4,7,8-HxCDD	**0.250**	0.0729	1	0.1	0.0250
1,2,3,6,7,8-HxCDD	**0.709**	0.0640	1	0.1	0.0709
1,2,3,7,8,9-HxCDD	**0.551**	0.0699	1	0.1	0.0551
1,2,3,4,6,7,8-HpCDD	**43.7**	0.113	1	0.01	0.437
OCDD	**4600**	0.0340	1	0.0003	1.38
2,3,7,8-TCDF	ND	0.251	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0424	1	0.03	
2,3,4,7,8-PeCDF	**0.315**	0.0419	1	0.3	0.0945
1,2,3,4,7,8-HxCDF	**0.610**	0.0338	1	0.1	0.0610
1,2,3,6,7,8-HxCDF	**0.203**	0.0321	1	0.1	0.0203
1,2,3,7,8,9-HxCDF	**0.0667**	0.0419	1	0.1	0.00667
2,3,4,6,7,8-HxCDF	**0.311**	0.0360	1	0.1	0.0311
1,2,3,4,6,7,8-HpCDF	**1.93**	0.0429	1	0.01	0.0193
1,2,3,4,7,8,9-HpCDF	ND	0.0582	1	0.01	
OCDF	**3.55**	0.0611	1	0.0003	0.00107
		Total TEQ			2.35

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1630
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66S0440001	**Units:**	ng/Kg
Lab Code:	E1001027-015	**Basis:**	Dry
		Percent Solids:	89.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1515
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	11.095g	**Instrument Name:**	F-HRMS-01
		GC Column:	DB-225
Data File Name:	U137848	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.251	1.01			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	448.617	45		40-135	0.82	1.061
37Cl-2,3,7,8-TCDD	800	608.514	76		40-135	NA	0.988

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1700
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS6650450001	**Units:**	ng/Kg
Lab Code:	E1001027-016	**Basis:**	Dry
		Percent Solids:	86.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1358
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.271g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209691	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0437	1.13			1
1,2,3,7,8-PeCDD	**0.356**	J	0.0330	2.81	1.62	1.000	1
1,2,3,4,7,8-HxCDD	**0.629**	JK	0.0629	2.81	1.00	0.998	1
1,2,3,6,7,8-HxCDD	**1.24**	J	0.0552	2.81	1.39	1.000	1
1,2,3,7,8,9-HxCDD	**1.47**	J	0.0603	2.81	1.39	1.008	1
1,2,3,4,6,7,8-HpCDD	**91.2**	B	0.224	2.81	1.04	1.000	1
OCDD	**9360**	BJ	0.0581	5.63	0.89	1.000	1
2,3,7,8-TCDF	**1.37**		0.0388	1.13	0.74	1.001	1
1,2,3,7,8-PeCDF	**0.297**	JK	0.0423	2.81	1.83	1.001	1
2,3,4,7,8-PeCDF	**0.390**	JK	0.0418	2.81	2.11	1.025	1
1,2,3,4,7,8-HxCDF	**0.960**	J	0.0227	2.81	1.17	1.000	1
1,2,3,6,7,8-HxCDF	**0.313**	JK	0.0215	2.81	1.49	1.003	1
1,2,3,7,8,9-HxCDF	**0.114**	JK	0.0281	2.81	2.58	1.037	1
2,3,4,6,7,8-HxCDF	**0.221**	JK	0.0241	2.81	1.77	1.017	1
1,2,3,4,6,7,8-HpCDF	**2.06**	J	0.0466	2.81	0.88	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.136**	JK	0.0632	2.81	1.56	1.033	1
OCDF	**3.08**	J	0.0903	5.63	0.80	1.004	1
Total Tetra-Dioxins	**1.48**		0.0437	1.13	0.83		1
Total Penta-Dioxins	**4.26**		0.0330	2.81	1.38		1
Total Hexa-Dioxins	**21.1**		0.0552	2.81	1.26		1
Total Hepta-Dioxins	**213**		0.224	2.81	1.05		1
Total Tetra-Furans	**6.46**		0.0388	1.13	0.69		1
Total Penta-Furans	**4.15**		0.0418	2.81	1.40		1
Total Hexa-Furans	**4.28**		0.0215	2.81	1.06		1
Total Hepta-Furans	**1.97**	J	0.0466	2.81	0.97		1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1700
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66S0450001	**Units:**	Percent
Lab Code:	E1001027-016	**Basis:**	Dry
		Percent Solids:	86.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1358
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.271g	**Instrument Name:**	E-HRMS-02
		GC Column:	DB-5
Data File Name:	P209691	**Blank File Name:**	P209650
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209688

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	525.339	53		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	663.108	66		40-135	1.60	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1428.488	57		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1481.657	59		40-135	1.04	1.068
13C-OCDD	5000	2347.522	47		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	449.390	45		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	626.236	63		40-135	1.58	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1287.735	52		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1345.333	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	602.718	75		40-135	NA	1.009

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Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1700
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66S0450001	**Units:**	ng/Kg
Lab Code:	E1001027-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0437	1	1	
1,2,3,7,8-PeCDD	**0.356**	0.0330	1	1	0.356
1,2,3,4,7,8-HxCDD	**0.629**	0.0629	1	0.1	0.0629
1,2,3,6,7,8-HxCDD	**1.24**	0.0552	1	0.1	0.124
1,2,3,7,8,9-HxCDD	**1.47**	0.0603	1	0.1	0.147
1,2,3,4,6,7,8-HpCDD	**91.2**	0.224	1	0.01	0.912
OCDD	**9360**	0.0581	1	0.0003	2.81
2,3,7,8-TCDF	ND	0.707	1	0.1	
1,2,3,7,8-PeCDF	**0.297**	0.0423	1	0.03	0.00891
2,3,4,7,8-PeCDF	**0.390**	0.0418	1	0.3	0.117
1,2,3,4,7,8-HxCDF	**0.960**	0.0227	1	0.1	0.0960
1,2,3,6,7,8-HxCDF	**0.313**	0.0215	1	0.1	0.0313
1,2,3,7,8,9-HxCDF	**0.114**	0.0281	1	0.1	0.0114
2,3,4,6,7,8-HxCDF	**0.221**	0.0241	1	0.1	0.0221
1,2,3,4,6,7,8-HpCDF	**2.06**	0.0466	1	0.01	0.0206
1,2,3,4,7,8,9-HpCDF	**0.136**	0.0632	1	0.01	0.00136
OCDF	**3.08**	0.0903	1	0.0003	0.000924
		Total TEQ			4.72

2005 WHO TEFs, ND = 0

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1700
Sample Matrix:	Soil	**Date Received:**	9/23/10
Sample Name:	SS IS66SS450001	**Units:**	ng/Kg
Lab Code:	E1001027-016	**Basis:**	Dry
		Percent Solids:	86.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 1552
Prep Method:	Method	**Date Extracted:**	9/27/10
Sample Amount:	10.271g	**Instrument Name:**	F-HRMS-01
		GC Column:	DB-225
Data File Name:	U137849	**Blank File Name:**	U137838
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137837

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.707	1.13			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	188.893	19	Y	40-135	0.81	1.061
37Cl-2,3,7,8-TCDD	800	607.155	76		40-135	NA	0.988

TWD 12/20/2010

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services SDG JU04-2.

Samples were analyzed using the following analytical methods:

- SW6010/6020 Metals
- SW7470A/7471A Mercury
- SW8081A Pesticides
- SW8082 PCBs
- SW8260C Volatiles
- SW8270C and 8270C SIM Semivolatiles
- SW8330 Explosives
- 9012 Cyanide

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66DP310001	SD5871-2
IS66DP311415	SD5871-3
IS66DP280001	SD5871-4
IS66DP280607	SD5871-5
IS66EB092310	SD5871-6
IS66EB092410	SD5903-1
IS66DP270001	SD5903-3
IS66DP270910	SD5903-4
IS66DP260001	SD5903-5
IS66DP260708	SD5903-6
IS66DP290001	SD5903-7
IS66DP291617	SD5903-8
IS66EB01-092810	SD5971-1
IS66DP360001	SD5971-2
IS66DP360809	SD5971-3
IS66DP370001	SD5971-4
IS66DP371314	SD5971-5
IS66DP390001	SD5971-6

The original Sample IDs as submitted to the laboratory were incorrect. A cross-reference table with the correct Sample IDs is provided at the end of this report.

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), National Functional Guidelines for Inorganic Methods Data Review (EPA 2004), Region III Modifications for Organic Data Review (EPA 1994), and Region III Modifications for Inorganic Data Review (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations

- Blanks
- Internal Standards
- Serial Dilutions
- Dual Column Confirmation
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data that has been qualified are summarized in **Attachment 1.**

Attachment 2 lists the specific non-conformance issues, such as the %Difference, Relative Percent Differences (RPD) and recoveries for data in this SDG.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/23/10, 9/24/10 and 9/28/10. Samples were received at the laboratory on 9/24/10, 9/25/10 and 9/29/10. All sample preparation analysis was performed within holding time requirements.

Calibration

Initial, continuing calibration, and second source verification were outside of criteria for the compounds listed below in methods 8260B, 8270C and 8270C SIM. Affected data are summarized in **Attachment 1**.

Sample ID	Compound	Calibration
IS66DP260001	Benzaldehyde	IC
IS66DP260708	Benzaldehyde	IC
IS66DP270001	Benzaldehyde	IC
IS66DP270910	Benzaldehyde	IC
IS66DP280001	Benzaldehyde	IC
IS66DP280607	Benzaldehyde	IC
IS66DP290001	Benzaldehyde	IC
IS66DP291617	Benzaldehyde	IC
IS66DP310001	Benzaldehyde	IC
IS66DP311415	Benzaldehyde	IC
IS66DP360001	Benzaldehyde	IC
IS66DP360809	Benzaldehyde	IC
IS66DP370001	Benzaldehyde	IC
IS66DP371314	Benzaldehyde	IC
IS66DP390001	Benzaldehyde	IC
IS66EB092310	Benzaldehyde	IC
IS66EB092410	Benzaldehyde	IC
IS66EB01-092810	Benzaldehyde	IC
IS66DP260001	Phenol	2nd source
IS66DP260001	2-Methylphenol	2nd source
IS66DP260001	4-Nitrophenol	2nd source
IS66DP260708	4-Nitrophenol	IC
IS66DP270001	4-Nitrophenol	IC
IS66DP270910	4-Nitrophenol	IC
IS66DP280001	4-Nitrophenol	IC
IS66DP280607	4-Nitrophenol	IC
IS66DP290001	Phenol	2nd source
IS66DP290001	2-Methylphenol	2nd source
IS66DP290001	4-Nitrophenol	2nd source
IS66DP291617	Phenol	2nd source
IS66DP291617	2-Methylphenol	2nd source
IS66DP291617	4-Nitrophenol	2nd source
IS66DP310001	4-Nitrophenol	IC
IS66DP311415	4-Nitrophenol	IC
IS66DP360001	Nitrobenzene	2nd source
IS66DP360001	4-Nitrophenol	IC
IS66DP390001	Nitrobenzene	2nd source
IS66DP390001	4-Nitrophenol	IC
IS66EB092310	Naphthalene	CC

Sample ID	Compound	Calibration
IS66EB092310	2,4-Dinitrophenol	IC
IS66EB092310	4-Nitrophenol	IC
IS66EB092410	Nitrobenzene	2nd source
IS66EB092410	2,4-Dinitrophenol	IC
IS66EB092410	4-Nitrophenol	IC
IS66EB092410	4-Nitroaniline	2nd source
IS66EB092410	4,6-Dinitro-2-methylphenol	IC
IS66DP310001	Acetone	IC

Blanks

Various compounds in methods 6020, 6010B, 8260B, and 8270C SIM were detected in equipment blank, field blanks, method blanks, and calibration blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Units	Action Level	Units
8260 - VOC					
IS66EB092310	Acetone	6.8	ug/L	68	ug/Kg
IS66EB092410	Acetone	6.6	ug/L	66	ug/Kg
IS66FB092710	Acetone	4.8	ug/L	48	ug/Kg
WG82627 -2– MB – 9/27	Carbon Disulfide	1.5	ug/L	7.5	ug/Kg
WG82717-2 – MB – 9/29	Carbon Disulfide	1.3	ug/L	6.5	ug/Kg
WG82812-2 – MB – 9/30	Carbon Disulfide	1.3	ug/L	6.5	ug/Kg
WG82949-2 – MB – 10/1	Carbon Disulfide	1.2	ug/L	6.0	ug/Kg
8270 SIM					
IS66EB092310	Benzo(b)fluoranthene	0.14	ug/L	23.1	ug/Kg
IS66EB092410	Naphthalene	0.095	ug/L	15.8	ug/Kg
	Benzo(a)anthracene	0.13	ug/L	21.6	ug/Kg
WG82643-1RA – MB – 9/28	BEHP	1.6	ug/L	16	ug/L
WG82758-1RA – MB – 9/30	BEHP	3.0	ug/L	30	ug/L
WG82749-1 – MB – 9/30	BEHP	46	ug/kg	460	ug/Kg
Metals – 6010/6020 – Waters					
PBWAJ01ICW0 - PB	Iron	22.43	ug/L	12.15	ug/L
PBWAJ01ICW0 - PB	Magnesium	8.622	ug/L	43.11	ug/L

Blank ID	Compound	Conc.	Units	Action Level	Units
PBWAJ01ICW0 - PB	Manganese	0.831	ug/L	4.16	ug/L
PBWAJ01ICW0 - PB	Zinc	1.2	ug/L	6.0	ug/L
PBWAJ01IMW0 - PB	Arsenic	1.712	ug/L	8.56	ug/L
PBWAJ01IMW0 - PB	Vanadium	1.556	ug/L	7.78	ug/L
PBWAJ06IMW0 - PB	Chromium	1.535	ug/L	7.675	ug/L
CCB 100410 1749	Sodium	13.93	ug/L	69.65	ug/L
CCB 100410 1749	Zinc	0.3	ug/L	1.5	ug/L
CCB 100410 1749	Barium	0.25	ug/L	1.25	ug/L
CCB 100410 1749	Manganese	1.75	ug/L	8.75	ug/L
CCB 100510 1830	Magnesium	10.89	ug/L	54.45	ug/L
CCB 101210 1830	Beryllium	0.01	ug/L	0.05	ug/L
Metals – 6010/6020 – Soils					
ISSEB01-092310 (soil)	Calcium	17.1	ug/L	0.855	mg/Kg
ISSEB01-092410 (soil)	Cadmium	0.04	ug/L	0.02	mg/Kg
	Calcium	28.3	ug/L	14.15	mg/Kg
ISSEB01-092810 (soil)	Calcium	24	ug/L	12	mg/Kg
	Copper	0.17	ug/L	0.085	mg/Kg
ISSFB01-092210 (soil)	Arsenic	1.8	ug/L	0.9	mg/Kg
	Cadmium	0.1	ug/L	0.05	mg/Kg
ISSFB01-092210 (soil)	Arsenic	2.4	ug/L	1.2	mg/Kg
PBSAI30ICS0	Barium	.038	mg/Kg	0.190	mg/Kg
	Calcium	8.275	mg/Kg	41.375	mg/Kg
	Copper	0.080	mg/Kg	0.4	mg/Kg
	Iron	4.409	mg/Kg	22.045	mg/Kg
	Magnesium	2.899	mg/Kg	14.5	mg/Kg
	Manganese	0.155	mg/Kg	0.755	mg/Kg
	Nickel	0.0556	mg/Kg	0.280	mg/Kg
	Sodium	10.91	mg/Kg	54.55	mg/Kg
	Zinc	0.081	mg/Kg	0.405	mg/Kg
PBSAI30IMS0	Arsenic	0.231	mg/Kg	1.155	mg/Kg
	Chromium	0.269	mg/Kg	1.345	mg/Kg
	Selenium	0.062	mg/Kg	0.31	mg/Kg
	Vanadium	0.163	mg/Kg	0.815	mg/Kg
PBAJ11ICS1	Cadmium	0.017	mg/Kg	0.085	mg/Kg
	Calcium	5.317	mg/Kg	26.585	mg/Kg
	Copper	0.132	mg/Kg	0.66	mg/Kg
	Iron	2.835	mg/Kg	14.175	mg/Kg
	Magnesium	2.256	mg/Kg	11.28	mg/Kg
	Sodium	29.36	mg/Kg	146.8	mg/Kg
	Zinc	0.305	mg/Kg	1.525	mg/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
PBAJ11IMS0	Chromium	0.159	mg/Kg	0.795	mg/Kg
CCB 100110 1657	Barium	0.34	ug/L	0.170	mg/Kg
	Beryllium	0.24	ug/L	0.120	mg/Kg
	Zinc	0.62	ug/L	0.310	mg/Kg
CCB 100110 1751	Cadmium	0.56	ug/L	0.280	mg/Kg
	Calcium	21.68	ug/L	10.84	mg/Kg
	Iron	12.09	ug/L	6.045	mg/Kg
	Magnesium	15.15	ug/L	7.575	mg/Kg
CCB 100110 1845	Nickel	0.69	ug/L	0.345	mg/Kg
CCB 100110 1939	Lead	2.16	ug/L	1.08	mg/Kg
	Manganese	0.96	ug/L	0.48	mg/Kg
	Potassium	66.38	ug/L	33.190	mg/Kg
	Sodium	37.65	ug/L	18.825	mg/Kg
CCB 100410 1646	Silver	0.01	ug/L	0.005	mg/Kg
	Thallium	0.01	ug/L	0.005	mg/Kg
CCB 100410 1745	Magnesium	10.89	ug/L	5.445	mg/Kg
CCB 101410 1826	Barium	0.32	ug/L	0.160	mg/Kg
	Beryllium	0.2	ug/L	0.10	mg/Kg
	Sodium	38.17	ug/L	19.085	mg/Kg
CCB 100410 1921	Iron	18.92	ug/L	9.46	mg/Kg
	Cadmium	0.16	ug/L	0.08	mg/Kg
	Magnesium	10.05	ug/L	5.025	mg/Kg
	Manganese	1.35	ug/L	.775	mg/Kg

Lab Control Sample/Lab Control Duplicate

Multiple compounds were qualified due to low recoveries in the LCS/LCSD for methods 8270C, 8270C SIM, and 8330. 3,3-Dichlorobenzidine was rejected due to 0% recovery. Affected data are summarized in **Attachment 1.**

Matrix Spike/Spike Duplicate

Calcium, Magnesium, Potassium and Fluoranthene were qualified due to high recoveries in the MS/MSD. Various other compounds for methods 8260B, 8270C and 8270C SIM were qualified due to low recoveries in the MS/MSD.

4-Chloroaniline was rejected due to 0% recovery for lab sample 5871-5. Antimony was also rejected due to 23% recovery for lab sample 5871-4 and 20% recovery for lab sample 5871-5. Affected data are summarized in **Attachment 1.**

Surrogates
Surrogates for the samples listed below exhibited recoveries below the lower control limits for methods 8081A and 8082 and 8260B. Acetone was qualified for sample IS66DP280001 due to high surrogate recovery. Affected data are summarized in **Attachment 1.**

Sample ID
IS66DP260001
IS66DP260708
IS66DP270001
IS66DP270910
IS66DP280001
IS66DP280607
IS66DP290001
IS66DP291617
IS66DP310001
IS66DP311415
IS66DP360001
IS66DP360809
IS66DP370001
IS66DP371314
IS66DP390001
IS66DP260001
IS66DP260708
IS66DP270001
IS66DP270910
IS66DP280001
IS66DP290001
IS66DP360001
IS66DP390001
IS66DP260708
IS66DP291617
IS66DP311415
IS66DP360001

Internal Standards
Internal standards were out high for the samples below for method 8270C SIM. The compounds affected by the high internal standards are summarized in **Attachment 1.**

Sample ID
IS66DP260708
IS66DP260708
IS66DP270001
IS66DP270001
IS66DP270910
IS66DP270910

Other Quality Control Issues
From the Case Narrative – "All of the soil samples had concentrations of Tetrachloroethene above the MDL. Upon investigation, Katahdin found that the freezer blank stored in the freezer at the same time as these samples had a Tetrachloroethene concentration of 15 ug/kg. Upon further investigation, Katahdin discovered that another client's sample which was also stored in the same freezer had an extremely high concentration of Tetrachloroethene. It is believed that this sample is the source of contamination. The sample was removed from the storage freezer and the subsequent freezer storage blank had no detection of Tetrachloroethene above the MDL." Therefore, qualify all detected Tetrachloroethene results as "J-OT".

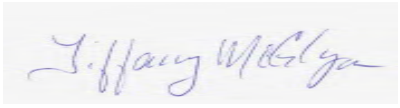
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Sample ID Cross-Reference Table

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP29	IS66DP291617	IS66SB291617
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5871-2
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS310001	SL	23-SEP-10	24-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG82742	29-SEP-10 14:37:20	SW846 M9012	29-SEP-10	
Total Solids	95. %	1	N/A	SM2540G	WG82756	30-SEP-10 09:05:00	ASTM D2216	29-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5871-3
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB311415	SL	23-SEP-10	24-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82742	29-SEP-10 14:37:21	SW846 M9012	29-SEP-10	
Total Solids	81. %	1	N/A	SM2540G	WG82756	30-SEP-10 09:06:00	ASTM D2216	29-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5871-4
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS280001	SL	23-SEP-10	24-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82742	29-SEP-10 14:37:22	SW846 M9012	29-SEP-10	
Total Solids	92. %	1	N/A	SM2540G	WG82756	30-SEP-10 09:07:00	ASTM D2216	29-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5871-5
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB280607	SL	23-SEP-10	24-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82742	29-SEP-10 16:32:48	SW846 M9012	29-SEP-10	
Total Solids	93. %	1	N/A	SM2540G	WG82756	30-SEP-10 09:09:00	ASTM D2216	29-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5871-6
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66EB092310	AQ	23-SEP-10	24-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82743	29-SEP-10 14:40:11	SW846 M9012	29-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-1
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66EB092410	AQ	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82804	30-SEP-10 13:47:23	SW846 M9012	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-3
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS270001	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82806	30-SEP-10 11:42:40	SW846 M9012	30-SEP-10	
Total Solids	91.%	1	N/A	SM2540G	WG82842	01-OCT-10 09:33:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-4
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB270910	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82806	30-SEP-10 11:42:41	SW846 M9012	30-SEP-10	
Total Solids	82. %	1	N/A	SM2540G	WG82842	01-OCT-10 09:35:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-5
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66DP260001 SS	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82806	30-SEP-10 11:42:42	SW846 M9012	30-SEP-10	
Total Solids	91. %	1	N/A	SM2540G	WG82842	01-OCT-10 09:36:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-6
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB260708	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG82806	30-SEP-10 11:46:30	SW846 M9012	30-SEP-10	
Total Solids	87. %	1	N/A	SM2540G	WG82842	01-OCT-10 09:37:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-7
Report Date: 19-OCT-10
Client PO: 935177 386329 N624 70
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS290001	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82806	30-SEP-10 11:46:31	SW846 M9012	30-SEP-10	
Total Solids	90. %	1	N/A	SM2540G	WG82842	01-OCT-10 09:38:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5903-8
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
1S66~~DP~~SB291617	SL	24-SEP-10	25-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG82806	30-SEP-10 11:46:34	SW846 M9012	30-SEP-10	
Total Solids	86. %	1	N/A	SM2540G	WG82842	01-OCT-10 09:39:00	ASTM D2216	30-SEP-10	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-1
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66EB01-092810	AQ	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	J5.1 ug/L	10.	8.0	SW846 M9012A	WG83041	05-OCT-10 12:28:00	SW846 M9012	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-2
Report Date: 19-OCT-10
Client PO: 935177 386329 N624 70
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66DP360001 (SS)	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83042	05-OCT-10 14:07:06	SW846 M9012	05-OCT-10	
Total Solids	78. %	1	N/A	SM2540G	WG82844	01-OCT-10 10:00:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-3
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB360809	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83042	05-OCT-10 14:07:07	SW846 M9012	05-OCT-10	
Total Solids	88. %	1	N/A	SM2540G	WG82844	01-OCT-10 10:01:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-4
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS370001	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG83042	05-OCT-10 14:07:08	SW846 M9012	05-OCT-10	
Total Solids	93. %	1	N/A	SM2540G	WG82844	01-OCT-10 10:02:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-5
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
1S66~~DP~~SB371314	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83042	05-OCT-10 14:09:53	SW846 M9012	05-OCT-10	
Total Solids	84. %	1	N/A	SM2540G	WG82844	01-OCT-10 10:03:00	ASTM D2216	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5971-6
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-2

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS390001	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83042	05-OCT-10 14:09:54	SW846 M9012	05-OCT-10	
Total Solids	86. %	1	N/A	SM2540G	WG82844	01-OCT-10 10:04:00	ASTM D2216	30-SEP-10	

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS310001

HPLC

Lot-Sample #...:	G0I280572-001	**Work Order #...:**	L7MDK1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	09/30/10	**Analysis Date..:**	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.99				
% Moisture.....:	5.1	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**2.6 J**	**5.2**	**ug/kg**	**0.27**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~311415

HPLC

Lot-Sample #...:	G0I280572-002	Work Order #...:	L7MDM1AC	Matrix.....:	SOLID
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.91				
% Moisture.....:	15	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.86 J	5.3	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SS

Client Sample ID: IS66DP280001

HPLC

Lot-Sample #...:	G0I280572-003	**Work Order #...:**	L7MDN1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	09/30/10	**Analysis Date..:**	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	1				
% Moisture.....:	8.4	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**2.5 J**	**5.5**	**ug/kg**	**0.28**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66DP280607

HPLC

Lot-Sample #...: G0I280572-004	**Work Order #...:** L7MDP1AC	**Matrix.....:** SOLID
Date Sampled...: 09/23/10	**Date Received..:** 09/28/10	
Prep Date.....: 09/30/10	**Analysis Date..:** 10/06/10	
Prep Batch #...: 0273241		
Dilution Factor: 0.96		
% Moisture.....: 7.3	**Method.....:** SW846 6850_DOD Ha	

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**1.1 J**	**5.2**	**ug/kg**	**0.27**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SS

Client Sample ID: IS66DP270001

HPLC

Lot-Sample #...: G0I280572-005	**Work Order #...:** L7MDT1AC		**Matrix.....:** SOLID	
Date Sampled...: 09/24/10	**Date Received..:** 09/28/10			
Prep Date.....: 09/30/10	**Analysis Date..:** 10/06/10			
Prep Batch #...: 0273241				
Dilution Factor: 0.9				
% Moisture.....: 7.2	**Method.....:** SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**2.3 J**	**4.8**	**ug/kg**	**0.25**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~270910

HPLC

Lot-Sample #...:	G0I280572-006	Work Order #...:	L7MDV1AC	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.47 U	5.9	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66SS260001

HPLC

Lot-Sample #...:	G0I280572-007	Work Order #...:	L7MDW1AC	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.99				
% Moisture.....:	8.1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	2.0 J	5.4	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

SB

Client Sample ID: IS66DP260708

HPLC

Lot-Sample #...:	G0I280572-008	Work Order #...:	L7MDX1AC	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.98				
% Moisture.....:	11	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.32 J	5.5	ug/kg	0.29

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS290001

HPLC

Lot-Sample #...:	G0I280572-009	Work Order #...:	L7MD01AC	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.99				
% Moisture.....:	4.9	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	3.7 J	5.2	ug/kg	0.27

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66DP291617

HPLC

Lot-Sample #...:	G0I280572-010	Work Order #...:	L7MD11AC	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273241				
Dilution Factor:	0.97				
% Moisture.....:	18	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.47 U	5.9	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66KB092310

Dissolved HPLC

Lot-Sample #...:	G0I280572-011	Work Order #...:	L7MD21AA	Matrix.....:	WATER
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB092410

Dissolved HPLC

Lot-Sample #...:	G0I280572-012	**Work Order #...:**	L7MD41AA	**Matrix.....:**	WATER
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.25 U**	**0.50**	**ug/L**	**0.082**

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS36001

HPLC

Lot-Sample #...: G0J010570-002	Work Order #...: L7VVJ1AC	Matrix.....: SOLID
Date Sampled...: 09/28/10	Date Received..: 09/30/10	
Prep Date.....: 10/05/10	Analysis Date..: 10/08/10	
Prep Batch #...: 0278436		
Dilution Factor: 0.97		
% Moisture.....: 11	Method.....: SW846 6850_DOD Ha	

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.44 U	5.5	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66DP360809

HPLC

Lot-Sample #...: G0J010570-003	**Work Order #...:** L7VVP1AC		**Matrix.....:** SOLID	
Date Sampled...: 09/28/10	**Date Received..:** 09/30/10			
Prep Date.....: 10/05/10	**Analysis Date..:** 10/08/10			
Prep Batch #...: 0278436				
Dilution Factor: 0.98				
% Moisture.....: 11	**Method.....:** SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.44 U**	**5.5**	**ug/kg**	**0.29**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

HK 12/10/2010

Katahdin Analytical Services

SS

Client Sample ID: IS66DP370001

HPLC

Lot-Sample #...: G0J010570-004	**Work Order #...:** L7VVR1AC		**Matrix.....:** SOLID	
Date Sampled...: 09/28/10	**Date Received..:** 09/30/10			
Prep Date.....: 10/05/10	**Analysis Date..:** 10/08/10			
Prep Batch #...: 0278436				
Dilution Factor: 0.97				
% Moisture.....: 11	**Method.....:** SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.57 J**	**5.4**	**ug/kg**	**0.28**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66DP371314

HPLC

Lot-Sample #...:	G0J010570-005	Work Order #...:	L7VVT1AC	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/05/10	Analysis Date..:	10/08/10		
Prep Batch #...:	0278436				
Dilution Factor:	0.99				
% Moisture.....:	16	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.47 U	5.9	ug/kg	0.30

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

SS

Client Sample ID: IS66~~DP~~390001

HPLC

Lot-Sample #...:	G0J010570-006	**Work Order #...:**	L7VVW1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	10/05/10	**Analysis Date..:**	10/08/10		
Prep Batch #...:	0278436				
Dilution Factor:	1.02				
% Moisture.....:	16	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**1.3 J**	**6.0**	**ug/kg**	**0.31**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66EB01-092810

Dissolved HPLC

Lot-Sample #...:	G0J010570-001	Work Order #...:	L7VVG1AA	Matrix.....:	WATER
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	~~U~~ UL-BSL	45.	ug/Kgdrywt	1	100	91.	7.8	45.
RDX	U	45.	ug/Kgdrywt	1	100	91.	6.2	45.
1,3,5-Trinitrobenzene	U	45.	ug/Kgdrywt	1	100	91.	6.1	45.
1,3-Dinitrobenzene	U	45.	ug/Kgdrywt	1	100	91.	5.6	45.
Tetryl	U	45.	ug/Kgdrywt	1	100	91.	4.9	45.
Nitrobenzene	EXCLUDE-RE ~~U~~	45.	ug/Kgdrywt	1	100	91.	20.	45.
Nitroglycerin		1900	ug/Kgdrywt	1	800	730	110	360
2,4,6-Trinitrotoluene	U	45.	ug/Kgdrywt	1	100	91.	6.1	45.
4-Am-DNT	U	45.	ug/Kgdrywt	1	100	91.	15.	45.
2-Am-DNT	U	45.	ug/Kgdrywt	1	100	91.	19.	45.
2,6-Dinitrotoluene	U	45.	ug/Kgdrywt	1	100	91.	24.	45.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	45.	ug/Kgdrywt	1	100	91.	14.	45.
2-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	91.	11.	45.
4-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	91.	24.	45.
3-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	91.	7.2	45.
1,2-Dinitrobenzene		85.5	%					

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HK 12/10/2010

http://www.katahdinlab.com

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	~~U~~ PUL-RSL	59.	ug/Kgdrywt	1	100	120	10.	59.
RDX	U	59.	ug/Kgdrywt	1	100	120	8.0	59.
1,3,5-Trinitrobenzene	U	59.	ug/Kgdrywt	1	100	120	7.9	59.
1,3-Dinitrobenzene	U	59.	ug/Kgdrywt	1	100	120	7.3	59.
Tetryl	U	59.	ug/Kgdrywt	1	100	120	6.4	59.
Nitrobenzene	EXCLUDE-RE ~~U~~	59.	ug/Kgdrywt	1	100	120	26.	59.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	950	150	470
2,4,6-Trinitrotoluene	U	59.	ug/Kgdrywt	1	100	120	7.9	59.
4-Am-DNT	U	59.	ug/Kgdrywt	1	100	120	20.	59.
2-Am-DNT	U	59.	ug/Kgdrywt	1	100	120	25.	59.
2,6-Dinitrotoluene	U	59.	ug/Kgdrywt	1	100	120	32.	59.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	59.	ug/Kgdrywt	1	100	120	18.	59.
2-Nitrotoluene	U	59.	ug/Kgdrywt	1	100	120	14.	59.
4-Nitrotoluene	U	59.	ug/Kgdrywt	1	100	120	32.	59.
3-Nitrotoluene	U	59.	ug/Kgdrywt	1	100	120	9.4	59.
1,2-Dinitrobenzene		82.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 92.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	~~U~~ UUL-BSL	52.	ug/Kgdrywt	1	100	100	9.0	52.
RDX	U	52.	ug/Kgdrywt	1	100	100	7.1	52.
1,3,5-Trinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
1,3-Dinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	6.5	52.
Tetryl	U	52.	ug/Kgdrywt	1	100	100	5.7	52.
Nitrobenzene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	23.	52.
Nitroglycerin	U	420	ug/Kgdrywt	1	800	840	130	420
2,4,6-Trinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
4-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	18.	52.
2-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	22.	52.
2,6-Dinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	16.	52.
2-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	12.	52.
4-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
3-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	8.3	52.
1,2-Dinitrobenzene		87.6	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	~~U~~ UJL-BSL	47.	ug/Kgdrywt	1	100	95.	8.2	47.
RDX	U	47.	ug/Kgdrywt	1	100	95.	6.4	47.
1,3,5-Trinitrobenzene	U	47.	ug/Kgdrywt	1	100	95.	6.4	47.
1,3-Dinitrobenzene	U	47.	ug/Kgdrywt	1	100	95.	5.9	47.
Tetryl	U	47.	ug/Kgdrywt	1	100	95.	5.1	47.
Nitrobenzene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	95.	21.	47.
Nitroglycerin	U	380	ug/Kgdrywt	1	800	760	120	380
2,4,6-Trinitrotoluene	U	47.	ug/Kgdrywt	1	100	95.	6.4	47.
4-Am-DNT	U	47.	ug/Kgdrywt	1	100	95.	16.	47.
2-Am-DNT	U	47.	ug/Kgdrywt	1	100	95.	20.	47.
2,6-Dinitrotoluene	U	47.	ug/Kgdrywt	1	100	95.	26.	47.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	95.	14.	47.
2-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	95.	11.	47.
4-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	95.	26.	47.
3-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	95.	7.5	47.
1,2-Dinitrobenzene		87.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG82645

Analysis Date: 30-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U MDL-BSL	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	132.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 30-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE U	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE U	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	146.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	~~U~~	47.	ug/Kgdrywt	1	100	94.	8.1	47.
RDX	U	47.	ug/Kgdrywt	1	100	94.	6.4	47.
1,3,5-Trinitrobenzene	U	47.	ug/Kgdrywt	1	100	94.	6.3	47.
1,3-Dinitrobenzene	U	47.	ug/Kgdrywt	1	100	94.	5.8	47.
Tetryl	U	47.	ug/Kgdrywt	1	100	94.	5.1	47.
Nitrobenzene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	94.	21.	47.
Nitroglycerin	U	380	ug/Kgdrywt	1	800	750	120	380
2,4,6-Trinitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	6.3	47.
4-Am-DNT	U	47.	ug/Kgdrywt	1	100	94.	16.	47.
2-Am-DNT	U	47.	ug/Kgdrywt	1	100	94.	20.	47.
2,6-Dinitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	25.	47.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	94.	14.	47.
2-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	11.	47.
4-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	25.	47.
3-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	7.4	47.
1,2-Dinitrobenzene		87.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	50.	ug/Kgdrywt	1	100	100	8.6	50.
RDX	U	50.	ug/Kgdrywt	1	100	100	6.8	50.
1,3,5-Trinitrobenzene	U	50.	ug/Kgdrywt	1	100	100	6.7	50.
1,3-Dinitrobenzene	U	50.	ug/Kgdrywt	1	100	100	6.2	50.
Tetryl	U	50.	ug/Kgdrywt	1	100	100	5.4	50.
Nitrobenzene	EXCLUDE-RE ~~U~~	50.	ug/Kgdrywt	1	100	100	22.	50.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	800	120	400
2,4,6-Trinitrotoluene	U	50.	ug/Kgdrywt	1	100	100	6.7	50.
4-Am-DNT	U	50.	ug/Kgdrywt	1	100	100	17.	50.
2-Am-DNT	U	50.	ug/Kgdrywt	1	100	100	21.	50.
2,6-Dinitrotoluene	U	50.	ug/Kgdrywt	1	100	100	27.	50.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	50.	ug/Kgdrywt	1	100	100	15.	50.
2-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	12.	50.
4-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	27.	50.
3-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	100	7.9	50.
1,2-Dinitrobenzene		83.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 06-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	48.	ug/Kgdrywt	1	100	96.	8.2	48.
RDX	U	48.	ug/Kgdrywt	1	100	96.	6.5	48.
1,3,5-Trinitrobenzene	U	48.	ug/Kgdrywt	1	100	96.	6.4	48.
1,3-Dinitrobenzene	U	48.	ug/Kgdrywt	1	100	96.	5.9	48.
Tetryl	U	48.	ug/Kgdrywt	1	100	96.	5.2	48.
Nitrobenzene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	96.	21.	48.
Nitroglycerin	U	380	ug/Kgdrywt	1	800	760	120	380
2,4,6-Trinitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	6.4	48.
4-Am-DNT	U	48.	ug/Kgdrywt	1	100	96.	16.	48.
2-Am-DNT	U	48.	ug/Kgdrywt	1	100	96.	20.	48.
2,6-Dinitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	26.	48.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	96.	14.	48.
2-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	11.	48.
4-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	26.	48.
3-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	7.6	48.
1,2-Dinitrobenzene		91.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 87.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	45.	ug/Kgdrywt	1	100	90.	7.7	45.
RDX	U	45.	ug/Kgdrywt	1	100	90.	6.1	45.
1,3,5-Trinitrobenzene	U	45.	ug/Kgdrywt	1	100	90.	6.0	45.
1,3-Dinitrobenzene	U	45.	ug/Kgdrywt	1	100	90.	5.6	45.
Tetryl	U	45.	ug/Kgdrywt	1	100	90.	4.9	45.
Nitrobenzene	EXCLUDE-RE ~~U~~	45.	ug/Kgdrywt	1	100	90.	20.	45.
Nitroglycerin	U	360	ug/Kgdrywt	1	800	720	110	360
2,4,6-Trinitrotoluene	U	45.	ug/Kgdrywt	1	100	90.	6.0	45.
4-Am-DNT	U	45.	ug/Kgdrywt	1	100	90.	15.	45.
2-Am-DNT	U	45.	ug/Kgdrywt	1	100	90.	19.	45.
2,6-Dinitrotoluene	U	45.	ug/Kgdrywt	1	100	90.	24.	45.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	45.	ug/Kgdrywt	1	100	90.	13.	45.
2-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	90.	11.	45.
4-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	90.	24.	45.
3-Nitrotoluene	U	45.	ug/Kgdrywt	1	100	90.	7.1	45.
1,2-Dinitrobenzene		89.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	48.	ug/Kgdrywt	1	100	97.	8.3	48.
RDX	U	48.	ug/Kgdrywt	1	100	97.	6.6	48.
1,3,5-Trinitrobenzene	U	48.	ug/Kgdrywt	1	100	97.	6.5	48.
1,3-Dinitrobenzene	U	48.	ug/Kgdrywt	1	100	97.	6.0	48.
Tetryl	U	48.	ug/Kgdrywt	1	100	97.	5.2	48.
Nitrobenzene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	97.	21.	48.
Nitroglycerin	U	390	ug/Kgdrywt	1	800	770	120	390
2,4,6-Trinitrotoluene	U	48.	ug/Kgdrywt	1	100	97.	6.5	48.
4-Am-DNT	U	48.	ug/Kgdrywt	1	100	97.	16.	48.
2-Am-DNT	U	48.	ug/Kgdrywt	1	100	97.	20.	48.
2,6-Dinitrotoluene	U	48.	ug/Kgdrywt	1	100	97.	26.	48.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	97.	14.	48.
2-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	97.	12.	48.
4-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	97.	26.	48.
3-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	97.	7.6	48.
1,2-Dinitrobenzene		90.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82788

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	52.	ug/Kgdrywt	1	100	100	8.9	52.
RDX	U	52.	ug/Kgdrywt	1	100	100	7.1	52.
1,3,5-Trinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
1,3-Dinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	6.4	52.
Tetryl	U	52.	ug/Kgdrywt	1	100	100	5.6	52.
Nitrobenzene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	23.	52.
Nitroglycerin	U	420	ug/Kgdrywt	1	800	830	130	420
2,4,6-Trinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
4-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	18.	52.
2-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	22.	52.
2,6-Dinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	16.	52.
2-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	12.	52.
4-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
3-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	8.2	52.
1,2-Dinitrobenzene		88.1	%					

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ANALYTICAL SERVICES

nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		115.	%					

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REISSUE

HK 12/10/2010

Katahdin Analytical Services A0000772

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 78.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58.	ug/Kgdrywt	1	100	120	10.	58.
RDX	U	58.	ug/Kgdrywt	1	100	120	7.9	58.
1,3,5-Trinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
1,3-Dinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58.	ug/Kgdrywt	1	100	120	6.3	58.
Nitrobenzene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	26.	58.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	930	140	460
2,4,6-Trinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
4-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	20.	58.
2-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	24.	58.
2,6-Dinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	17.	58.
2-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	14.	58.
4-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
3-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
1,2-Dinitrobenzene		95.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 88.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	56.	ug/Kgdrywt	1	100	110	9.6	56.
RDX	U	56.	ug/Kgdrywt	1	100	110	7.6	56.
1,3,5-Trinitrobenzene	U	56.	ug/Kgdrywt	1	100	110	7.4	56.
1,3-Dinitrobenzene	U	56.	ug/Kgdrywt	1	100	110	6.9	56.
Tetryl	U	56.	ug/Kgdrywt	1	100	110	6.0	56.
Nitrobenzene	EXCLUDE-RE ~~U~~	56.	ug/Kgdrywt	1	100	110	24.	56.
Nitroglycerin	U	440	ug/Kgdrywt	1	800	890	140	440
2,4,6-Trinitrotoluene	U	56.	ug/Kgdrywt	1	100	110	7.4	56.
4-Am-DNT	U	56.	ug/Kgdrywt	1	100	110	19.	56.
2-Am-DNT	U	56.	ug/Kgdrywt	1	100	110	23.	56.
2,6-Dinitrotoluene	U	56.	ug/Kgdrywt	1	100	110	30.	56.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	56.	ug/Kgdrywt	1	100	110	17.	56.
2-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	13.	56.
4-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	30.	56.
3-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	8.8	56.
1,2-Dinitrobenzene		98.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	48.	ug/Kgdrywt	1	100	96.	8.2	48.
RDX	U	48.	ug/Kgdrywt	1	100	96.	6.5	48.
1,3,5-Trinitrobenzene	U	48.	ug/Kgdrywt	1	100	96.	6.4	48.
1,3-Dinitrobenzene	U	48.	ug/Kgdrywt	1	100	96.	5.9	48.
Tetryl	U	48.	ug/Kgdrywt	1	100	96.	5.2	48.
Nitrobenzene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	96.	21.	48.
Nitroglycerin	U	380	ug/Kgdrywt	1	800	770	120	380
2,4,6-Trinitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	6.4	48.
4-Am-DNT	U	48.	ug/Kgdrywt	1	100	96.	16.	48.
2-Am-DNT	U	48.	ug/Kgdrywt	1	100	96.	20.	48.
2,6-Dinitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	26.	48.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	48.	ug/Kgdrywt	1	100	96.	14.	48.
2-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	12.	48.
4-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	26.	48.
3-Nitrotoluene	U	48.	ug/Kgdrywt	1	100	96.	7.6	48.
1,2-Dinitrobenzene		101.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 84.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	54.	ug/Kgdrywt	1	100	110	9.4	54.
RDX	U	54.	ug/Kgdrywt	1	100	110	7.4	54.
1,3,5-Trinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	7.3	54.
1,3-Dinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	6.8	54.
Tetryl	U	54.	ug/Kgdrywt	1	100	110	5.9	54.
Nitrobenzene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	24.	54.
Nitroglycerin	U	440	ug/Kgdrywt	1	800	870	140	440
2,4,6-Trinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	7.3	54.
4-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	18.	54.
2-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	23.	54.
2,6-Dinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	16.	54.
2-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	13.	54.
4-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
3-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
1,2-Dinitrobenzene		88.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	53.	ug/Kgdrywt	1	100	110	9.1	53.
RDX	U	53.	ug/Kgdrywt	1	100	110	7.2	53.
1,3,5-Trinitrobenzene	U	53.	ug/Kgdrywt	1	100	110	7.1	53.
1,3-Dinitrobenzene	U	53.	ug/Kgdrywt	1	100	110	6.6	53.
Tetryl	U	53.	ug/Kgdrywt	1	100	110	5.7	53.
Nitrobenzene	EXCLUDE-RE ~~U~~	53.	ug/Kgdrywt	1	100	110	23.	53.
Nitroglycerin	U	420	ug/Kgdrywt	1	800	850	130	420
2,4,6-Trinitrotoluene	U	53.	ug/Kgdrywt	1	100	110	7.1	53.
4-Am-DNT	U	53.	ug/Kgdrywt	1	100	110	18.	53.
2-Am-DNT	U	53.	ug/Kgdrywt	1	100	110	22.	53.
2,6-Dinitrotoluene	U	53.	ug/Kgdrywt	1	100	110	29.	53.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	53.	ug/Kgdrywt	1	100	110	16.	53.
2-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	13.	53.
4-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	29.	53.
3-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	8.4	53.
1,2-Dinitrobenzene		101.	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS310001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 94.8
Lab Sample ID: SD5871-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	7520			P	1	27	1.40	9.0
7440-36-0	ANTIMONY, TOTAL	0.11	J	~~N~~	P	1	0.72	0.10	0.45
7440-38-2	ARSENIC, TOTAL	1.7		~~N~~	MS	5	0.45	0.10	0.36
7440-39-3	BARIUM, TOTAL	39.5			P	1	0.45	0.02	0.27
7440-41-7	BERYLLIUM, TOTAL	0.35	J		P	1	0.45	0.008	0.045
7440-43-9	CADMIUM, TOTAL	0.27	U		P	1	0.90	0.007	0.27
7440-70-2	CALCIUM, TOTAL	116		~~N~~	P	1	9.0	0.96	7.2
7440-47-3	CHROMIUM, TOTAL	8.9			MS	5	0.45	0.05	0.18
7440-48-4	COBALT, TOTAL	3.9			MS	5	0.090	0.004	0.027
7440-50-8	COPPER, TOTAL	14.8			P	1	2.2	0.06	0.90
7439-89-6	IRON, TOTAL	6990			P	1	9.0	0.29	7.2
7439-92-1	LEAD, TOTAL	23.4			P	1	0.45	0.09	0.36
7439-95-4	MAGNESIUM, TOTAL	552		~~N~~	P	1	9.0	0.33	7.2
7439-96-5	MANGANESE, TOTAL	64.1			P	1	0.45	0.05	0.36
7439-97-6	MERCURY, TOTAL	0.06			CV	1	0.034	0.001	0.018
7440-02-0	NICKEL, TOTAL	6.9			P	1	3.6	0.05	0.36
7440-09-7	POTASSIUM, TOTAL	447		~~N~~	P	1	90	9.28	45
7782-49-2	SELENIUM, TOTAL	0.29	J		MS	5	0.45	0.03	0.27
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.090	0.009	0.036
7440-23-5	SODIUM, TOTAL	31.3	JB-MBL		P	1	90	1.50	45
7440-28-0	THALLIUM, TOTAL	0.10	J		MS	5	0.18	0.005	0.036
7440-62-2	VANADIUM, TOTAL	25.4			MS	5	0.45	0.07	0.36
7440-66-6	ZINC, TOTAL	19.8			P	1	2.2	0.06	0.90

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SB311415
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 81.1
Lab Sample ID: SD5871-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	15800			P	1	26	1.35	8.7
7440-36-0	ANTIMONY, TOTAL	0.87	U	~~N~~	P	2	1.4	0.19	0.87
7440-38-2	ARSENIC, TOTAL	1.5		~~N~~	MS	5	0.43	0.10	0.35
7440-39-3	BARIUM, TOTAL	166			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	1.2			P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.52	U		P	2	1.7	0.01	0.52
7440-70-2	CALCIUM, TOTAL	523		~~N~~	P	1	8.7	0.92	6.9
7440-47-3	CHROMIUM, TOTAL	21.2			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	16.3			MS	5	0.087	0.003	0.026
7440-50-8	COPPER, TOTAL	13.9			P	2	4.3	0.13	1.7
7439-89-6	IRON, TOTAL	21800			P	1	8.7	0.28	6.9
7439-92-1	LEAD, TOTAL	8.6			P	2	0.87	0.18	0.69
7439-95-4	MAGNESIUM, TOTAL	2790		~~N~~	P	2	17	0.63	14
7439-96-5	MANGANESE, TOTAL	81.3			P	2	0.87	0.10	0.69
7439-97-6	MERCURY, TOTAL	0.004	J		CV	1	0.040	0.001	0.021
7440-02-0	NICKEL, TOTAL	30.6			P	2	6.9	0.09	0.69
7440-09-7	POTASSIUM, TOTAL	904		~~N~~	P	1	87	8.94	43
7782-49-2	SELENIUM, TOTAL	0.38	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.087	0.009	0.035
7440-23-5	SODIUM, TOTAL	166			P	1	87	1.45	43
7440-28-0	THALLIUM, TOTAL	0.16	J		MS	5	0.17	0.004	0.035
7440-62-2	VANADIUM, TOTAL	28.8			MS	5	0.43	0.07	0.35
7440-66-6	ZINC, TOTAL	63.0			P	1	2.2	0.05	0.87

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS280001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 91.8
Lab Sample ID: SD5871-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	11400			P	1	25	1.31	8.4
7440-36-0	ANTIMONY, TOTAL	R-MSL 0.42	~~U~~	~~N~~	P	1	0.68	0.09	0.42
7440-38-2	ARSENIC, TOTAL	2.3		~~N~~	MS	5	0.42	0.10	0.34
7440-39-3	BARIUM, TOTAL	43.4			P	1	0.42	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.46			P	1	0.42	0.008	0.042
7440-43-9	CADMIUM, TOTAL	0.03	~~J~~	B-MBL	P	1	0.84	0.007	0.25
7440-70-2	CALCIUM, TOTAL	K-MSH 216		~~N~~	P	1	8.4	0.90	6.8
7440-47-3	CHROMIUM, TOTAL	13.4			MS	5	0.42	0.05	0.17
7440-48-4	COBALT, TOTAL	5.1			MS	5	0.084	0.003	0.025
7440-50-8	COPPER, TOTAL	18.7			P	1	2.1	0.06	0.84
7439-89-6	IRON, TOTAL	13100			P	1	8.4	0.27	6.8
7439-92-1	LEAD, TOTAL	20.9			P	1	0.42	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	K-MSH 782		~~N~~	P	1	8.4	0.31	6.8
7439-96-5	MANGANESE, TOTAL	82.2			P	1	0.42	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.04			CV	1	0.033	0.001	0.017
7440-02-0	NICKEL, TOTAL	7.3			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	K-MSH 837		~~N~~	P	1	84	8.70	42
7782-49-2	SELENIUM, TOTAL	0.36	J		MS	5	0.42	0.03	0.25
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.084	0.008	0.034
7440-23-5	SODIUM, TOTAL	37.9	~~J~~	B-MBL	P	1	84	1.41	42
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	28.9			MS	5	0.42	0.06	0.34
7440-66-6	ZINC, TOTAL	29.2			P	1	2.1	0.05	0.84

Bottle ID: N

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SB280607
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 93.3
Lab Sample ID: SD5871-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	6520			P	1	25	1.29	8.3
7440-36-0	ANTIMONY, TOTAL	R-MSL 0.42	~~U~~	~~N~~	P	1	0.66	0.09	0.42
7440-38-2	ARSENIC, TOTAL	1.6		~~N~~	MS	5	0.43	0.10	0.34
7440-39-3	BARIUM, TOTAL	20.9			P	1	0.42	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.22	J		P	1	0.42	0.007	0.042
7440-43-9	CADMIUM, TOTAL	0.25	U		P	1	0.83	0.007	0.25
7440-70-2	CALCIUM, TOTAL	103		~~N~~	P	1	8.3	0.88	6.6
7440-47-3	CHROMIUM, TOTAL	9.5			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	2.1			MS	5	0.086	0.003	0.026
7440-50-8	COPPER, TOTAL	4.9			P	1	2.1	0.06	0.83
7439-89-6	IRON, TOTAL	6120			P	1	8.3	0.27	6.6
7439-92-1	LEAD, TOTAL	6.1			P	1	0.42	0.09	0.33
7439-95-4	MAGNESIUM, TOTAL	K-MSH 566		~~N~~	P	1	8.3	0.30	6.6
7439-96-5	MANGANESE, TOTAL	24.4			P	1	0.42	0.05	0.33
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.032	0.001	0.016
7440-02-0	NICKEL, TOTAL	5.5			P	1	3.3	0.04	0.33
7440-09-7	POTASSIUM, TOTAL	K-MSH 720		~~N~~	P	1	83	8.56	42
7782-49-2	SELENIUM, TOTAL	0.09	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.086	0.009	0.034
7440-23-5	SODIUM, TOTAL	58.8	J		P	1	83	1.39	42
7440-28-0	THALLIUM, TOTAL	0.08	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	15.5			MS	5	0.43	0.06	0.34
7440-66-6	ZINC, TOTAL	14.0			P	1	2.1	0.05	0.83

Bottle ID: O

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66EB092310
Matrix: WATER
SDG Name: JU04-2
Percent Solids: 0.00
Lab Sample ID: SD5871-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	17.1	J	I	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	1.4	J	B MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	8.0	J	B CCB	P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	1.0	J	B CCB	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	4.0	U		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66EB092410
Matrix: WATER
SDG Name: JU04-2
Percent Solids: 0.00
Lab Sample ID: SD5903-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	4.0	U		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.04	J-B-FBL		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	24.3	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	1.5	J-B-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	46.2	J-B-CCBL		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	4.0	U		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	39.6	J-B-CCBL		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	4.0	U		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	0.74	J-B-CCBL		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS270001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 91.4
Lab Sample ID: SD5903-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	7370			P	1	26	1.34	8.6
7440-36-0	ANTIMONY, TOTAL	0.43	U	~~N~~	P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	2.2		~~N~~	MS	5	0.43	0.10	0.34
7440-39-3	BARIUM, TOTAL	32.7			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	0.44			P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.06	~~J~~	JB-CCBL	P	1	0.86	0.007	0.26
7440-70-2	CALCIUM, TOTAL	214		~~N~~	P	1	8.6	0.91	6.9
7440-47-3	CHROMIUM, TOTAL	8.8			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	5.1			MS	5	0.086	0.003	0.026
7440-50-8	COPPER, TOTAL	29.7			P	1	2.2	0.06	0.86
7439-89-6	IRON, TOTAL	5920			P	1	8.6	0.28	6.9
7439-92-1	LEAD, TOTAL	37.8			P	1	0.43	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	543		~~N~~	P	1	8.6	0.31	6.9
7439-96-5	MANGANESE, TOTAL	120			P	1	0.43	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.08			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	7.9			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	551		~~N~~	P	1	86	8.87	43
7782-49-2	SELENIUM, TOTAL	0.37	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.06	J		MS	5	0.086	0.009	0.034
7440-23-5	SODIUM, TOTAL	50.2	~~J~~	JB-MBL	P	1	86	1.44	43
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	32.9			MS	5	0.43	0.06	0.34
7440-66-6	ZINC, TOTAL	21.6			P	1	2.2	0.05	0.86

Bottle ID: E

Comments:

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | **Client Field ID:** IS66~~DP~~SB270910

Matrix: SOIL | **SDG Name:** JU04-2

Percent Solids: 82.3 | **Lab Sample ID:** SD5903-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	17200			P	1	25	1.27	8.2
7440-36-0	ANTIMONY, TOTAL	0.41	U	~~N~~	P	1	0.66	0.09	0.41
7440-38-2	ARSENIC, TOTAL	1.7		~~N~~	MS	5	0.41	0.09	0.33
7440-39-3	BARIUM, TOTAL	61.9			P	1	0.41	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.63			P	1	0.41	0.007	0.041
7440-43-9	CADMIUM, TOTAL	0.10	~~J~~ BCCBL		P	1	0.82	0.007	0.25
7440-70-2	CALCIUM, TOTAL	153		~~N~~	P	1	8.2	0.87	6.6
7440-47-3	CHROMIUM, TOTAL	18.5			MS	5	0.41	0.05	0.16
7440-48-4	COBALT, TOTAL	4.8			MS	5	0.082	0.003	0.025
7440-50-8	COPPER, TOTAL	12.9			P	1	2.0	0.06	0.82
7439-89-6	IRON, TOTAL	17800			P	1	8.2	0.26	6.6
7439-92-1	LEAD, TOTAL	10.8			P	1	0.41	0.08	0.33
7439-95-4	MAGNESIUM, TOTAL	1160		~~N~~	P	1	8.2	0.30	6.6
7439-96-5	MANGANESE, TOTAL	28.4			P	1	0.41	0.05	0.33
7439-97-6	MERCURY, TOTAL	0.006	J		CV	1	0.040	0.001	0.020
7440-02-0	NICKEL, TOTAL	9.5			P	1	3.3	0.04	0.33
7440-09-7	POTASSIUM, TOTAL	1140		~~N~~	P	1	82	8.45	41
7782-49-2	SELENIUM, TOTAL	0.35	J		MS	5	0.41	0.03	0.25
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.082	0.008	0.033
7440-23-5	SODIUM, TOTAL	78.7	J		P	1	82	1.37	41
7440-28-0	THALLIUM, TOTAL	0.22			MS	5	0.16	0.004	0.033
7440-62-2	VANADIUM, TOTAL	29.5			MS	5	0.41	0.06	0.33
7440-66-6	ZINC, TOTAL	37.8			P	1	2.0	0.05	0.82

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS260001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 90.9
Lab Sample ID: SD5903-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8540			P	1	24	1.24	8.0
7440-36-0	ANTIMONY, TOTAL	0.40	U	~~N~~	P	1	0.64	0.09	0.40
7440-38-2	ARSENIC, TOTAL	3.1		~~N~~	MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	30.8			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.38	J		P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.07	~~J~~B-ccBL		P	1	0.80	0.006	0.24
7440-70-2	CALCIUM, TOTAL	129		~~N~~	P	1	8.0	0.84	6.4
7440-47-3	CHROMIUM, TOTAL	14.6			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	5.4			MS	5	0.080	0.003	0.024
7440-50-8	COPPER, TOTAL	36.6			P	1	2.0	0.06	0.80
7439-89-6	IRON, TOTAL	11100			P	1	8.0	0.26	6.4
7439-92-1	LEAD, TOTAL	40.3			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	593		~~N~~	P	1	8.0	0.29	6.4
7439-96-5	MANGANESE, TOTAL	112			P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.06			CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	6.7			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	502		~~N~~	P	1	80	8.21	40
7782-49-2	SELENIUM, TOTAL	0.45			MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.07	J		MS	5	0.080	0.008	0.032
7440-23-5	SODIUM, TOTAL	32.7	~~J~~B-mBL		P	1	80	1.33	40
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	39.3			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	24.0			P	1	2.0	0.05	0.80

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB260708

Matrix: SOIL **SDG Name:** JU04-2

Percent Solids: 86.8 **Lab Sample ID:** SD5903-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	12600			P	1	24	1.24	8.0
7440-36-0	ANTIMONY, TOTAL	0.40	U	~~N~~	P	1	0.64	0.09	0.40
7440-38-2	ARSENIC, TOTAL	6.2		~~N~~	MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	50.7			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.59			P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.05	J		P	1	0.80	0.006	0.24
7440-70-2	CALCIUM, TOTAL	46.5		~~N~~	P	1	8.0	0.85	6.4
7440-47-3	CHROMIUM, TOTAL	18.9			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	7.0			MS	5	0.080	0.003	0.024
7440-50-8	COPPER, TOTAL	9.5			P	1	2.0	0.06	0.80
7439-89-6	IRON, TOTAL	8290			P	1	8.0	0.26	6.4
7439-92-1	LEAD, TOTAL	8.7			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	1170		~~N~~	P	1	8.0	0.29	6.4
7439-96-5	MANGANESE, TOTAL	24.4			P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.03	J		CV	1	0.037	0.001	0.019
7440-02-0	NICKEL, TOTAL	8.0			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	1080		~~N~~	P	1	80	8.24	40
7782-49-2	SELENIUM, TOTAL	0.28	J		MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.080	0.008	0.032
7440-23-5	SODIUM, TOTAL	109			P	1	80	1.33	40
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	32.4			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	31.4			P	1	2.0	0.05	0.80

Bottle ID: E

Comments:

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SS290001

Matrix: SOIL **SDG Name:** JU04-2

Percent Solids: 90.6 **Lab Sample ID:** SD5903-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	6570			P	1	24	1.26	8.1
7440-36-0	ANTIMONY, TOTAL	0.11	J	~~N~~	P	1	0.65	0.09	0.40
7440-38-2	ARSENIC, TOTAL	2.1		~~N~~	MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	32.7			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.30	J		P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.09	~~J~~ B-CCBL		P	1	0.81	0.006	0.24
7440-70-2	CALCIUM, TOTAL	120		~~N~~	P	1	8.1	0.86	6.5
7440-47-3	CHROMIUM, TOTAL	9.4			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	7.1			MS	5	0.081	0.003	0.024
7440-50-8	COPPER, TOTAL	39.5			P	1	2.0	0.06	0.81
7439-89-6	IRON, TOTAL	6890			P	1	8.1	0.26	6.5
7439-92-1	LEAD, TOTAL	41.6			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	514		~~N~~	P	1	8.1	0.29	6.5
7439-96-5	MANGANESE, TOTAL	447			P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.032	0.001	0.016
7440-02-0	NICKEL, TOTAL	5.9			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	484		~~N~~	P	1	81	8.36	40
7782-49-2	SELENIUM, TOTAL	0.32	J		MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.081	0.008	0.032
7440-23-5	SODIUM, TOTAL	33.1	~~J~~ B-MBL		P	1	81	1.35	40
7440-28-0	THALLIUM, TOTAL	0.10	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	24.7			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	18.7			P	1	2.0	0.05	0.81

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SB291617
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 85.8
Lab Sample ID: SD5903-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	11600			P	1	21	1.09	7.0
7440-36-0	ANTIMONY, TOTAL	0.17	J	~~N~~	P	2	1.1	0.16	0.70
7440-38-2	ARSENIC, TOTAL	0.48 B-FBL		~~N~~	MS	5	0.35	0.08	0.28
7440-39-3	BARIUM, TOTAL	88.9			P	1	0.35	0.02	0.21
7440-41-7	BERYLLIUM, TOTAL	0.82			P	1	0.35	0.006	0.035
7440-43-9	CADMIUM, TOTAL	0.42	U		P	2	1.4	0.01	0.42
7440-70-2	CALCIUM, TOTAL	459		~~N~~	P	1	7.0	0.74	5.6
7440-47-3	CHROMIUM, TOTAL	19.4			MS	5	0.35	0.04	0.14
7440-48-4	COBALT, TOTAL	10.5			MS	5	0.070	0.003	0.021
7440-50-8	COPPER, TOTAL	13.4			P	2	3.5	0.10	1.4
7439-89-6	IRON, TOTAL	27700			P	1	7.0	0.23	5.6
7439-92-1	LEAD, TOTAL	9.3			P	2	0.70	0.14	0.56
7439-95-4	MAGNESIUM, TOTAL	2070		~~N~~	P	2	14	0.51	11
7439-96-5	MANGANESE, TOTAL	91.4			P	2	0.70	0.08	0.56
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.033	0.001	0.017
7440-02-0	NICKEL, TOTAL	22.1			P	2	5.6	0.08	0.56
7440-09-7	POTASSIUM, TOTAL	957		~~N~~	P	1	70	7.23	35
7782-49-2	SELENIUM, TOTAL	0.27	J		MS	5	0.35	0.02	0.21
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.070	0.007	0.028
7440-23-5	SODIUM, TOTAL	69.4	J		P	1	70	1.17	35
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.14	0.004	0.028
7440-62-2	VANADIUM, TOTAL	25.7			MS	5	0.35	0.05	0.28
7440-66-6	ZINC, TOTAL	50.7			P	1	1.8	0.04	0.70

Bottle ID: E

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB01-092810

Matrix: WATER | SDG Name: JU04-2

Percent Solids: 0.00 | Lab Sample ID: SD5971-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.0	J	B MBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	24.0	J	J	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	1.4	J	B MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.17	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	7.8	J	B CCB	P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	4.0	U		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	0.91	J	B MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	0.63	J	B CCB	P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS360001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 78.4
Lab Sample ID: SD5971-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10100			P	1	30	1.57	10
7440-36-0	ANTIMONY, TOTAL	0.51	U	~~N~~	P	1	0.81	0.11	0.51
7440-38-2	ARSENIC, TOTAL	8.1		~~N~~	MS	5	0.51	0.12	0.40
7440-39-3	BARIUM, TOTAL	66.1			P	1	0.51	0.03	0.30
7440-41-7	BERYLLIUM, TOTAL	0.62			P	1	0.51	0.009	0.051
7440-43-9	CADMIUM, TOTAL	0.12	J	BCCBL	P	1	1.0	0.008	0.30
7440-70-2	CALCIUM, TOTAL	289		~~N~~	P	1	10	1.07	8.1
7440-47-3	CHROMIUM, TOTAL	12.3			MS	5	0.51	0.06	0.20
7440-48-4	COBALT, TOTAL	15.1			MS	5	0.10	0.004	0.030
7440-50-8	COPPER, TOTAL	14.2			P	1	2.5	0.07	1.0
7439-89-6	IRON, TOTAL	10100			P	1	10	0.33	8.1
7439-92-1	LEAD, TOTAL	15.4			P	1	0.51	0.10	0.40
7439-95-4	MAGNESIUM, TOTAL	931		~~N~~	P	1	10	0.37	8.1
7439-96-5	MANGANESE, TOTAL	150			P	1	0.51	0.06	0.40
7439-97-6	MERCURY, TOTAL	0.05			CV	1	0.033	0.001	0.017
7440-02-0	NICKEL, TOTAL	10.0			P	1	4.0	0.05	0.40
7440-09-7	POTASSIUM, TOTAL	710		~~N~~	P	1	100	10.43	51
7782-49-2	SELENIUM, TOTAL	0.38	J		MS	5	0.51	0.04	0.30
7440-22-4	SILVER, TOTAL	0.08	J		MS	5	0.10	0.01	0.040
7440-23-5	SODIUM, TOTAL	59.4	J		P	1	100	1.69	51
7440-28-0	THALLIUM, TOTAL	0.13	J		MS	5	0.20	0.005	0.040
7440-62-2	VANADIUM, TOTAL	23.7			MS	5	0.51	0.08	0.40
7440-66-6	ZINC, TOTAL	49.2			P	1	2.5	0.06	1.0

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB360809

Matrix: SOIL **SDG Name:** JU04-2

Percent Solids: 88.1 **Lab Sample ID:** SD5971-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	11300			P	1	29	1.48	9.5
7440-36-0	ANTIMONY, TOTAL	0.48	U	~~N~~	P	1	0.76	0.11	0.48
7440-38-2	ARSENIC, TOTAL	0.28	J	~~N~~	MS	5	0.48	0.11	0.38
7440-39-3	BARIUM, TOTAL	87.6			P	1	0.48	0.02	0.29
7440-41-7	BERYLLIUM, TOTAL	0.58			P	1	0.48	0.009	0.048
7440-43-9	CADMIUM, TOTAL	0.06			P	1	0.95	0.008	0.29
7440-70-2	CALCIUM, TOTAL	320		~~N~~	P	1	9.5	1.01	7.6
7440-47-3	CHROMIUM, TOTAL	16.7			MS	5	0.48	0.06	0.19
7440-48-4	COBALT, TOTAL	9.3			MS	5	0.095	0.004	0.029
7440-50-8	COPPER, TOTAL	10.8			P	1	2.4	0.07	0.95
7439-89-6	IRON, TOTAL	10500			P	1	9.5	0.31	7.6
7439-92-1	LEAD, TOTAL	5.3			P	1	0.48	0.10	0.38
7439-95-4	MAGNESIUM, TOTAL	1560		~~N~~	P	1	9.5	0.35	7.6
7439-96-5	MANGANESE, TOTAL	43.7			P	1	0.48	0.06	0.38
7439-97-6	MERCURY, TOTAL	0.008	J		CV	1	0.033	0.001	0.017
7440-02-0	NICKEL, TOTAL	17.1			P	1	3.8	0.05	0.38
7440-09-7	POTASSIUM, TOTAL	1080		~~N~~	P	1	95	9.82	48
7782-49-2	SELENIUM, TOTAL	0.18	J		MS	5	0.48	0.03	0.29
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.095	0.010	0.038
7440-23-5	SODIUM, TOTAL	136			P	1	95	1.59	48
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.19	0.005	0.038
7440-62-2	VANADIUM, TOTAL	15.7			MS	5	0.48	0.07	0.38
7440-66-6	ZINC, TOTAL	50.0			P	1	2.4	0.06	0.95

B-FBL

J3-CCBL

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SS370001

Matrix: SOIL **SDG Name:** JU04-2

Percent Solids: 93.0 **Lab Sample ID:** SD5971-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10200			P	1	26	1.34	8.7
7440-36-0	ANTIMONY, TOTAL	0.43	U	~~N~~	P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	1.9		~~N~~	MS	5	0.43	0.10	0.35
7440-39-3	BARIUM, TOTAL	51.9			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	0.46			P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.07	J	B-CCBL	P	1	0.87	0.007	0.26
7440-70-2	CALCIUM, TOTAL	95.1		~~N~~	P	1	8.7	0.92	6.9
7440-47-3	CHROMIUM, TOTAL	13.2			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	5.5			MS	5	0.087	0.003	0.026
7440-50-8	COPPER, TOTAL	5.1			P	1	2.2	0.06	0.87
7439-89-6	IRON, TOTAL	10300			P	1	8.7	0.28	6.9
7439-92-1	LEAD, TOTAL	7.9			P	1	0.43	0.09	0.35
7439-95-4	MAGNESIUM, TOTAL	864		~~N~~	P	1	8.7	0.31	6.9
7439-96-5	MANGANESE, TOTAL	71.5			P	1	0.43	0.05	0.35
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.030	0.001	0.015
7440-02-0	NICKEL, TOTAL	8.8			P	1	3.5	0.05	0.35
7440-09-7	POTASSIUM, TOTAL	640		~~N~~	P	1	87	8.93	43
7782-49-2	SELENIUM, TOTAL	0.19	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.087	0.009	0.035
7440-23-5	SODIUM, TOTAL	34.2	J	B-MBL	P	1	87	1.45	43
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.17	0.004	0.035
7440-62-2	VANADIUM, TOTAL	18.9			MS	5	0.43	0.07	0.35
7440-66-6	ZINC, TOTAL	28.8			P	1	2.2	0.05	0.87

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SB371314
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 84.1
Lab Sample ID: SD5971-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	13200			P	1	27	1.39	8.9
7440-36-0	ANTIMONY, TOTAL	0.89	U		P	2	1.4	0.20	0.89
7440-38-2	ARSENIC, TOTAL	1.2			MS	5	0.45	0.10	0.36
7440-39-3	BARIUM, TOTAL	101			P	1	0.45	0.02	0.27
7440-41-7	BERYLLIUM, TOTAL	0.88			P	1	0.45	0.008	0.045
7440-43-9	CADMIUM, TOTAL	0.54	U		P	2	1.8	0.01	0.54
7440-70-2	CALCIUM, TOTAL	633			P	1	8.9	0.95	7.2
7440-47-3	CHROMIUM, TOTAL	21.5			MS	5	0.45	0.05	0.18
7440-48-4	COBALT, TOTAL	7.1			MS	5	0.089	0.004	0.027
7440-50-8	COPPER, TOTAL	12.0			P	2	4.5	0.13	1.8
7439-89-6	IRON, TOTAL	22600			P	1	8.9	0.29	7.2
7439-92-1	LEAD, TOTAL	9.2			P	2	0.89	0.18	0.72
7439-95-4	MAGNESIUM, TOTAL	2050			P	2	18	0.65	14
7439-96-5	MANGANESE, TOTAL	65.9			P	2	0.89	0.10	0.72
7439-97-6	MERCURY, TOTAL	0.07			CV	1	0.032	0.001	0.016
7440-02-0	NICKEL, TOTAL	21.1			P	2	7.2	0.10	0.72
7440-09-7	POTASSIUM, TOTAL	1190			P	1	89	9.21	45
7782-49-2	SELENIUM, TOTAL	0.33	J		MS	5	0.45	0.03	0.27
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.089	0.009	0.036
7440-23-5	SODIUM, TOTAL	158			P	1	89	1.49	45
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.18	0.004	0.036
7440-62-2	VANADIUM, TOTAL	26.9			MS	5	0.45	0.07	0.36
7440-66-6	ZINC, TOTAL	46.3			P	1	2.2	0.06	0.89

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS390001
Matrix: SOIL
SDG Name: JU04-2
Percent Solids: 85.7
Lab Sample ID: SD5971-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	15200			P	1	24	1.26	8.1
7440-36-0	ANTIMONY, TOTAL	0.40	U	~~N~~	P	1	0.65	0.09	0.40
7440-38-2	ARSENIC, TOTAL	3.3		~~N~~	MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	47.0			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.59			P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.12	J	B<CRBL	P	1	0.81	0.006	0.24
7440-70-2	CALCIUM, TOTAL	62.4		~~N~~	P	1	8.1	0.86	6.5
7440-47-3	CHROMIUM, TOTAL	23.0			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	6.0			MS	5	0.081	0.003	0.024
7440-50-8	COPPER, TOTAL	13.7			P	1	2.0	0.06	0.81
7439-89-6	IRON, TOTAL	17000			P	1	8.1	0.26	6.5
7439-92-1	LEAD, TOTAL	11.4			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	1670		~~N~~	P	1	8.1	0.29	6.5
7439-96-5	MANGANESE, TOTAL	42.6			P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.03	J		CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	11.2			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	1200		~~N~~	P	1	81	8.34	40
7782-49-2	SELENIUM, TOTAL	0.39	J		MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.01	J		MS	5	0.081	0.008	0.032
7440-23-5	SODIUM, TOTAL	44.4	J	B<MBL	P	1	81	1.35	40
7440-28-0	THALLIUM, TOTAL	0.15	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	31.1			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	38.0			P	1	2.0	0.05	0.81

Bottle ID: E

Comments:

Katahdin Analytical Services

Client Sample ID: IS66SS310001

HPLC

Lot-Sample #...:	G0I280572-001	Work Order #...:	L7MDK1AD	Matrix.....:	SOLID
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.99				
% Moisture.....:	5.1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

SS

Client Sample ID: IS66~~DP~~310001

HPLC

Lot-Sample #...:	G0I280572-001	Work Order #...:	L7MDK2AD	Matrix.....:	SOLID
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.97				
% Moisture.....:	5.1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 J	0.24	mg/kg	0.019

Exclude-RE

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SB311415

HPLC

Lot-Sample #...:	G0I280572-002	Work Order #...:	L7MDM1AD	Matrix.....:	SOLID
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	15	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

SB

Client Sample ID: IS66DP311415

HPLC

Lot-Sample #...:	G0I280572-002	**Work Order #...:**	L7MDM2AD	**Matrix.....:**	SOLID
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/14/10	**Analysis Date..:**	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.98				
% Moisture.....:	15	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS280001

HPLC

Lot-Sample #...:	G0I280572-003	**Work Order #...:**	L7MDN1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	8.4	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.040 U**	**0.25**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS280001

HPLC

Lot-Sample #...: G0I280572-003	Work Order #...: L7MDN2AD		Matrix.....: SOLID	
Date Sampled...: 09/23/10	Date Received..: 09/28/10			
Prep Date.....: 10/14/10	Analysis Date..: 10/15/10			
Prep Batch #...: 0287483				
Dilution Factor: 1				
% Moisture.....: 8.4	Method.....: SW846 8330 (Modif			

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

EXCLUDE-RE

HK 12/10/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~280607

HPLC

Lot-Sample #...:	G0I280572-004	Work Order #...:	L7MDP1AD	Matrix.....:	SOLID
Date Sampled...:	09/23/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	1.01				
% Moisture.....:	7.3	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

SB

Client Sample ID: IS66DP280607

HPLC

Lot-Sample #...:	G0I280572-004	**Work Order #...:**	L7MDP2AD	**Matrix.....:**	SOLID
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/14/10	**Analysis Date..:**	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.98				
% Moisture.....:	7.3	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66SS270001

HPLC

Lot-Sample #...:	G0I280572-005	Work Order #...:	L7MDT1AD	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	7.2	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66DP270001 SS

HPLC

Lot-Sample #...:	G0I280572-005	Work Order #...:	L7MDT2AD	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	10/14/10	Analysis Date..:	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	1.02				
% Moisture.....:	7.2	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.041 U	0.26	mg/kg	0.020

Exclude-RE

Katahdin Analytical Services

SB

Client Sample ID: IS66DP270910

HPLC

Lot-Sample #...:	G0I280572-006	Work Order #...:	L7MDV1AD	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	16	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~270910

HPLC

Lot-Sample #...:	G0I280572-006	**Work Order #...:**	L7MDV2AD	**Matrix.....:**	SOLID
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/14/10	**Analysis Date..:**	10/15/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.97				
% Moisture.....:	16	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.019**

Exclude -RE

Katahdin Analytical Services

SS

Client Sample ID: IS66~~DP~~260001

HPLC

Lot-Sample #...:	G0I280572-007	Work Order #...:	L7MDW1AD	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	8.1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

SS

Client Sample ID: IS66~~DP~~260001

HPLC

Lot-Sample #...: G0I280572-007	Work Order #...: L7MDW2AD		Matrix.....: SOLID	
Date Sampled...: 09/24/10	Date Received..: 09/28/10			
Prep Date.....: 10/14/10	Analysis Date..: 10/15/10			
Prep Batch #...: 0287483				
Dilution Factor: 0.98				
% Moisture.....: 8.1	Method.....: SW846 8330 (Modif			

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Exclude-RE

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~260708

SB

HPLC

Lot-Sample #...:	G0I280572-008	Work Order #...:	L7MDX1AD	Matrix.....:	SOLID
Date Sampled...:	09/24/10	Date Received..:	09/28/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

HK 12/10/2010

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~260708 SB

HPLC

Lot-Sample #...:	G0I280572-008	**Work Order #...:**	L7MDX2AD	**Matrix.....:**	SOLID
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/14/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0287483				
Dilution Factor:	1				
% Moisture.....:	11	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.040 U**	**0.25**	**mg/kg**	**0.020**

Exclude-RE

Katahdin Analytical Services

Client Sample ID: IS66SS290001

HPLC

Lot-Sample #...:	G0I280572-009	**Work Order #...:**	L7MD01AD	**Matrix.....:**	SOLID
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	0.98				
% Moisture.....:	4.9	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66SS290001

HPLC

Lot-Sample #...: G0I280572-009	**Work Order #...:** L7MD02AD		**Matrix.....:** SOLID	
Date Sampled...: 09/24/10	**Date Received..:** 09/28/10			
Prep Date.....: 10/14/10	**Analysis Date..:** 10/16/10			
Prep Batch #...: 0287483				
Dilution Factor: 0.98				
% Moisture.....: 4.9	**Method.....:** SW846 8330 (Modif			

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U** EXCLUDE-RE	**0.24**	**mg/kg**	**0.020**

Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~291617

HPLC

Lot-Sample #...:	G0I280572-010	**Work Order #...:**	L7MD11AD	**Matrix.....:**	SOLID
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277222				
Dilution Factor:	1				
% Moisture.....:	18	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.040 U**	**0.25**	**mg/kg**	**0.020**

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Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~291617

HPLC

Lot-Sample #...:	G0I280572-010	**Work Order #...:**	L7MD12AD	**Matrix.....:**	SOLID
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/14/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0287483				
Dilution Factor:	0.98				
% Moisture.....:	18	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

EXCLUDE-RE

Katahdin Analytical Services

Client Sample ID: IS66EB092310

Dissolved HPLC

Lot-Sample #...:	G0I280572-011	**Work Order #...:**	L7MD22AC	**Matrix.....:**	WATER
Date Sampled...:	09/23/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/13/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**6.0 U**	**20**	**ug/L**	**2.4**

Katahdin Analytical Services

Client Sample ID: IS66EB092410

Dissolved HPLC

Lot-Sample #...:	G0I280572-012	**Work Order #...:**	L7MD42AC	**Matrix.....:**	WATER
Date Sampled...:	09/24/10	**Date Received..:**	09/28/10		
Prep Date.....:	10/13/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**6.0 U**	**20**	**ug/L**	**2.4**

Katahdin Analytical Services

SS

Client Sample ID: IS66~~DP~~36001

HPLC

Lot-Sample #...: G0J010570-002	**Work Order #...:** L7VVJ1AD	**Matrix.....:** SOLID
Date Sampled...: 09/28/10	**Date Received..:** 09/30/10	
Prep Date.....: 10/06/10	**Analysis Date..:** 10/19/10	
Prep Batch #...: 0279401		
Dilution Factor: 0.97		
% Moisture.....: 11	**Method.....:** SW846 8330 (Modif	

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.019**

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Katahdin Analytical Services

SB

Client Sample ID: IS66~~DP~~360809

HPLC

Lot-Sample #...:	G0J010570-003	Work Order #...:	L7VVP1AD	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.91				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.036 U	0.23	mg/kg	0.018

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Katahdin Analytical Services

Client Sample ID: IS66DP370001 SS

HPLC

Lot-Sample #...:	G0J010570-004	**Work Order #...:**	L7VVR1AD	**Matrix.....:**	SOLID
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	10/06/10	**Analysis Date..:**	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.95				
% Moisture.....:	11	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.038 U**	**0.24**	**mg/kg**	**0.019**

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Katahdin Analytical Services

SB

Client Sample ID: IS66DP371314

HPLC

Lot-Sample #...:	G0J010570-005	Work Order #...:	L7VVT1AD	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.98				
% Moisture.....:	16	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS390001

HPLC

Lot-Sample #...:	G0J010570-006	Work Order #...:	L7VVW1AD	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66EB01-092810

Dissolved HPLC

Lot-Sample #...:	G0J010570-001	Work Order #...:	L7VVG2AC	Matrix.....:	WATER
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/13/10	Analysis Date..:	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82635

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 95.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.1	ug/Kgdrywt	1	17	16.	5.7	8.1
Aroclor-1221	U	8.1	ug/Kgdrywt	1	17	16.	7.5	8.1
Aroclor-1232	U	9.5	ug/Kgdrywt	1	17	16.	8.8	9.5
Aroclor-1242	U	8.1	ug/Kgdrywt	1	17	16.	5.5	8.1
Aroclor-1248	U	8.1	ug/Kgdrywt	1	17	16.	5.8	8.1
Aroclor-1254	U	8.1	ug/Kgdrywt	1	17	16.	4.5	8.1
Aroclor-1260	U	8.1	ug/Kgdrywt	1	17	16.	5.7	8.1
Tetrachloro-M-Xylene		66.1	%					
Decachlorobiphenyl		79.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82635

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 81.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		56.2	%					
Decachlorobiphenyl		70.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82635

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 92.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	UUJ-SSL	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254	U	9.2	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene	*	53.0	%					
Decachlorobiphenyl		65.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82635

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 93.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.9	ug/Kgdrywt	1	17	18.	6.3	8.9
Aroclor-1221	U	8.9	ug/Kgdrywt	1	17	18.	8.2	8.9
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.7	10.
Aroclor-1242	U	8.9	ug/Kgdrywt	1	17	18.	6.0	8.9
Aroclor-1248	U	8.9	ug/Kgdrywt	1	17	18.	6.4	8.9
Aroclor-1254	U	8.9	ug/Kgdrywt	1	17	18.	4.9	8.9
Aroclor-1260	U	8.9	ug/Kgdrywt	1	17	18.	6.3	8.9
Tetrachloro-M-Xylene		64.1	%					
Decachlorobiphenyl		77.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: 1S66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82648

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.49	0.15	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.49	0.20	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.49	0.087	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.49	0.18	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.49	0.20	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.49	0.080	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.49	0.17	0.24
Tetrachloro-M-Xylene		75.5	%					
Decachlorobiphenyl		69.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82648

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.48	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.48	0.086	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.48	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.48	0.080	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.48	0.16	0.24
Tetrachloro-M-Xylene	*	61.7	%					
Decachlorobiphenyl		43.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 91.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	~~U~~ UJ-SSL	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254	U	9.2	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene	*	53.2	%					
Decachlorobiphenyl		65.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 82.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-SSL	9.8	ug/Kgdrywt	1	17	20.	6.9	9.8
Aroclor-1221	U	9.8	ug/Kgdrywt	1	17	20.	9.1	9.8
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	20.	11.	11.
Aroclor-1242	U	9.8	ug/Kgdrywt	1	17	20.	6.7	9.8
Aroclor-1248	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Aroclor-1254	U	9.8	ug/Kgdrywt	1	17	20.	5.4	9.8
Aroclor-1260	U	9.8	ug/Kgdrywt	1	17	20.	6.9	9.8
Tetrachloro-M-Xylene	*	54.6	%					
Decachlorobiphenyl		67.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 91.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	~~UJ~~ SSL	9.0	ug/Kgdrywt	1	17	18.	6.3	9.0
Aroclor-1221	U	9.0	ug/Kgdrywt	1	17	18.	8.4	9.0
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.8	10.
Aroclor-1242	U	9.0	ug/Kgdrywt	1	17	18.	6.1	9.0
Aroclor-1248	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Aroclor-1254	U	9.0	ug/Kgdrywt	1	17	18.	5.0	9.0
Aroclor-1260	U	9.0	ug/Kgdrywt	1	17	18.	6.3	9.0
Tetrachloro-M-Xylene	*	54.5	%					
Decachlorobiphenyl		67.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 87.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-SSL	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Aroclor-1221	U	9.6	ug/Kgdrywt	1	17	19.	8.9	9.6
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.6	ug/Kgdrywt	1	17	19.	6.6	9.6
Aroclor-1248	U	9.6	ug/Kgdrywt	1	17	19.	6.9	9.6
Aroclor-1254	U	9.6	ug/Kgdrywt	1	17	19.	5.3	9.6
Aroclor-1260	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Tetrachloro-M-Xylene	*	49.1	%					
Decachlorobiphenyl		73.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-SSL	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.5	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.2	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254	U	9.2	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		60.2	%					
Decachlorobiphenyl		76.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 86.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	19.	8.7	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	19.	6.4	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	19.	6.7	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	19.	5.2	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Tetrachloro-M-Xylene	*	54.4	%					
Decachlorobiphenyl		64.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.093	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.085	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		80.1	%					
Decachlorobiphenyl		60.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 78.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	~~U~~ UJ-SSL	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.6	11.
Tetrachloro-M-Xylene	*	52.1	%					
Decachlorobiphenyl		65.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 88.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Aroclor-1221	U	9.0	ug/Kgdrywt	1	17	18.	8.4	9.0
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	9.9	11.
Aroclor-1242	U	9.0	ug/Kgdrywt	1	17	18.	6.2	9.0
Aroclor-1248	U	9.0	ug/Kgdrywt	1	17	18.	6.5	9.0
Aroclor-1254	U	9.0	ug/Kgdrywt	1	17	18.	5.0	9.0
Aroclor-1260	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Tetrachloro-M-Xylene		66.8	%					
Decachlorobiphenyl		73.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 93.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.0	ug/Kgdrywt	1	17	18.	6.3	9.0
Aroclor-1221	U	9.0	ug/Kgdrywt	1	17	18.	8.4	9.0
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	18.	9.8	10.
Aroclor-1242	U	9.0	ug/Kgdrywt	1	17	18.	6.1	9.0
Aroclor-1248	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Aroclor-1254	U	9.0	ug/Kgdrywt	1	17	18.	5.0	9.0
Aroclor-1260	U	9.0	ug/Kgdrywt	1	17	18.	6.3	9.0
Tetrachloro-M-Xylene		59.9	%					
Decachlorobiphenyl		68.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 84.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.3	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.8	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.5	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Tetrachloro-M-Xylene		66.5	%					
Decachlorobiphenyl		74.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 86.
Report Date: 19-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	~~U~~ UJ-SSL	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Aroclor-1221	U	9.6	ug/Kgdrywt	1	17	19.	8.9	9.6
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.6	ug/Kgdrywt	1	17	19.	6.5	9.6
Aroclor-1248	U	9.6	ug/Kgdrywt	1	17	19.	6.9	9.6
Aroclor-1254	U	9.6	ug/Kgdrywt	1	17	19.	5.3	9.6
Aroclor-1260	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Tetrachloro-M-Xylene	*	54.2	%					
Decachlorobiphenyl		73.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82636

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.32	0.81
gamma-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.26	0.81
Heptachlor	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.28	0.81
Aldrin	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.26	0.81
beta-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.31	0.81
delta-BHC	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.30	0.81
Heptachlor Epoxide	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.21	0.81
Endosulfan I	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.23	0.81
Gamma-Chlordane	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.22	0.81
Alpha-Chlordane	U	0.81	ug/Kgdrywt	1	1.7	1.6	0.20	0.81
4,4'-DDE	J	0.43	ug/Kgdrywt	1	3.3	3.1	0.18	1.6
Dieldrin	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.21	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.81	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.19	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.32	1.6
4,4'-DDT	J	0.84	ug/Kgdrywt	1	3.3	3.1	0.29	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.46	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.55	1.6
Methoxychlor	U	8.1	ug/Kgdrywt	1	17	16.	0.47	8.1
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.1	0.38	1.6
Toxaphene	U	15.	ug/Kgdrywt	1	33	31.	6.6	15.
Tetrachloro-M-Xylene	*	64.2	%					
Decachlorobiphenyl		83.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2RE
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83065

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-EC	0.87	ug/Kgdrywt	1	1.7	1.7	0.35	0.87
gamma-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.28	0.87
Heptachlor	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.30	0.87
Aldrin	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.29	0.87
beta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.34	0.87
delta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.33	0.87
Heptachlor Epoxide	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.22	0.87
Endosulfan I	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.24	0.87
Gamma-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.24	0.87
Alpha-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.21	0.87
4,4'-DDE	J	0.78	ug/Kgdrywt	1	3.3	3.4	0.19	1.7
Dieldrin	JJ	0.55	ug/Kgdrywt	1	3.3	3.4	0.22	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.87	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	J	0.98	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.50	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.59	1.7
Methoxychlor	U	8.7	ug/Kgdrywt	1	17	17.	0.51	8.7
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.41	1.7
Toxaphene	U	16.	ug/Kgdrywt	1	33	34.	7.2	16.
Tetrachloro-M-Xylene	*	49.3	%					
Decachlorobiphenyl		65.7	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82636

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UUL-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.60	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.4	19.
Tetrachloro-M-Xylene	*	62.0	%					
Decachlorobiphenyl		74.8	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3RE
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83065

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	J Exclude-76	0.65	ug/Kgdrywt	1	1.7	1.9	0.38	0.94
gamma-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.30	0.94
Heptachlor	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.32	0.94
Aldrin	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.31	0.94
beta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.36	0.94
delta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.35	0.94
Heptachlor Epoxide	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.24	0.94
Endosulfan I	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.26	0.94
Gamma-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.25	0.94
Alpha-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.23	0.94
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.94	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.4	ug/Kgdrywt	1	17	19.	0.55	9.4
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.8	18.
Tetrachloro-M-Xylene	*	55.0	%					
Decachlorobiphenyl		72.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82636

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 92.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	~~U~~ UL-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.31	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.35	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	J L-SSL	0.37	ug/Kgdrywt	1	3.3	3.6	0.20	1.8
Dieldrin	U UL-SSL	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J L-SSL	1.3	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	54.7	%					
Decachlorobiphenyl		68.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4RE
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83065

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 92.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude CE	0.86	ug/Kgdrywt	1	1.7	1.7	0.35	0.86
gamma-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.27	0.86
Heptachlor	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.30	0.86
Aldrin	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.28	0.86
beta-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.34	0.86
delta-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.32	0.86
Heptachlor Epoxide	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.22	0.86
Endosulfan I	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.24	0.86
Gamma-Chlordane	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.23	0.86
Alpha-Chlordane	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.21	0.86
4,4'-DDE	JJ	0.64	ug/Kgdrywt	1	3.3	3.4	0.19	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.22	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.86	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	J	1.0	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.50	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.59	1.7
Methoxychlor	U	8.6	ug/Kgdrywt	1	17	17.	0.51	8.6
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.41	1.7
Toxaphene	U	16.	ug/Kgdrywt	1	33	34.	7.1	16.
Tetrachloro-M-Xylene	*	51.3	%					
Decachlorobiphenyl		63.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82636

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.89	ug/Kgdrywt	1	1.7	1.8	0.36	0.89
gamma-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.28	0.89
Heptachlor	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.30	0.89
Aldrin	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.29	0.89
beta-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.34	0.89
delta-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.33	0.89
Heptachlor Epoxide	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.23	0.89
Endosulfan I	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.25	0.89
Gamma-Chlordane	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.24	0.89
Alpha-Chlordane	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.22	0.89
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.89	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.36	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.51	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.60	1.7
Methoxychlor	U	8.9	ug/Kgdrywt	1	17	18.	0.52	8.9
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	34.	7.3	17.
Tetrachloro-M-Xylene	*	69.8	%					
Decachlorobiphenyl		79.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5RE
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83065

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.33	0.82
gamma-BHC	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.26	0.82
Heptachlor	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.28	0.82
Aldrin	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.27	0.82
beta-BHC	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.32	0.82
delta-BHC	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.31	0.82
Heptachlor Epoxide	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.21	0.82
Endosulfan I	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.23	0.82
Gamma-Chlordane	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.22	0.82
Alpha-Chlordane	U	0.82	ug/Kgdrywt	1	1.7	1.6	0.20	0.82
4,4'-DDE	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.18	1.6
Dieldrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.21	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.82	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.19	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.33	1.6
4,4'-DDT	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.30	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.47	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.56	1.6
Methoxychlor	U	8.2	ug/Kgdrywt	1	17	16.	0.48	8.2
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.39	1.6
Toxaphene	U	15.	ug/Kgdrywt	1	33	32.	6.8	15.
Tetrachloro-M-Xylene	*	63.0	%					
Decachlorobiphenyl		82.3	%					

Exclude #

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82647

Analysis Date: 01-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.024	ug/L	1	.05	0.049	0.0068	0.024
Gamma-BHC	U	0.024	ug/L	1	.05	0.049	0.0070	0.024
Heptachlor	U	0.024	ug/L	1	.05	0.049	0.0078	0.024
Aldrin	U	0.024	ug/L	1	.05	0.049	0.0072	0.024
beta-BHC	U	0.024	ug/L	1	.05	0.049	0.0062	0.024
delta-BHC	U	0.024	ug/L	1	.05	0.049	0.013	0.024
Heptachlor Epoxide	U	0.024	ug/L	1	.05	0.049	0.0072	0.024
Endosulfan I	U	0.024	ug/L	1	.05	0.049	0.0063	0.024
Gamma-Chlordane	U	0.024	ug/L	1	.05	0.049	0.0059	0.024
Alpha-Chlordane	U	0.024	ug/L	1	.05	0.049	0.0074	0.024
4,4'-DDE	U	0.049	ug/L	1	.1	0.098	0.0048	0.049
Dieldrin	U	0.049	ug/L	1	.1	0.098	0.0064	0.049
Endrin	U	0.049	ug/L	1	.1	0.098	0.0082	0.049
4,4'-DDD	U	0.049	ug/L	1	.1	0.098	0.0088	0.049
Endosulfan II	U	0.049	ug/L	1	.1	0.098	0.0056	0.049
4,4'-DDT	U	0.049	ug/L	1	.1	0.098	0.0087	0.049
Endrin Aldehyde	U	0.049	ug/L	1	.1	0.098	0.0061	0.049
Endosulfan Sulfate	U	0.049	ug/L	1	.1	0.098	0.0066	0.049
Methoxychlor	U	0.24	ug/L	1	.5	0.49	0.0082	0.24
Endrin Ketone	U	0.049	ug/L	1	.1	0.098	0.0076	0.049
Toxaphene	U	0.49	ug/L	1	1	0.98	0.17	0.49
Tetrachloro-M-Xylene		80.3	%					
Decachlorobiphenyl		62.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82647

Analysis Date: 04-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.024	ug/L	1	.05	0.048	0.0067	0.024
Gamma-BHC	U	0.024	ug/L	1	.05	0.048	0.0070	0.024
Heptachlor	U	0.024	ug/L	1	.05	0.048	0.0078	0.024
Aldrin	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
beta-BHC	U	0.024	ug/L	1	.05	0.048	0.0061	0.024
delta-BHC	U	0.024	ug/L	1	.05	0.048	0.013	0.024
Heptachlor Epoxide	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
Endosulfan I	U	0.024	ug/L	1	.05	0.048	0.0062	0.024
Gamma-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0058	0.024
Alpha-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0074	0.024
4,4'-DDE	U	0.048	ug/L	1	.1	0.097	0.0048	0.048
Dieldrin	U	0.048	ug/L	1	.1	0.097	0.0063	0.048
Endrin	U	0.048	ug/L	1	.1	0.097	0.0082	0.048
4,4'-DDD	U	0.048	ug/L	1	.1	0.097	0.0087	0.048
Endosulfan II	U	0.048	ug/L	1	.1	0.097	0.0055	0.048
4,4'-DDT	U	0.048	ug/L	1	.1	0.097	0.0086	0.048
Endrin Aldehyde	U	0.048	ug/L	1	.1	0.097	0.0060	0.048
Endosulfan Sulfate	U	0.048	ug/L	1	.1	0.097	0.0065	0.048
Methoxychlor	U	0.24	ug/L	1	.5	0.48	0.0082	0.24
Endrin Ketone	U	0.048	ug/L	1	.1	0.097	0.0076	0.048
Toxaphene	U	0.48	ug/L	1	1	0.97	0.16	0.48
Tetrachloro-M-Xylene		62.9	%					
Decachlorobiphenyl		39.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.31	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.35	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	J L-SSL	1.0	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U UL-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U UL-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	J L-SSL	0.84	ug/Kgdrywt	1	3.3	3.6	0.20	1.8
Dieldrin	U UL-SSL	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	45.7	%					
Decachlorobiphenyl		72.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3RE
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.31	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.34	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	J	1.2	ug/Kgdrywt	1	3.3	3.6	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J	1.3	ug/Kgdrywt	1	3.3	3.6	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	66.6	%					
Decachlorobiphenyl		73.2	%					

Exclude PE

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.98	ug/Kgdrywt	1	1.7	2.0	0.39	0.98
gamma-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.31	0.98
Heptachlor	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.33	0.98
Aldrin	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.32	0.98
beta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.38	0.98
delta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.37	0.98
Heptachlor Epoxide	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.25	0.98
Endosulfan I	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.28	0.98
Gamma-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.26	0.98
Alpha-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.24	0.98
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.98	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.8	ug/Kgdrywt	1	17	20.	0.57	9.8
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.0	18.
Tetrachloro-M-Xylene	*	51.2	%					
Decachlorobiphenyl		70.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4RE
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.26	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	1.0	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.24	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.40	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.58	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.68	1.9
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.47	1.9
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.2	19.
Tetrachloro-M-Xylene	*	60.8	%					
Decachlorobiphenyl		69.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.28	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	J L-SSL	3.3	ug/Kgdrywt	1	3.3	3.5	0.20	1.7
Dieldrin	U UL-SSL	1.7	ug/Kgdrywt	1	3.3	3.5	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.90	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.36	1.7
4,4'-DDT	J L-SSL	1.9	ug/Kgdrywt	1	3.3	3.5	0.33	1.7
Endrin Aldehyde	U UL-SSL	1.7	ug/Kgdrywt	1	3.3	3.5	0.52	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.61	1.7
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	50.8	%					
Decachlorobiphenyl		75.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5RE
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.29	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	J	2.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J	1.9	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	61.8	%					
Decachlorobiphenyl		79.7	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 87.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.30	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.96	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.38	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.55	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.66	1.9
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.57	9.6
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.45	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	47.2	%					
Decachlorobiphenyl		78.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6RE
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 87.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	0.95	ug/Kgdrywt	1	1.7	1.9	0.38	0.95
gamma-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.30	0.95
Heptachlor	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.32	0.95
Aldrin	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.31	0.95
beta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.37	0.95
delta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.36	0.95
Heptachlor Epoxide	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.24	0.95
Endosulfan I	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.27	0.95
Gamma-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.26	0.95
Alpha-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.23	0.95
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.95	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.65	1.8
Methoxychlor	U	9.5	ug/Kgdrywt	1	17	19.	0.56	9.5
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.8	18.
Tetrachloro-M-Xylene	*	69.8	%					
Decachlorobiphenyl		77.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP29000I~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.31	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.34	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.62	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	56.8	%					
Decachlorobiphenyl		84.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7RE
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-PE	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.28	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	J	0.80	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.90	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.36	1.7
4,4'-DDT	J	1.2	ug/Kgdrywt	1	3.3	3.5	0.33	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.52	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.61	1.7
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	59.2	%					
Decachlorobiphenyl		73.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.93	ug/Kgdrywt	1	1.7	1.9	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	19.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.7	18.
Tetrachloro-M-Xylene	*	52.2	%					
Decachlorobiphenyl		67.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8RE
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.31	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.96	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.38	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.66	1.9
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.57	9.6
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.45	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	39.9	%					
Decachlorobiphenyl	*	50.5	%					

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ANALYTICAL SERVICES

Cert No ER7604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site E
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0072	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0075	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0083	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0079	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0051	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0068	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0088	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0094	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0070	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0088	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0081	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		78.1	%					
Decachlorobiphenyl		57.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 78.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.34	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.29	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	L-SSL	9.2	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U UL-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.25	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.43	2.1
4,4'-DDT	J L-SSL	2.2	ug/Kgdrywt	1	3.3	4.2	0.39	2.1
Endrin Aldehyde	U UL-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.62	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.74	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.64	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.51	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	8.9	20.
Tetrachloro-M-Xylene	*	47.9	%					
Decachlorobiphenyl		71.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2RE
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 78.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.34	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.40	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.29	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE		9.3	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	JJ	1.0	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	JJ	1.9	ug/Kgdrywt	1	3.3	4.2	0.25	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.43	2.1
4,4'-DDT	J	3.7	ug/Kgdrywt	1	3.3	4.2	0.39	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.62	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.74	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.63	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.51	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	8.9	20.
Tetrachloro-M-Xylene	*	50.0	%					
Decachlorobiphenyl		66.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 88.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.29	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.23	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.90	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.42	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	57.2	%					
Decachlorobiphenyl		77.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3RE
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 88.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	0.95	ug/Kgdrywt	1	1.7	1.9	0.38	0.95
gamma-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.30	0.95
Heptachlor	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.32	0.95
Aldrin	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.31	0.95
beta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.37	0.95
delta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.36	0.95
Heptachlor Epoxide	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.24	0.95
Endosulfan I	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.27	0.95
Gamma-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.26	0.95
Alpha-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.23	0.95
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.95	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.35	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.55	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.65	1.8
Methoxychlor	U	9.5	ug/Kgdrywt	1	17	19.	0.56	9.5
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.45	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.8	18.
Tetrachloro-M-Xylene	*	57.0	%					
Decachlorobiphenyl		67.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.28	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.90	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.36	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.33	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.52	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.61	1.7
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	52.3	%					
Decachlorobiphenyl		70.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4RE
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 93.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U EXCLUDE-RE	0.84	ug/Kgdrywt	1	1.7	1.7	0.34	0.84
gamma-BHC	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.27	0.84
Heptachlor	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.28	0.84
Aldrin	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.28	0.84
beta-BHC	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.32	0.84
delta-BHC	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.32	0.84
Heptachlor Epoxide	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.22	0.84
Endosulfan I	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.24	0.84
Gamma-Chlordane	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.23	0.84
Alpha-Chlordane	U	0.84	ug/Kgdrywt	1	1.7	1.7	0.21	0.84
4,4'-DDE	J	0.72	ug/Kgdrywt	1	3.3	3.2	0.19	1.6
Dieldrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.22	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.84	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.20	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.34	1.6
4,4'-DDT	J	0.90	ug/Kgdrywt	1	3.3	3.2	0.30	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.48	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.57	1.6
Methoxychlor	U	8.4	ug/Kgdrywt	1	17	17.	0.49	8.4
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.2	0.39	1.6
Toxaphene	U	16.	ug/Kgdrywt	1	33	32.	6.9	16.
Tetrachloro-M-Xylene	*	61.6	%					
Decachlorobiphenyl		68.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 84.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.26	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	1.0	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.40	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.58	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.68	1.9
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.47	1.9
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.2	19.
Tetrachloro-M-Xylene	*	55.8	%					
Decachlorobiphenyl		76.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5RE
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 84.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U EXCLUDE-RE	0.98	ug/Kgdrywt	1	1.7	2.0	0.39	0.98
gamma-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.31	0.98
Heptachlor	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.34	0.98
Aldrin	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.32	0.98
beta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.38	0.98
delta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.37	0.98
Heptachlor Epoxide	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.25	0.98
Endosulfan I	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.28	0.98
Gamma-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.27	0.98
Alpha-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.24	0.98
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.98	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.57	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.8	ug/Kgdrywt	1	17	20.	0.58	9.8
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.1	18.
Tetrachloro-M-Xylene	*	58.8	%					
Decachlorobiphenyl		71.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 12-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.30	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.21	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.96	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.22	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.38	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.55	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.65	1.9
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.56	9.6
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.45	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	55.3	%					
Decachlorobiphenyl		74.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6RE
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	0.93	ug/Kgdrywt	1	1.7	1.9	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	19.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.7	18.
Tetrachloro-M-Xylene	*	57.3	%					
Decachlorobiphenyl		69.6	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	52.	ug/Kgdrywt	1	100	100	6.3	52.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	52.	ug/Kgdrywt	1	100	100	5.5	52.
2-Methylphenol	U UL-BSL	52.	ug/Kgdrywt	1	100	100	8.8	52.
3&4-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	10.	52.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	J	10.	ug/Kgdrywt	1	100	100	3.4	52.
2,4,5-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	2.6	52.
Dimethyl phthalate	U	10.	ug/Kgdrywt	1	20	21.	1.4	10.
Acenaphthylene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Acenaphthene	J L-BSL	4.0	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	U UCF-ICB	52.	ug/Kgdrywt	1	100	100	8.3	52.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.2	10.
Fluorene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	3.3	10.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	320	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	52.	ug/Kgdrywt	1	100	100	14.	52.
Phenanthrene		33.	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	J	9.0	ug/Kgdrywt	1	20	21.	1.2	10.
Fluoranthene		68.	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene		42.	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U R-BSL	10.	ug/Kgdrywt	1	20	21.	3.1	10.
Benzo (a) anthracene		36.	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene		25.	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	J B-mBL	57.	ug/Kgdrywt	1	100	100	33.	52.
Di-n-octylphthalate	U	52.	ug/Kgdrywt	1	100	100	48.	52.
Benzo (b) Fluoranthene		53.	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	14.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo(a)pyrene		35.	ug/Kgdrywt	1	20	21.	3.4	10.
Indeno (1,2,3-cd) pyrene	J	18.	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	J	3.9	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	J	17.	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		45.0	%					
Fluorene-D10		45.3	%					
Pyrene-D10		57.9	%					
2,4-Dibromophenol		61.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	62.	ug/Kgdrywt	1	100	120	7.5	62.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	25.	2.1	12.
2-Chlorophenol	U	62.	ug/Kgdrywt	1	100	120	6.5	62.
2-Methylphenol	U U-BSL	62.	ug/Kgdrywt	1	100	120	10.	62.
3&4-Methylphenol	U	62.	ug/Kgdrywt	1	100	120	12.	62.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	25.	5.9	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	25.	3.9	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	25.	2.7	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	25.	3.2	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	25.	2.8	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	25.	2.7	12.
Hexachlorocyclopentadiene	U U-BSL	12.	ug/Kgdrywt	1	20	25.	1.8	12.
2,4,6-Trichlorophenol	U	62.	ug/Kgdrywt	1	100	120	4.1	62.
2,4,5-Trichlorophenol	U	62.	ug/Kgdrywt	1	100	120	3.1	62.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	25.	1.7	12.
Acenaphthylene	U U-BSL	12.	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U U-BSL	12.	ug/Kgdrywt	1	20	25.	1.8	12.
4-Nitrophenol	U U-ICB	62.	ug/Kgdrywt	1	100	120	9.9	62.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	25.	8.6	12.
Fluorene	U U-BSL	12.	ug/Kgdrywt	1	20	25.	3.9	12.
4,6-Dinitro-2-methylphenol	U U-BSL	180	ug/Kgdrywt	1	310	380	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	25.	2.2	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	25.	1.2	12.
Pentachlorophenol	U	62.	ug/Kgdrywt	1	100	120	17.	62.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	25.	2.2	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	25.	2.2	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	25.	2.6	12.
3,3'-Dichlorobenzidine	U R-BSL	12.	ug/Kgdrywt	1	20	25.	3.7	12.
Benzo (a) anthracene	J	8.1	ug/Kgdrywt	1	20	25.	2.3	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	25.	2.1	12.
bis(2-Ethylhexyl)phthalate	J B-MBL	90.	ug/Kgdrywt	1	100	120	39.	62.
Di-n-octylphthalate	U	62.	ug/Kgdrywt	1	100	120	57.	62.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	25.	3.0	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	25.	2.2	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		36.9	%					
Fluorene-D10		37.7	%					
Pyrene-D10		60.3	%					
2,4-Dibromophenol		43.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U LL-BSL	54.	ug/Kgdrywt	1	100	110	9.2	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
2,4-Dichlorophenol	J	7.0	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U LL-MSL	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U LL-MSL	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	J L-BSL	4.4	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	J	14.	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	J	4.5	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	J	2.7	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	J L-BSL	1.6	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	J L-BSL	7.0	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U UJ-ICB	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	J L-BSL	5.8	ug/Kgdrywt	1	20	22.	3.4	11.
4,6-Dinitro-2-methylphenol	U LL-BSL	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Atrazine	J	2.5	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene		65.	ug/Kgdrywt	1	20	22.	1.9	11.
Anthracene	J	12.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	K-MSH	130	ug/Kgdrywt	1	20	22.	1.9	11.
Pyrene		79.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U R-BSL	11.	ug/Kgdrywt	1	20	22.	3.2	11.
Benzo (a) anthracene		79.	ug/Kgdrywt	1	20	22.	2.0	11.
Chrysene		54.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate	J B-MBL	82.	ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene		100	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 08-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 92.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		29.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo(a)pyrene		72.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		46.	ug/Kgdrywt	1	20	22.	2.0	11.
Dibenzo (a,h) anthracene	J	16.	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(g,h,i)perylene		42.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		49.2	%					
Fluorene-D10		50.5	%					
Pyrene-D10		58.7	%					
2,4-Dibromophenol		67.2	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	52.	ug/Kgdrywt	1	100	100	6.4	52.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	52.	ug/Kgdrywt	1	100	100	5.6	52.
2-Methylphenol	U RL-BSL	52.	ug/Kgdrywt	1	100	100	8.9	52.
3&4-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	10.	52.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U UL-MSL	10.	ug/Kgdrywt	1	20	21.	3.4	10.
2,4-Dichlorophenol	J	5.5	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	J	10.	ug/Kgdrywt	1	100	100	3.5	52.
2,4,5-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	2.6	52.
Dimethyl phthalate	J	2.2	ug/Kgdrywt	1	20	21.	1.5	10.
Acenaphthylene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.3	10.
Acenaphthene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	U CCT-ICB	52.	ug/Kgdrywt	1	100	100	8.4	52.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.4	10.
Fluorene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	3.4	10.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	320	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	J	2.0	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	52.	ug/Kgdrywt	1	100	100	15.	52.
Phenanthrene	J	3.4	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	J	1.8	ug/Kgdrywt	1	20	21.	1.3	10.
Fluoranthene	J H-MSH	7.1	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene	J	6.4	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U R-BSL	10.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo (a) anthracene	J	8.6	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene	J	2.0	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	E Reluse-LR	430	ug/Kgdrywt	1	100	100	34.	52.
Di-n-octylphthalate	U	52.	ug/Kgdrywt	1	100	100	48.	52.
Benzo (b) Fluoranthene	J B-EBL	12.	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	10.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo(a)pyrene	J	7.9	ug/Kgdrywt	1	20	21.	3.5	10.
Indeno (1,2,3-cd) pyrene	J	3.2	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	J	2.4	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	J	2.8	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		61.3	%					
Fluorene-D10		52.4	%					
Pyrene-D10		67.0	%					
2,4-Dibromophenol		61.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5DL
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	160	ug/Kgdrywt	3	100	320	19.	160
bis(2-Chloroethyl)ether	U	32.	ug/Kgdrywt	3	20	63.	5.4	32.
2-Chlorophenol	U	160	ug/Kgdrywt	3	100	320	17.	160
2-Methylphenol	U	160	ug/Kgdrywt	3	100	320	27.	160
3&4-Methylphenol	U	160	ug/Kgdrywt	3	100	320	31.	160
n-Nitroso-di-n-propylamine	U	32.	ug/Kgdrywt	3	20	63.	6.0	32.
Nitrobenzene	U	32.	ug/Kgdrywt	3	20	63.	15.	32.
2,4-Dimethylphenol	U	32.	ug/Kgdrywt	3	20	63.	10.	32.
2,4-Dichlorophenol	U	32.	ug/Kgdrywt	3	20	63.	6.9	32.
Naphthalene	U	32.	ug/Kgdrywt	3	20	63.	8.2	32.
Hexachlorobutadiene	U	32.	ug/Kgdrywt	3	20	63.	7.2	32.
2-Methylnaphthalene	U	32.	ug/Kgdrywt	3	20	63.	6.9	32.
Hexachlorocyclopentadiene	U	32.	ug/Kgdrywt	3	20	63.	4.7	32.
2,4,6-Trichlorophenol	U	160	ug/Kgdrywt	3	100	320	10.	160
2,4,5-Trichlorophenol	U	160	ug/Kgdrywt	3	100	320	7.9	160
Dimethyl phthalate	U	32.	ug/Kgdrywt	3	20	63.	4.4	32.
Acenaphthylene	U	32.	ug/Kgdrywt	3	20	63.	3.8	32.
Acenaphthene	U	32.	ug/Kgdrywt	3	20	63.	4.7	32.
4-Nitrophenol	U	160	ug/Kgdrywt	3	100	320	25.	160
2,4-Dinitrotoluene	U	32.	ug/Kgdrywt	3	20	63.	22.	32.
Fluorene	U	32.	ug/Kgdrywt	3	20	63.	10.	32.
4,6-Dinitro-2-methylphenol	U	470	ug/Kgdrywt	3	310	980	320	470
Hexachlorobenzene	U	32.	ug/Kgdrywt	3	20	63.	5.7	32.
Atrazine	U	32.	ug/Kgdrywt	3	20	63.	3.2	32.
Pentachlorophenol	U	160	ug/Kgdrywt	3	100	320	44.	160
Phenanthrene	U	32.	ug/Kgdrywt	3	20	63.	5.7	32.
Anthracene	U	32.	ug/Kgdrywt	3	20	63.	3.8	32.
Fluoranthene	J	8.3	ug/Kgdrywt	3	20	63.	5.7	32.
Pyrene	J	6.8	ug/Kgdrywt	3	20	63.	6.6	32.
3,3'-Dichlorobenzidine	U	32.	ug/Kgdrywt	3	20	63.	9.5	32.
Benzo (a) anthracene	U	32.	ug/Kgdrywt	3	20	63.	6.0	32.
Chrysene	U	32.	ug/Kgdrywt	3	20	63.	5.4	32.
bis(2-Ethylhexyl)phthalate	B-MBL	550	ug/Kgdrywt	3	100	320	100	160
Di-n-octylphthalate	U Exclude-DL	160	ug/Kgdrywt	3	100	320	140	160
Benzo (b) Fluoranthene	U	32.	ug/Kgdrywt	3	20	63.	7.6	32.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5DL
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude-DL	32.	ug/Kgdrywt	3	20	63.	9.8	32.
Benzo(a)pyrene	U	32.	ug/Kgdrywt	3	20	63.	10.	32.
Indeno (1,2,3-cd) pyrene	U	32.	ug/Kgdrywt	3	20	63.	6.0	32.
Dibenzo (a,h) anthracene	U	32.	ug/Kgdrywt	3	20	63.	5.7	32.
Benzo(g,h,i)perylene	U	32.	ug/Kgdrywt	3	20	63.	6.3	32.
2-Methylnaphthalene-D10		59.6	%					
Fluorene-D10		41.6	%					
Pyrene-D10		83.7	%					
2,4-Dibromophenol		51.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82643

Analysis Date: 05-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	UUL-BSL	0.11	ug/L	1	.2	0.21	0.044	0.11
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.21	0.076	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.21	0.078	0.11
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	J-LCH	0.18	ug/L	1	.2	0.21	0.068	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.21	0.092	0.11
2,4,6-Trichlorophenol	U	0.53	ug/L	1	1	1.1	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	J	0.21	ug/L	1	.2	0.21	0.074	0.11
2,4-Dinitrophenol	UKJ-ICB	0.53	ug/L	1	1	1.1	0.26	0.53
4-Nitrophenol	UKJ-ICB	0.53	ug/L	1	1	1.1	0.24	0.53
Dibenzofuran	U	0.11	ug/L	1	.2	0.21	0.072	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.21	0.037	0.11
4-Nitroaniline	U	0.11	ug/L	1	.2	0.21	0.069	0.11
4,6-Dinitro-2-methylphenol	U	0.80	ug/L	1	1	1.1	0.53	0.80
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.21	0.058	0.11
Atrazine	U	0.11	ug/L	1	.2	0.21	0.040	0.11
Pentachlorophenol	U	0.53	ug/L	1	1	1.1	0.35	0.53
3,3'-Dichlorobenzidine	U	0.11	ug/L	1	.2	0.21	0.060	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.21	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.21	0.038	0.11
bis(2-Ethylhexyl)phthalate	B B-MBL	1.3	ug/L	1	1	1.1	0.53	0.53
Benzo(b)fluoranthene	J L-BSL	0.14	ug/L	1	.2	0.21	0.095	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.21	0.052	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.21	0.070	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.21	0.055	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.21	0.074	0.11
2-Methylnaphthalene-D10		66.4	%					
Fluorene-D10		48.7	%					
pyrene-d10		76.8	%					
2,4-Dibromophenol		49.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1RA
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82643

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U UJ-BSL	0.11	ug/L	1	.2	0.21	0.044	0.11
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.21	0.076	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.21	0.078	0.11
Nitrobenzene EXCLUDE-RE	~~U UJ-25~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	J	0.095	ug/L	1	.2	0.21	0.068	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.21	0.092	0.11
2,4,6-Trichlorophenol	U	0.53	ug/L	1	1	1.1	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	U	0.11	ug/L	1	.2	0.21	0.074	0.11
2,4-Dinitrophenol	U UJ-ICB	0.53	ug/L	1	1	1.1	0.26	0.53
4-Nitrophenol	U UJ-ICB	0.53	ug/L	1	1	1.1	0.24	0.53
Dibenzofuran	U	0.11	ug/L	1	.2	0.21	0.072	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.21	0.037	0.11
4-Nitroaniline	U UJ-25	0.11	ug/L	1	.2	0.21	0.069	0.11
4,6-Dinitro-2-methylphenol	U UJ-ICB	0.80	ug/L	1	1	1.1	0.53	0.80
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.21	0.058	0.11
Atrazine	U	0.11	ug/L	1	.2	0.21	0.040	0.11
Pentachlorophenol	U	0.53	ug/L	1	1	1.1	0.35	0.53
3,3'-Dichlorobenzidine	U	0.11	ug/L	1	.2	0.21	0.060	0.11
Benzo(a)anthracene	J	0.13	ug/L	1	.2	0.21	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.21	0.038	0.11
bis(2-Ethylhexyl)phthalate	~~B~~ B-MBL	5.2	ug/L	1	1	1.1	0.53	0.53
Benzo(b)fluoranthene	U UJ-BSL	0.11	ug/L	1	.2	0.21	0.095	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.21	0.052	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.21	0.070	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.21	0.055	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.21	0.074	0.11
2-Methylnaphthalene-D10		53.6	%					
Fluorene-D10		48.6	%					
pyrene-d10		77.4	%					
2,4-Dibromophenol		55.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U UL-BSL	54.	ug/Kgdrywt	1	100	110	9.2	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	J B-BSL	4.3	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	J	10.	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U MJ-ICB	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.4	11.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Atrazine	J	1.9	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Pyrene	U MJ-ISH	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U [illegible]	11.	ug/Kgdrywt	1	20	22.	3.2	11.
Benzo (a) anthracene	J-ISH	150	ug/Kgdrywt	1	20	22.	2.0	11.
Chrysene	J-ISH	73.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate	B-MBL	220	ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U MJ-ISH	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene	J-ISH	170	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J-ISH	38.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo(a)pyrene		110	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	J-ISH	61.	ug/Kgdrywt	1	20	22.	2.0	11.
Dibenzo (a,h) anthracene	J-ISH	18.	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(g,h,i)perylene	UJ-ISH	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		43.3	%					
Fluorene-D10		41.8	%					
Pyrene-D10		44.6	%					
2,4-Dibromophenol		54.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3RA
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.2	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	J	3.1	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	J	3.0	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate		78.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	J	18.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	J	12.	ug/Kgdrywt	1	20	22.	3.4	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
Atrazine	J	1.8	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene		140	ug/Kgdrywt	1	20	22.	1.9	11.
Anthracene		29.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene		280	ug/Kgdrywt	1	20	22.	1.9	11.
Pyrene		180	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.2	11.
Benzo (a) anthracene		140	ug/Kgdrywt	1	20	22.	2.0	11.
Chrysene		110	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate		280	ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene		170	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3RA
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		61.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo(a)pyrene		110	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		110	ug/Kgdrywt	1	20	22.	2.0	11.
Dibenzo (a,h) anthracene	J	21.	ug/Kgdrywt	1	20	22.	1.9	11.
Benzo(g,h,i)perylene		68.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		38.5	%					
Fluorene-D10		51.2	%					
Pyrene-D10		65.6	%					
2,4-Dibromophenol		74.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.1	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.2	58.
2-Methylphenol	U UL-BSL	58.	ug/Kgdrywt	1	100	120	9.9	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	12.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.6	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.7	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Hexachlorocyclopentadiene	U UL-BSL	12.	ug/Kgdrywt	1	20	23.	1.8	12.
2,4,6-Trichlorophenol	J	9.2	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U UL-BSL	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U UL-BSL	12.	ug/Kgdrywt	1	20	23.	1.8	12.
4-Nitrophenol	U UJ-ICB	58.	ug/Kgdrywt	1	100	120	9.3	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.2	12.
Fluorene	U UL-BSL	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U UL-BSL	180	ug/Kgdrywt	1	310	360	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U UJ-ISH	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	U R BSL	12.	ug/Kgdrywt	1	20	23.	3.5	12.
Benzo (a) anthracene	J J-ISH	5.2	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U UJ-ISH	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	B Reanalyze-LR	1000	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U UJ-ISH	58.	ug/Kgdrywt	1	100	120	54.	58.
Benzo (b) Fluoranthene	J J-ISH	9.5	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	J	5.2	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		42.1	%					
Fluorene-D10		40.2	%					
Pyrene-D10		48.6	%					
2,4-Dibromophenol		49.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4DL
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	470	ug/Kgdrywt	8	100	930	57.	470
bis(2-Chloroethyl)ether	U	93.	ug/Kgdrywt	8	20	190	16.	93.
2-Chlorophenol	U	470	ug/Kgdrywt	8	100	930	50.	470
2-Methylphenol	U	470	ug/Kgdrywt	8	100	930	79.	470
3&4-Methylphenol	U	470	ug/Kgdrywt	8	100	930	92.	470
n-Nitroso-di-n-propylamine	U	93.	ug/Kgdrywt	8	20	190	18.	93.
Nitrobenzene	U	93.	ug/Kgdrywt	8	20	190	45.	93.
2,4-Dimethylphenol	U	93.	ug/Kgdrywt	8	20	190	30.	93.
2,4-Dichlorophenol	U	93.	ug/Kgdrywt	8	20	190	20.	93.
Naphthalene	U	93.	ug/Kgdrywt	8	20	190	24.	93.
Hexachlorobutadiene	U	93.	ug/Kgdrywt	8	20	190	21.	93.
2-Methylnaphthalene	U	93.	ug/Kgdrywt	8	20	190	20.	93.
Hexachlorocyclopentadiene	U	93.	ug/Kgdrywt	8	20	190	14.	93.
2,4,6-Trichlorophenol	U	470	ug/Kgdrywt	8	100	930	31.	470
2,4,5-Trichlorophenol	U	470	ug/Kgdrywt	8	100	930	23.	470
Dimethyl phthalate	U	93.	ug/Kgdrywt	8	20	190	13.	93.
Acenaphthylene	U	93.	ug/Kgdrywt	8	20	190	11.	93.
Acenaphthene	U	93.	ug/Kgdrywt	8	20	190	14.	93.
4-Nitrophenol	U	470	ug/Kgdrywt	8	100	930	75.	470
2,4-Dinitrotoluene	U	93.	ug/Kgdrywt	8	20	190	65.	93.
Fluorene	U	93.	ug/Kgdrywt	8	20	190	30.	93.
4,6-Dinitro-2-methylphenol	U	1400	ug/Kgdrywt	8	310	2900	930	1400
Hexachlorobenzene	U	93.	ug/Kgdrywt	8	20	190	17.	93.
Atrazine	U	93.	ug/Kgdrywt	8	20	190	9.3	93.
Pentachlorophenol	U	470	ug/Kgdrywt	8	100	930	130	470
Phenanthrene	U	93.	ug/Kgdrywt	8	20	190	17.	93.
Anthracene	U	93.	ug/Kgdrywt	8	20	190	11.	93.
Fluoranthene	U	93.	ug/Kgdrywt	8	20	190	17.	93.
Pyrene	U	93.	ug/Kgdrywt	8	20	190	20.	93.
3,3'-Dichlorobenzidine	U	93.	ug/Kgdrywt	8	20	190	28.	93.
Benzo (a) anthracene	U	93.	ug/Kgdrywt	8	20	190	18.	93.
Chrysene	U	93.	ug/Kgdrywt	8	20	190	16.	93.
bis(2-Ethylhexyl)phthalate	B-MBL	1900	ug/Kgdrywt	8	100	930	300	470
Di-n-octylphthalate	U	470	ug/Kgdrywt	8	100	930	430	470
Benzo (b) Fluoranthene	U	93.	ug/Kgdrywt	8	20	190	22.	93.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4DL
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude DL	93.	ug/Kgdrywt	8	20	190	29.	93.
Benzo(a)pyrene	U	93.	ug/Kgdrywt	8	20	190	31.	93.
Indeno (1,2,3-cd) pyrene	U	93.	ug/Kgdrywt	8	20	190	18.	93.
Dibenzo (a,h) anthracene	U	93.	ug/Kgdrywt	8	20	190	17.	93.
Benzo(g,h,i)perylene	U	93.	ug/Kgdrywt	8	20	190	19.	93.
2-Methylnaphthalene-D10		49.6	%					
Fluorene-D10	*	0.00	%					
Pyrene-D10		82.2	%					
2,4-Dibromophenol		37.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4RA
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude RF	58.	ug/Kgdrywt	1	100	120	7.1	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.2	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.9	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	12.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.6	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.7	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.8	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	23.	1.8	12.
4-Nitrophenol	U	58.	ug/Kgdrywt	1	100	120	9.3	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.2	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	360	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	U	12.	ug/Kgdrywt	1	20	23.	3.5	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	E	1300	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	54.	58.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4RA
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		36.4	%					
Fluorene-D10		38.6	%					
Pyrene-D10		59.8	%					
2,4-Dibromophenol		59.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	21.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.1	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	21.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	21.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	21.	3.4	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	21.	2.4	11.
Naphthalene	J	5.7	ug/Kgdrywt	1	20	21.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	21.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	21.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	21.	1.6	11.
2,4,6-Trichlorophenol	J	9.4	ug/Kgdrywt	1	100	110	3.5	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	21.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	21.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	21.	1.6	11.
4-Nitrophenol	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	21.	7.5	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	21.	3.4	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	21.	1.9	11.
Atrazine	J	1.7	ug/Kgdrywt	1	20	21.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	21.	1.9	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	21.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	21.	1.9	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	21.	2.2	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	21.	3.2	11.
Benzo (a) anthracene		220	ug/Kgdrywt	1	20	21.	2.0	11.
Chrysene		120	ug/Kgdrywt	1	20	21.	1.8	11.
bis(2-Ethylhexyl)phthalate		220	ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	49.	54.
Benzo (b) Fluoranthene		240	ug/Kgdrywt	1	20	21.	2.6	11.

Exclude-CE

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-RE	56.	ug/Kgdrywt	1	20	21.	3.3	11.
Benzo(a)pyrene		150	ug/Kgdrywt	1	20	21.	3.5	11.
Indeno (1,2,3-cd) pyrene		97.	ug/Kgdrywt	1	20	21.	2.0	11.
Dibenzo (a,h) anthracene		28.	ug/Kgdrywt	1	20	21.	1.9	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	21.	2.1	11.
2-Methylnaphthalene-D10		45.2	%					
Fluorene-D10		42.9	%					
Pyrene-D10		44.4	%					
2,4-Dibromophenol		53.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5RA
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	21.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.1	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	21.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	21.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	21.	3.4	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	21.	2.4	11.
Naphthalene	B-EBL	3.4	ug/Kgdrywt	1	20	21.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	21.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	21.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	21.	1.6	11.
2,4,6-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	3.5	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	J	2.0	ug/Kgdrywt	1	20	21.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	21.	1.3	11.
Acenaphthene		34.	ug/Kgdrywt	1	20	21.	1.6	11.
4-Nitrophenol	U	54.	ug/Kgdrywt	1	100	110	8.6	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	21.	7.5	11.
Fluorene		22.	ug/Kgdrywt	1	20	21.	3.4	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	330	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	21.	1.9	11.
Atrazine	J	1.3	ug/Kgdrywt	1	20	21.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene		240	ug/Kgdrywt	1	20	21.	1.9	11.
Anthracene		44.	ug/Kgdrywt	1	20	21.	1.3	11.
Fluoranthene		380	ug/Kgdrywt	1	20	21.	1.9	11.
Pyrene		260	ug/Kgdrywt	1	20	21.	2.2	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	21.	3.2	11.
Benzo (a) anthracene		210	ug/Kgdrywt	1	20	21.	2.0	11.
Chrysene		160	ug/Kgdrywt	1	20	21.	1.8	11.
bis(2-Ethylhexyl)phthalate	B-MBL	270	ug/Kgdrywt	1	100	110	34.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	49.	54.
Benzo (b) Fluoranthene		230	ug/Kgdrywt	1	20	21.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5RA
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J-ISH	91.	ug/Kgdrywt	1	20	21.	3.3	11.
Benzo(a)pyrene	J	160	ug/Kgdrywt	1	20	21.	3.5	11.
Indeno (1,2,3-cd) pyrene		150	ug/Kgdrywt	1	20	21.	2.0	11.
Dibenzo (a,h) anthracene	J-ISH	32.	ug/Kgdrywt	1	20	21.	1.9	11.
Benzo(g,h,i)perylene	J	97.	ug/Kgdrywt	1	20	21.	2.1	11.
2-Methylnaphthalene-D10		38.0	%					
Fluorene-D10		44.8	%					
Pyrene-D10		56.7	%					
2,4-Dibromophenol		60.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U UL-BSL	55.	ug/Kgdrywt	1	100	110	9.3	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	J	8.8	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.7	55.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U UJ-ICB	55.	ug/Kgdrywt	1	100	110	8.7	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U UJ-ISH	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U T-BSL	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene	J J-ISH	6.1	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U UJ-ISH	11.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate	J B-MBL	89.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U UJ-ISH	55.	ug/Kgdrywt	1	100	110	50.	55.
Benzo (b) Fluoranthene	J J-ISH	9.9	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	J	5.6	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		51.0	%					
Fluorene-D10		47.0	%					
Pyrene-D10		51.4	%					
2,4-Dibromophenol		55.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6RA
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	9.3	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.7	55.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	55.	ug/Kgdrywt	1	100	110	8.7	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate		120	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	50.	55.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6RA
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude RE	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		42.7	%					
Fluorene-D10		48.6	%					
Pyrene-D10		66.4	%					
2,4-Dibromophenol		68.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U EXCLUDE-RE	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	9.4	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.3	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	J	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	J	9.6	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.8	55.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	J	1.4	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene		220	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene		140	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	J	64.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	51.	55.
Benzo (b) Fluoranthene		280	ug/Kgdrywt	1	20	22.	2.6	11.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-CE	63.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene		180	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		110	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene		32.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		46.7	%					
Fluorene-D10		46.7	%					
Pyrene-D10		50.5	%					
2,4-Dibromophenol		55.8	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7RA
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	9.4	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.3	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	~~J~~ B-EBL	9.3	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.8	55.
Dimethyl phthalate	J	5.9	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene		38.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene		26.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene		270	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene		60.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene		420	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene		290	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene		220	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene		180	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	~~J~~ B-MBL	76.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	51.	55.
Benzo (b) Fluoranthene		240	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7RA
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J-ISH	90.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	J	170	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		160	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	J-ISH	31.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	J-ISH	99.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		42.0	%					
Fluorene-D10		48.1	%					
Pyrene-D10		62.5	%					
2,4-Dibromophenol		67.4	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.0	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.1	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.8	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	11.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.5	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
4-Nitrophenol	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.1	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	360	120	170
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	U	12.	ug/Kgdrywt	1	20	23.	3.5	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	J	100	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	53.	58.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		41.4	%					
Fluorene-D10		45.0	%					
Pyrene-D10		68.3	%					
2,4-Dibromophenol		67.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8RA
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-QC	58.	ug/Kgdrywt	1	100	120	7.0	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.1	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.8	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	11.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.5	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
4-Nitrophenol	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.1	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	360	120	170
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	U	12.	ug/Kgdrywt	1	20	23.	3.5	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	J	110	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	53.	58.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.8	12.

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8RA
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		42.4	%					
Fluorene-D10		42.9	%					
Pyrene-D10		73.7	%					
2,4-Dibromophenol		60.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: 1S66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.10	ug/L	1	.2	0.21	0.042	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.21	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.074	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.21	0.075	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.21	0.13	0.15
Naphthalene	J	0.21	ug/L	1	.2	0.21	0.066	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.090	0.10
2,4,6-Trichlorophenol	J	0.24	ug/L	1	1	1.0	0.12	0.52
2-Nitroaniline	U	0.15	ug/L	1	.2	0.21	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
2,4-Dinitrophenol	U	0.52	ug/L	1	1	1.0	0.25	0.52
4-Nitrophenol	U	0.52	ug/L	1	1	1.0	0.24	0.52
Dibenzofuran	U	0.10	ug/L	1	.2	0.21	0.070	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.036	0.10
4-Nitroaniline		0.38	ug/L	1	.2	0.21	0.067	0.10
4,6-Dinitro-2-methylphenol	U	0.77	ug/L	1	1	1.0	0.52	0.77
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.057	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.039	0.10
Pentachlorophenol	U	0.52	ug/L	1	1	1.0	0.34	0.52
3,3'-Dichlorobenzidine	U	0.10	ug/L	1	.2	0.21	0.058	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.037	0.10
bis(2-Ethylhexyl)phthalate	JB B-MBL	1.0	ug/L	1	1	1.0	0.52	0.52
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.092	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.068	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.054	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
2-Methylnaphthalene-D10		71.0	%					
Fluorene-D10		62.1	%					
pyrene-d10		86.3	%					
2,4-Dibromophenol		66.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 78.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	61.	ug/Kgdrywt	1	100	120	7.4	61.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
2-Chlorophenol	U	61.	ug/Kgdrywt	1	100	120	6.5	61.
2-Methylphenol	UUL-BSL	61.	ug/Kgdrywt	1	100	120	10.	61.
3&4-Methylphenol	U	61.	ug/Kgdrywt	1	100	120	12.	61.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.3	12.
Nitrobenzene	UUJ-2S	12.	ug/Kgdrywt	1	20	24.	5.8	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	24.	3.9	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	24.	2.7	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	24.	3.2	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.8	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	24.	2.7	12.
Hexachlorocyclopentadiene	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	U	61.	ug/Kgdrywt	1	100	120	4.0	61.
2,4,5-Trichlorophenol	U	61.	ug/Kgdrywt	1	100	120	3.0	61.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	24.	1.7	12.
Acenaphthylene	JL-BSL	4.2	ug/Kgdrywt	1	20	24.	1.5	12.
Acenaphthene	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	UUJ-ICB	61.	ug/Kgdrywt	1	100	120	9.8	61.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.5	12.
Fluorene	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	3.9	12.
4,6-Dinitro-2-methylphenol	UUL-BSL	180	ug/Kgdrywt	1	310	380	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	U	61.	ug/Kgdrywt	1	100	120	17.	61.
Phenanthrene	J	16.	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	J	3.2	ug/Kgdrywt	1	20	24.	1.5	12.
Fluoranthene		39.	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene		31.	ug/Kgdrywt	1	20	24.	2.6	12.
3,3'-Dichlorobenzidine	UR-BSL	12.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo (a) anthracene		27.	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	J	20.	ug/Kgdrywt	1	20	24.	2.1	12.
bis(2-Ethylhexyl)phthalate	JB-MBL	120	ug/Kgdrywt	1	100	120	39.	61.
Di-n-octylphthalate	U	61.	ug/Kgdrywt	1	100	120	56.	61.
Benzo (b) Fluoranthene		42.	ug/Kgdrywt	1	20	24.	2.9	12.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 78.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	13.	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene		29.	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno (1,2,3-cd) pyrene	J	20.	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo (a,h) anthracene	J	7.0	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	J	22.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		43.4	%					
Fluorene-D10		50.3	%					
Pyrene-D10		63.7	%					
2,4-Dibromophenol		58.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 88.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U UL-BSL	55.	ug/Kgdrywt	1	100	110	9.3	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.7	55.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	~~U~~ UJ ICB	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene	J	4.7	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	~~J~~ B-MBL	51.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	50.	55.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 88.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		42.5	%					
Fluorene-D10		34.4	%					
Pyrene-D10		54.8	%					
2,4-Dibromophenol		49.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	53.	ug/Kgdrywt	1	100	100	6.4	53.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	53.	ug/Kgdrywt	1	100	100	5.6	53.
2-Methylphenol	U UL-BSL	53.	ug/Kgdrywt	1	100	100	9.0	53.
3&4-Methylphenol	U	53.	ug/Kgdrywt	1	100	100	10.	53.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.4	10.
2,4-Dichlorophenol	J	5.6	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	J UL-BSL	3.9	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	J	11.	ug/Kgdrywt	1	100	100	3.5	53.
2,4,5-Trichlorophenol	J	2.7	ug/Kgdrywt	1	100	100	2.6	53.
Dimethyl phthalate	J	2.0	ug/Kgdrywt	1	20	21.	1.5	10.
Acenaphthylene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.3	10.
Acenaphthene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	~~U~~ UJ ICB	53.	ug/Kgdrywt	1	100	100	8.4	53.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.4	10.
Fluorene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	3.4	10.
4,6-Dinitro-2-methylphenol	U UL-BSL	160	ug/Kgdrywt	1	310	330	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	J	1.6	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	53.	ug/Kgdrywt	1	100	100	15.	53.
Phenanthrene	J	2.0	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	J	1.3	ug/Kgdrywt	1	20	21.	1.3	10
Fluoranthene	J	2.2	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene	U	10.	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo (a) anthracene	J	5.6	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene	J	2.0	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	B-MBL	170	ug/Kgdrywt	1	100	100	34.	53.
Di-n-octylphthalate	U	53.	ug/Kgdrywt	1	100	100	48.	53.
Benzo (b) Fluoranthene	J	6.8	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 93.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	21.	3.5	10.
Indeno (1,2,3-cd) pyrene	J	2.0	ug/Kgdrywt	1	20	21.	2.0	10
Dibenzo (a,h) anthracene	J	2.4	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	J	2.2	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		48.9	%					
Fluorene-D10		47.3	%					
Pyrene-D10		70.5	%					
2,4-Dibromophenol		70.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 84.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	57.	ug/Kgdrywt	1	100	110	7.0	57.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
2-Chlorophenol	U	57.	ug/Kgdrywt	1	100	110	6.0	57.
2-Methylphenol	U UL-BSL	57.	ug/Kgdrywt	1	100	110	9.7	57.
3&4-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	11.	57.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	23.	5.5	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	23.	3.6	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	23.	3.0	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	23.	2.6	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Hexachlorocyclopentadiene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.7	11.
2,4,6-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	3.8	57.
2,4,5-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	2.8	57.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	23.	1.6	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Acenaphthene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.7	11.
4-Nitrophenol	~~U~~ UJ ICB	57.	ug/Kgdrywt	1	100	110	9.1	57.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	23.	8.0	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	3.6	11.
4,6-Dinitro-2-methylphenol	U UL-BSL	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	23.	1.1	11.
Pentachlorophenol	U	57.	ug/Kgdrywt	1	100	110	16.	57.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	23.	2.4	11.
3,3'-Dichlorobenzidine	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	3.4	11.
Benzo (a) anthracene	J	4.7	ug/Kgdrywt	1	20	23.	2.2	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
bis(2-Ethylhexyl)phthalate	~~J~~ B-MBL	100	ug/Kgdrywt	1	100	110	36.	57.
Di-n-octylphthalate	U	57.	ug/Kgdrywt	1	100	110	52.	57.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 84.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	3.5	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	23.	3.8	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	23.	2.3	11.
2-Methylnaphthalene-D10		54.5	%					
Fluorene-D10		39.9	%					
Pyrene-D10		61.2	%					
2,4-Dibromophenol		51.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	57.	ug/Kgdrywt	1	100	110	6.9	57.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
2-Chlorophenol	U	57.	ug/Kgdrywt	1	100	110	6.0	57.
2-Methylphenol	U UL-BSL	57.	ug/Kgdrywt	1	100	110	9.6	57.
3&4-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	11.	57.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Nitrobenzene	U UJ-LS	11.	ug/Kgdrywt	1	20	23.	5.4	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	23.	3.6	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	23.	3.0	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	23.	2.6	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Hexachlorocyclopentadiene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.7	11.
2,4,6-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	3.7	57.
2,4,5-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	2.8	57.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	23.	1.6	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Acenaphthene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	1.7	11.
4-Nitrophenol	U UJ-ICB	57.	ug/Kgdrywt	1	100	110	9.1	57.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	23.	8.0	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	23.	3.6	11.
4,6-Dinitro-2-methylphenol	U UL-BSL	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	23.	1.1	11.
Pentachlorophenol	U	57.	ug/Kgdrywt	1	100	110	16.	57.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	23.	2.4	11.
3,3'-Dichlorobenzidine	U R-BSL	11.	ug/Kgdrywt	1	20	23.	3.4	11.
Benzo (a) anthracene	J	5.0	ug/Kgdrywt	1	20	23.	2.2	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
bis(2-Ethylhexyl)phthalate	J B-MBL	110	ug/Kgdrywt	1	100	110	36.	57.
Di-n-octylphthalate	U	57.	ug/Kgdrywt	1	100	110	52.	57.
Benzo (b) Fluoranthene	J	6.3	ug/Kgdrywt	1	20	23.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	23.	3.5	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	23.	3.7	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	23.	2.3	11.
2-Methylnaphthalene-D10		50.9	%					
Fluorene-D10		44.3	%					
Pyrene-D10		68.7	%					
2,4-Dibromophenol		56.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 95.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~	260	ug/Kgdrywt	1	330	340	120	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	340	92.	260
Acetophenone	U	260	ug/Kgdrywt	1	330	340	180	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	340	100	260
Isophorone	U	260	ug/Kgdrywt	1	330	340	78.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	340	170	260
Bis(2-Chloroethoxy) Methane	U	260	ug/Kgdrywt	1	330	340	100	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	340	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	340	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	340	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	340	76.	260
2-Chloronaphthalene	U	260	ug/Kgdrywt	1	330	340	90.	260
2-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	78.	640
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	260	ug/Kgdrywt	1	330	340	82.	260
3-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	97.	640
2,4-Dinitrophenol	U	640	ug/Kgdrywt	1	820	850	390	640
Dibenzofuran	U	260	ug/Kgdrywt	1	330	340	82.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	340	83.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	81.	260
4-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	140	640
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	340	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	88.	260
Carbazole	U	260	ug/Kgdrywt	1	330	340	120	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	340	100	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	340	96.	260
2-Fluorophenol		43.4	%					
Phenol-D6		46.5	%					
Nitrobenzene-d5		43.9	%					
2-Fluorobiphenyl		50.5	%					
2,4,6-Tribromophenol		53.2	%					
Terphenyl-d14		62.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 81.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	300	ug/Kgdrywt	1	330	410	150	300
2,2'-Oxybis(1-Chloropropane)	U	300	ug/Kgdrywt	1	330	410	110	300
Acetophenone	U	300	ug/Kgdrywt	1	330	410	220	300
Hexachloroethane	U	300	ug/Kgdrywt	1	330	410	120	300
Isophorone	U	300	ug/Kgdrywt	1	330	410	92.	300
2-Nitrophenol	U	300	ug/Kgdrywt	1	330	410	200	300
Bis(2-Chloroethoxy) Methane	U	300	ug/Kgdrywt	1	330	410	120	300
4-Chloroaniline	U	300	ug/Kgdrywt	1	330	410	150	300
Caprolactam	U	300	ug/Kgdrywt	1	330	410	180	300
4-Chloro-3-Methylphenol	U	300	ug/Kgdrywt	1	330	410	200	300
1,1'-Biphenyl	U	300	ug/Kgdrywt	1	330	410	90.	300
2-Chloronaphthalene	U	300	ug/Kgdrywt	1	330	410	110	300
2-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	92.	760
2,6-Dinitrotoluene EXCLUDE-RE	U	300	ug/Kgdrywt	1	330	410	97.	300
3-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	120	760
2,4-Dinitrophenol	U	760	ug/Kgdrywt	1	820	1000	460	760
Dibenzofuran	U	300	ug/Kgdrywt	1	330	410	97.	300
Diethylphthalate	U	300	ug/Kgdrywt	1	330	410	99.	300
4-Chlorophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	410	96.	300
4-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	160	760
N-Nitrosodiphenylamine	U	300	ug/Kgdrywt	1	330	410	270	300
4-Bromophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	410	100	300
Carbazole	U	300	ug/Kgdrywt	1	330	410	140	300
Di-N-Butylphthalate	U	300	ug/Kgdrywt	1	330	410	120	300
Butylbenzylphthalate	U	300	ug/Kgdrywt	1	330	410	110	300
2-Fluorophenol		44.0	%					
Phenol-D6		45.5	%					
Nitrobenzene-d5		44.5	%					
2-Fluorobiphenyl		45.8	%					
2,4,6-Tribromophenol		49.9	%					
Terphenyl-d14		66.8	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 92.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UCT-ICB	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	96.	270
Acetophenone	U UCL-MSL	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U UCL-MSL	270	ug/Kgdrywt	1	330	360	81.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U UCL-MSL	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U UCL-MSL	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	79.	270
2-Chloronaphthalene	U UCL-MSL	270	ug/Kgdrywt	1	330	360	94.	270
2-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	81.	660
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	85.	270
3-Nitroaniline	U UCL-MSL	660	ug/Kgdrywt	1	820	880	100	660
2,4-Dinitrophenol	U	660	ug/Kgdrywt	1	820	880	410	660
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	85.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	84.	270
4-Nitroaniline	U UCL-MSL	660	ug/Kgdrywt	1	820	880	140	660
N-Nitrosodiphenylamine	U UCL-MSL	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	92.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		51.4	%					
Phenol-D6		55.0	%					
Nitrobenzene-d5		53.0	%					
2-Fluorobiphenyl		58.9	%					
2,4,6-Tribromophenol		69.4	%					
Terphenyl-d14		65.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 93.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U U43-ICB	260	ug/Kgdrywt	1	330	350	130	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	350	94.	260
Acetophenone	U U44-MSL	260	ug/Kgdrywt	1	330	350	190	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	350	100	260
Isophorone	U	260	ug/Kgdrywt	1	330	350	79.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	350	180	260
Bis(2-Chloroethoxy) Methane	U	260	ug/Kgdrywt	1	330	350	100	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	350	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	350	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	350	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	350	77.	260
2-Chloronaphthalene	U U44-MSL	260	ug/Kgdrywt	1	330	350	91.	260
2-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	79.	650
2,6-Dinitrotoluene EXCLUDE-RE ~~U~~		260	ug/Kgdrywt	1	330	350	83.	260
3-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	99.	650
2,4-Dinitrophenol	U	650	ug/Kgdrywt	1	820	860	400	650
Dibenzofuran	U	260	ug/Kgdrywt	1	330	350	83.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	350	84.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	82.	260
4-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	140	650
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	350	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	89.	260
Carbazole	U	260	ug/Kgdrywt	1	330	350	120	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	350	110	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	350	98.	260
2-Fluorophenol		58.0	%					
Phenol-D6		63.1	%					
Nitrobenzene-d5		61.1	%					
2-Fluorobiphenyl		62.8	%					
2,4,6-Tribromophenol		63.4	%					
Terphenyl-d14		68.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82643

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	8.0	ug/L	1	10	11.	1.1	8.0
Phenol	U	8.0	ug/L	1	10	11.	1.9	8.0
2-Chlorophenol	U	8.0	ug/L	1	10	11.	3.4	8.0
2-Methylphenol	U	8.0	ug/L	1	10	11.	4.0	8.0
Acetophenone	U	8.0	ug/L	1	10	11.	4.1	8.0
3&4-Methylphenol	U	8.0	ug/L	1	10	11.	6.0	8.0
Isophorone	U	8.0	ug/L	1	10	11.	1.8	8.0
2-Nitrophenol	U	8.0	ug/L	1	10	11.	2.9	8.0
2,4-Dimethylphenol	U	8.0	ug/L	1	10	11.	4.7	8.0
Bis(2-Chloroethoxy) Methane	U	8.0	ug/L	1	10	11.	2.2	8.0
2,4-Dichlorophenol	U	8.0	ug/L	1	10	11.	3.2	8.0
4-Chloroaniline	U	8.0	ug/L	1	10	11.	2.0	8.0
Caprolactam	U	8.0	ug/L	1	10	11.	0.42	8.0
4-Chloro-3-Methylphenol	U	8.0	ug/L	1	10	11.	3.8	8.0
2-Methylnaphthalene	U	8.0	ug/L	1	10	11.	3.4	8.0
Hexachlorocyclopentadiene	U	8.0	ug/L	1	10	11.	1.3	8.0
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	8.0	ug/L	1	10	11.	2.9	8.0
2-Chloronaphthalene	U	8.0	ug/L	1	10	11.	3.1	8.0
Dimethyl Phthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Acenaphthylene	U	8.0	ug/L	1	10	11.	1.6	8.0
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	8.0	ug/L	1	10	11.	1.6	8.0
Diethylphthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Fluorene	U	8.0	ug/L	1	10	11.	2.2	8.0
4-Chlorophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.3	8.0
N-Nitrosodiphenylamine	U	8.0	ug/L	1	10	11.	3.9	8.0
4-Bromophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.0	8.0
Phenanthrene	U	8.0	ug/L	1	10	11.	2.6	8.0
Anthracene	U	8.0	ug/L	1	10	11.	1.8	8.0
Carbazole	U	8.0	ug/L	1	10	11.	2.2	8.0
Di-N-Butylphthalate	U	8.0	ug/L	1	10	11.	2.6	8.0
Fluoranthene	U	8.0	ug/L	1	10	11.	2.6	8.0
Pyrene	U	8.0	ug/L	1	10	11.	2.0	8.0
Butylbenzylphthalate	U	8.0	ug/L	1	10	11.	2.0	8.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82643

Analysis Date: 11-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.0	ug/L	1	10	11.	1.9	8.0
Benzo(g,h,i)perylene	U	8.0	ug/L	1	10	11.	1.6	8.0
2-Fluorophenol		36.9	%					
Phenol-D6		22.9	%					
Nitrobenzene-d5		68.4	%					
2-Fluorobiphenyl		71.4	%					
2,4,6-Tribromophenol		70.2	%					
Terphenyl-d14		97.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82640

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	8.0	ug/L	1	10	11.	1.1	8.0
Phenol	U	8.0	ug/L	1	10	11.	1.9	8.0
2-Chlorophenol	U	8.0	ug/L	1	10	11.	3.4	8.0
2-Methylphenol	U	8.0	ug/L	1	10	11.	4.0	8.0
Acetophenone	U	8.0	ug/L	1	10	11.	4.1	8.0
3&4-Methylphenol	U	8.0	ug/L	1	10	11.	6.0	8.0
Isophorone	U	8.0	ug/L	1	10	11.	1.8	8.0
2-Nitrophenol	U	8.0	ug/L	1	10	11.	2.9	8.0
2,4-Dimethylphenol	U	8.0	ug/L	1	10	11.	4.7	8.0
Bis(2-Chloroethoxy) Methane	U	8.0	ug/L	1	10	11.	2.2	8.0
2,4-Dichlorophenol	U	8.0	ug/L	1	10	11.	3.2	8.0
4-Chloroaniline	U	8.0	ug/L	1	10	11.	2.0	8.0
Caprolactam	U	8.0	ug/L	1	10	11.	0.42	8.0
4-Chloro-3-Methylphenol	U	8.0	ug/L	1	10	11.	3.8	8.0
2-Methylnaphthalene	U	8.0	ug/L	1	10	11.	3.4	8.0
Hexachlorocyclopentadiene	U	8.0	ug/L	1	10	11.	1.3	8.0
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	8.0	ug/L	1	10	11.	2.9	8.0
2-Chloronaphthalene	U	8.0	ug/L	1	10	11.	3.1	8.0
Dimethyl Phthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Acenaphthylene	U	8.0	ug/L	1	10	11.	1.6	8.0
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	8.0	ug/L	1	10	11.	1.6	8.0
Diethylphthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Fluorene	U	8.0	ug/L	1	10	11.	2.2	8.0
4-Chlorophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.3	8.0
N-Nitrosodiphenylamine	U	8.0	ug/L	1	10	11.	3.9	8.0
4-Bromophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.0	8.0
Phenanthrene	U	8.0	ug/L	1	10	11.	2.6	8.0
Anthracene	U	8.0	ug/L	1	10	11.	1.8	8.0
Carbazole	U	8.0	ug/L	1	10	11.	2.2	8.0
Di-N-Butylphthalate	U	8.0	ug/L	1	10	11.	2.6	8.0
Fluoranthene	U	8.0	ug/L	1	10	11.	2.6	8.0
Pyrene	U	8.0	ug/L	1	10	11.	2.0	8.0
Butylbenzylphthalate	U	8.0	ug/L	1	10	11.	2.0	8.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 28-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82640

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.0	ug/L	1	10	11.	1.9	8.0
Benzo(g,h,i)perylene	U	8.0	ug/L	1	10	11.	1.6	8.0
2-Fluorophenol		34.9	%					
Phenol-D6		24.7	%					
Nitrobenzene-d5		66.0	%					
2-Fluorobiphenyl		67.2	%					
2,4,6-Tribromophenol		71.8	%					
Terphenyl-d14		70.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 91.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U WG-ICB	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	96.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	81.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	79.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	94.	270
2-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	81.	660
2,6-Dinitrotoluene EXCLUDE-RE	U	270	ug/Kgdrywt	1	330	360	85.	270
3-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	100	660
2,4-Dinitrophenol	U	660	ug/Kgdrywt	1	820	880	410	660
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	85.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	84.	270
4-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	140	660
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	92.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		45.0	%					
Phenol-D6		47.2	%					
Nitrobenzene-d5		47.0	%					
2-Fluorobiphenyl		52.0	%					
2,4,6-Tribromophenol		60.0	%					
Terphenyl-d14		73.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 82.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	290	ug/Kgdrywt	1	330	380	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	380	100	290
Acetophenone	U	290	ug/Kgdrywt	1	330	380	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	380	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	380	88.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	380	200	290
Bis(2-Chloroethoxy) Methane	U	290	ug/Kgdrywt	1	330	380	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	380	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	380	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	380	190	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	380	85.	290
2-Chloronaphthalene	U	290	ug/Kgdrywt	1	330	380	100	290
2-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	88.	720
2,6-Dinitrotoluene	EXCLUDE-RE U	290	ug/Kgdrywt	1	330	380	92.	290
3-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	110	720
2,4-Dinitrophenol	U	720	ug/Kgdrywt	1	820	960	440	720
Dibenzofuran	U	290	ug/Kgdrywt	1	330	380	92.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	380	93.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	91.	290
4-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	160	720
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	380	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	99.	290
Carbazole	U	290	ug/Kgdrywt	1	330	380	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	380	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	380	110	290
2-Fluorophenol		47.8	%					
Phenol-D6		51.2	%					
Nitrobenzene-d5		45.9	%					
2-Fluorobiphenyl		49.3	%					
2,4,6-Tribromophenol		57.8	%					
Terphenyl-d14		62.0	%					

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 91.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~	270	ug/Kgdrywt	1	330	350	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	350	96.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	350	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	350	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	350	80.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	350	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	350	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	350	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	350	150	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	350	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	350	78.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	350	93.	270
2-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	80.	660
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	270	ug/Kgdrywt	1	330	350	85.	270
3-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	100	660
2,4-Dinitrophenol	U	660	ug/Kgdrywt	1	820	880	400	660
Dibenzofuran	U	270	ug/Kgdrywt	1	330	350	85.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	350	86.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	350	84.	270
4-Nitroaniline	U	660	ug/Kgdrywt	1	820	880	140	660
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	350	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	350	91.	270
Carbazole	U	270	ug/Kgdrywt	1	330	350	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	350	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	350	100	270
2-Fluorophenol		46.4	%					
Phenol-D6		49.7	%					
Nitrobenzene-d5		48.0	%					
2-Fluorobiphenyl		52.8	%					
2,4,6-Tribromophenol		59.2	%					
Terphenyl-d14		59.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 87.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	97.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	82.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	95.	270
2-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	82.	670
2,6-Dinitrotoluene	EXCLUDE-RE U	270	ug/Kgdrywt	1	330	360	86.	270
3-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	100	670
2,4-Dinitrophenol	U	670	ug/Kgdrywt	1	820	900	410	670
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	86.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	87.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	85.	270
4-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	150	670
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	93.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		52.2	%					
Phenol-D6		56.3	%					
Nitrobenzene-d5		53.6	%					
2-Fluorobiphenyl		54.9	%					
2,4,6-Tribromophenol		62.9	%					
Terphenyl-d14		64.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 90.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	98.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	200	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	83.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	96.	270
2-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	83.	680
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	270	ug/Kgdrywt	1	330	360	87.	270
3-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	100	680
2,4-Dinitrophenol	U	680	ug/Kgdrywt	1	820	900	420	680
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	87.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	88.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	150	680
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	94.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		50.5	%					
Phenol-D6		56.0	%					
Nitrobenzene-d5		53.6	%					
2-Fluorobiphenyl		59.8	%					
2,4,6-Tribromophenol		68.5	%					
Terphenyl-d14		73.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 86.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U JU3-1CB	290	ug/Kgdrywt	1	330	380	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	380	100	290
Acetophenone	U	290	ug/Kgdrywt	1	330	380	200	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	380	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	380	86.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	380	190	290
Bis(2-Chloroethoxy) Methane	U	290	ug/Kgdrywt	1	330	380	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	380	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	380	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	380	190	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	380	84.	290
2-Chloronaphthalene	U	290	ug/Kgdrywt	1	330	380	100	290
2-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	86.	710
2,6-Dinitrotoluene EXCLUDE-RE	U	290	ug/Kgdrywt	1	330	380	91.	290
3-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	110	710
2,4-Dinitrophenol	U	710	ug/Kgdrywt	1	820	940	430	710
Dibenzofuran	U	290	ug/Kgdrywt	1	330	380	91.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	380	92.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	90.	290
4-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	150	710
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	380	250	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	98.	290
Carbazole	U	290	ug/Kgdrywt	1	330	380	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	380	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	380	110	290
2-Fluorophenol		49.2	%					
Phenol-D6		53.1	%					
Nitrobenzene-d5		49.9	%					
2-Fluorobiphenyl		53.1	%					
2,4,6-Tribromophenol		63.3	%					
Terphenyl-d14		66.1	%					

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 13-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	J [1-CB]	1.1	ug/L	1	10	10.	1.0	7.7
Phenol	U	7.7	ug/L	1	10	10.	1.8	7.7
2-Chlorophenol	U	7.7	ug/L	1	10	10.	3.3	7.7
2-Methylphenol	U	7.7	ug/L	1	10	10.	3.9	7.7
Acetophenone	U	7.7	ug/L	1	10	10.	4.0	7.7
3&4-Methylphenol	U	7.7	ug/L	1	10	10.	5.8	7.7
Isophorone	U	7.7	ug/L	1	10	10.	1.8	7.7
2-Nitrophenol	U	7.7	ug/L	1	10	10.	2.8	7.7
2,4-Dimethylphenol	U	7.7	ug/L	1	10	10.	4.5	7.7
Bis(2-Chloroethoxy) Methane	U	7.7	ug/L	1	10	10.	2.2	7.7
2,4-Dichlorophenol	U	7.7	ug/L	1	10	10.	3.1	7.7
4-Chloroaniline	U	7.7	ug/L	1	10	10.	2.0	7.7
Caprolactam	U	7.7	ug/L	1	10	10.	0.41	7.7
4-Chloro-3-Methylphenol	U	7.7	ug/L	1	10	10.	3.7	7.7
2-Methylnaphthalene	U	7.7	ug/L	1	10	10.	3.3	7.7
Hexachlorocyclopentadiene	U	7.7	ug/L	1	10	10.	1.2	7.7
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.7	ug/L	1	10	10.	2.8	7.7
2-Chloronaphthalene	U	7.7	ug/L	1	10	10.	3.0	7.7
Dimethyl Phthalate	U	7.7	ug/L	1	10	10.	2.1	7.7
Acenaphthylene	U	7.7	ug/L	1	10	10.	1.5	7.7
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.7	ug/L	1	10	10.	1.5	7.7
Diethylphthalate	U	7.7	ug/L	1	10	10.	2.1	7.7
Fluorene	U	7.7	ug/L	1	10	10.	2.2	7.7
4-Chlorophenyl-Phenylether	U	7.7	ug/L	1	10	10.	2.3	7.7
N-Nitrosodiphenylamine	U	7.7	ug/L	1	10	10.	3.8	7.7
4-Bromophenyl-Phenylether	U	7.7	ug/L	1	10	10.	2.0	7.7
Phenanthrene	U	7.7	ug/L	1	10	10.	2.5	7.7
Anthracene	U	7.7	ug/L	1	10	10.	1.8	7.7
Carbazole	U	7.7	ug/L	1	10	10.	2.2	7.7
Di-N-Butylphthalate	U	7.7	ug/L	1	10	10.	2.6	7.7
Fluoranthene	U	7.7	ug/L	1	10	10.	2.5	7.7
Pyrene	U	7.7	ug/L	1	10	10.	2.0	7.7
Butylbenzylphthalate	U	7.7	ug/L	1	10	10.	2.0	7.7

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site E
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 13-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.7	ug/L	1	10	10.	1.8	7.7
Benzo(g,h,i)perylene	U	7.7	ug/L	1	10	10.	1.5	7.7
2-Fluorophenol		41.9	%					
Phenol-D6		26.0	%					
Nitrobenzene-d5		71.0	%					
2-Fluorobiphenyl		74.2	%					
2,4,6-Tribromophenol		75.6	%					
Terphenyl-d14		82.2	%					

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REISSUE

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 78.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	300	ug/Kgdrywt	1	330	400	150	300
2,2'-Oxybis(1-Chloropropane)	U	300	ug/Kgdrywt	1	330	400	110	300
Acetophenone	U	300	ug/Kgdrywt	1	330	400	220	300
Hexachloroethane	U	300	ug/Kgdrywt	1	330	400	120	300
Isophorone	U	300	ug/Kgdrywt	1	330	400	91.	300
2-Nitrophenol	U	300	ug/Kgdrywt	1	330	400	200	300
Bis(2-Chloroethoxy) Methane	U	300	ug/Kgdrywt	1	330	400	120	300
4-Chloroaniline	U	300	ug/Kgdrywt	1	330	400	140	300
Caprolactam	U	300	ug/Kgdrywt	1	330	400	180	300
4-Chloro-3-Methylphenol	U	300	ug/Kgdrywt	1	330	400	200	300
1,1'-Biphenyl	U	300	ug/Kgdrywt	1	330	400	89.	300
2-Chloronaphthalene	U	300	ug/Kgdrywt	1	330	400	110	300
2-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	91.	750
2,6-Dinitrotoluene EXCLUDE-RE	U	300	ug/Kgdrywt	1	330	400	96.	300
3-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	110	750
2,4-Dinitrophenol	U	750	ug/Kgdrywt	1	820	1000	460	750
Dibenzofuran	U	300	ug/Kgdrywt	1	330	400	96.	300
Diethylphthalate	U	300	ug/Kgdrywt	1	330	400	98.	300
4-Chlorophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	95.	300
4-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	160	750
N-Nitrosodiphenylamine	U	300	ug/Kgdrywt	1	330	400	270	300
4-Bromophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	100	300
Carbazole	U	300	ug/Kgdrywt	1	330	400	140	300
Di-N-Butylphthalate	U	300	ug/Kgdrywt	1	330	400	120	300
Butylbenzylphthalate	U	300	ug/Kgdrywt	1	330	400	110	300
2-Fluorophenol		47.8	%					
Phenol-D6		53.7	%					
Nitrobenzene-d5		50.7	%					
2-Fluorobiphenyl		57.1	%					
2,4,6-Tribromophenol		57.6	%					
Terphenyl-d14		76.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 12-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 88.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	97.	270
Acetophenone	U	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	82.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	U	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	U	270	ug/Kgdrywt	1	330	360	95.	270
2-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	82.	670
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	270	ug/Kgdrywt	1	330	360	86.	270
3-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	100	670
2,4-Dinitrophenol	U	670	ug/Kgdrywt	1	820	900	410	670
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	86.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	88.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	85.	270
4-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	150	670
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	93.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		46.8	%					
Phenol-D6		51.2	%					
Nitrobenzene-d5		51.3	%					
2-Fluorobiphenyl		53.1	%					
2,4,6-Tribromophenol		57.8	%					
Terphenyl-d14		69.2	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 13-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 93.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	260	ug/Kgdrywt	1	330	350	130	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	350	94.	260
Acetophenone	U	260	ug/Kgdrywt	1	330	350	190	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	350	100	260
Isophorone	U	260	ug/Kgdrywt	1	330	350	79.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	350	180	260
Bis(2-Chloroethoxy) Methane	U	260	ug/Kgdrywt	1	330	350	100	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	350	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	350	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	350	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	350	77.	260
2-Chloronaphthalene	U	260	ug/Kgdrywt	1	330	350	92.	260
2-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	79.	650
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	260	ug/Kgdrywt	1	330	350	83.	260
3-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	99.	650
2,4-Dinitrophenol	U	650	ug/Kgdrywt	1	820	860	400	650
Dibenzofuran	U	260	ug/Kgdrywt	1	330	350	83.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	350	84.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	82.	260
4-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	140	650
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	350	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	90.	260
Carbazole	U	260	ug/Kgdrywt	1	330	350	120	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	350	110	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	350	98.	260
2-Fluorophenol		51.8	%					
Phenol-D6		53.6	%					
Nitrobenzene-d5		53.5	%					
2-Fluorobiphenyl		56.7	%					
2,4,6-Tribromophenol		67.5	%					
Terphenyl-d14		76.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 13-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 84.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ WG-ICB	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	U	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	380	85.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	380	83.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	380	99.	280
2-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	85.	700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	380	90.	280
3-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	110	700
2,4-Dinitrophenol	U	700	ug/Kgdrywt	1	820	930	430	700
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	90.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	91.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	89.	280
4-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	150	700
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	97.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		50.0	%					
Phenol-D6		50.8	%					
Nitrobenzene-d5		50.6	%					
2-Fluorobiphenyl		54.7	%					
2,4,6-Tribromophenol		54.7	%					
Terphenyl-d14		77.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 13-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 86.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UJ-ICB	280	ug/Kgdrywt	1	330	370	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	370	100	280
Acetophenone	U	280	ug/Kgdrywt	1	330	370	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	370	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	370	85.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	370	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	370	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	370	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	370	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	370	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	370	83.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	370	99.	280
2-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	85.	700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	370	90.	280
3-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	110	700
2,4-Dinitrophenol	U	700	ug/Kgdrywt	1	820	930	430	700
Dibenzofuran	U	280	ug/Kgdrywt	1	330	370	90.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	370	91.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	89.	280
4-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	150	700
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	370	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	96.	280
Carbazole	U	280	ug/Kgdrywt	1	330	370	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	370	110	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	370	100	280
2-Fluorophenol		52.0	%					
Phenol-D6		53.8	%					
Nitrobenzene-d5		52.3	%					
2-Fluorobiphenyl		56.6	%					
2,4,6-Tribromophenol		63.1	%					
Terphenyl-d14		68.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	2.1	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone		160	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		14.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	65.1	%					
Toluene-D8	*	76.3	%					
1,2-Dichloroethane-D4		126.	%					
Dibromofluoromethane		97.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2RA
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.8	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J-LCS	210	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	J J-SSL	29.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-DT	14.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-2RA
Client ID: ~~IS66DP310001~~ IS66SS310001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	68.8	%					
Toluene-D8		86.1	%					
1,2-Dichloroethane-D4		119.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RE	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.9	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J	8.0	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		12.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		106.	%					
Toluene-D8		108.	%					
1,2-Dichloroethane-D4	*	143.	%					
Dibromofluoromethane		119.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3RA
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U WJ-SSL	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J EMBL	1.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U WJ-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-OT	5.9	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U WJ-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-3RA
Client ID: ~~IS66DP311415~~ IS66SB311415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		103.	%					
Toluene-D8		107.	%					
1,2-Dichloroethane-D4	*	136.	%					
Dibromofluoromethane		115.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSH	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-MBL	1.6	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U UJ-SSH	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U UJ-SSH	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J-SSA	76.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U UJ-SSH	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-CT	5.8	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UJ-SSH	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-4
Client ID: ~~IS66DP280001~~ IS66SS280001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 92.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-SSH	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		97.4	%					
Toluene-D8		103.	%					
1,2-Dichloroethane-D4	*	136.	%					
Dibromofluoromethane		114.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J B-FBL	8.7	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-OT	7.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-5
Client ID: ~~IS66DP280607~~ IS66SB280607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U UL-MSL	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U UL-MSL	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		106.	%					
Toluene-D8		106.	%					
1,2-Dichloroethane-D4		126.	%					
Dibromofluoromethane		110.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82811

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.6	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		6.8	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-6
Client ID: IS66EB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82811

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		101.	%					
Toluene-d8		106.	%					
1,2-Dichloroethane-d4		118.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-7
Client ID: IS66TB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82811

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.1	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5871-7
Client ID: IS66TB092310
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 23-SEP-10
Received Date: 24-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82811

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		102.	%					
Toluene-d8		106.	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		109.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82948

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.54	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		6.6	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-1
Client ID: IS66EB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82948

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		97.1	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		105.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-2
Client ID: IS66TB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82948

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.70	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-2
Client ID: IS66TB092410
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82948

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		96.0	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		96.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U LL-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B MBL	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J B EBL	19.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J J-CT	5.4	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U LL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	52.9	%					
Toluene-D8	*	77.5	%					
1,2-Dichloroethane-D4		109.	%					
Dibromofluoromethane		92.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3RA
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.8	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone		46.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		11.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-3RA
Client ID: ~~IS66DP270001~~ IS66SS270001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	36.2	%					
Toluene-D8	*	70.9	%					
1,2-Dichloroethane-D4		84.4	%					
Dibromofluoromethane		80.7	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	L SSL J ~~J-SSL~~	2.8	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-MBL	1.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U UL-SSL	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J B-EBL	8.5	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	L SSL J ~~J-SSL~~	3.0	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-OT	10.	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82627

Analysis Date: 27-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	68.4	%					
Toluene-D8	*	76.2	%					
1,2-Dichloroethane-D4		105.	%					
Dibromofluoromethane		89.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4RA
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	J	2.2	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.6	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	U	14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	J	2.2	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		9.4	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-4RA
Client ID: ~~IS66DP270910~~ IS66SB270910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-DE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	64.3	%					
Toluene-D8	*	80.7	%					
1,2-Dichloroethane-D4		81.5	%					
Dibromofluoromethane		80.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.6	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U UL-SSL	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J B-EBL	15.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-DT	11.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	33.8	%					
Toluene-D8	*	64.3	%					
1,2-Dichloroethane-D4		80.2	%					
Dibromofluoromethane		73.8	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5DL
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Excluded	340	ug/Kgdrywt	1	10	670	62.	340
Chloromethane	U	340	ug/Kgdrywt	1	10	670	94.	340
Vinyl Chloride	U	340	ug/Kgdrywt	1	10	670	58.	340
Bromomethane	U	340	ug/Kgdrywt	1	10	670	74.	340
Chloroethane	U	340	ug/Kgdrywt	1	10	670	87.	340
Trichlorofluoromethane	U	340	ug/Kgdrywt	1	10	670	61.	340
1,1-Dichloroethene	U	170	ug/Kgdrywt	1	5	340	62.	170
Carbon Disulfide	U	170	ug/Kgdrywt	1	5	340	52.	170
Freon-113	U	170	ug/Kgdrywt	1	5	340	60.	170
Methylene Chloride	U	840	ug/Kgdrywt	1	25	1700	530	840
Acetone	U	840	ug/Kgdrywt	1	25	1700	340	840
trans-1,2-Dichloroethene	U	170	ug/Kgdrywt	1	5	340	48.	170
Methyl tert-butyl Ether	U	170	ug/Kgdrywt	1	5	340	74.	170
1,1-Dichloroethane	U	170	ug/Kgdrywt	1	5	340	110	170
cis-1,2-Dichloroethene	U	170	ug/Kgdrywt	1	5	340	61.	170
Chloroform	U	170	ug/Kgdrywt	1	5	340	23.	170
Carbon Tetrachloride	U	170	ug/Kgdrywt	1	5	340	87.	170
1,1,1-Trichloroethane	U	170	ug/Kgdrywt	1	5	340	28.	170
2-Butanone	U	840	ug/Kgdrywt	1	25	1700	400	840
Benzene	U	170	ug/Kgdrywt	1	5	340	62.	170
Cyclohexane	U	170	ug/Kgdrywt	1	5	340	94.	170
1,2-Dichloroethane	U	170	ug/Kgdrywt	1	5	340	67.	170
Trichloroethene	U	170	ug/Kgdrywt	1	5	340	40.	170
1,2-Dichloropropane	U	170	ug/Kgdrywt	1	5	340	94.	170
Bromodichloromethane	U	170	ug/Kgdrywt	1	5	340	40.	170
cis-1,3-Dichloropropene	U	170	ug/Kgdrywt	1	5	340	48.	170
Toluene	U	170	ug/Kgdrywt	1	5	340	94.	170
4-Methyl-2-Pentanone	U	840	ug/Kgdrywt	1	25	1700	400	840
Tetrachloroethene	U	170	ug/Kgdrywt	1	5	340	80.	170
trans-1,3-Dichloropropene	U	170	ug/Kgdrywt	1	5	340	58.	170
1,1,2-Trichloroethane	U	170	ug/Kgdrywt	1	5	340	65.	170
Dibromochloromethane	U	170	ug/Kgdrywt	1	5	340	67.	170
1,2-Dibromoethane	U	170	ug/Kgdrywt	1	5	340	80.	170
2-Hexanone	U	840	ug/Kgdrywt	1	25	1700	320	840
Chlorobenzene	U	170	ug/Kgdrywt	1	5	340	34.	170

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-5DL
Client ID: ~~IS66DP260001~~ IS66SS260001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 91.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude RE	170	ug/Kgdrywt	1	5	340	44.	170
Total Xylene	U	500	ug/Kgdrywt	1	15	1000	87.	500
Styrene	U	170	ug/Kgdrywt	1	5	340	34.	170
Bromoform	U	170	ug/Kgdrywt	1	5	340	47.	170
Isopropylbenzene	U	170	ug/Kgdrywt	1	5	340	62.	170
1,1,2,2-Tetrachloroethane	U	170	ug/Kgdrywt	1	5	340	56.	170
1,3-Dichlorobenzene	U	170	ug/Kgdrywt	1	5	340	42.	170
1,4-Dichlorobenzene	U	170	ug/Kgdrywt	1	5	340	29.	170
1,2-Dichlorobenzene	U	170	ug/Kgdrywt	1	5	340	52.	170
1,2-Dibromo-3-Chloropropane	U	170	ug/Kgdrywt	1	5	340	100	170
1,2,4-Trichlorobenzene	U	170	ug/Kgdrywt	1	5	340	53.	170
Methyl Acetate	U	200	ug/Kgdrywt	1	5	340	180	200
Methylcyclohexane	U	170	ug/Kgdrywt	1	5	340	64.	170
p-Bromofluorobenzene		86.5	%					
Toluene-D8		95.3	%					
1,2-Dichloroethane-D4		102.	%					
Dibromofluoromethane		93.9	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UUL-SSL	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Carbon Disulfide	JB-MBL	1.4	ug/Kgdrywt	1	5	5.0	0.77	2.5
Freon-113	UUL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.8	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.0	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.8	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.8	12.
Tetrachloroethene	J-CT	9.8	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Total Xylene	U	7.4	ug/Kgdrywt	1	15	15.	1.3	7.4
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.95	2.5
p-Bromofluorobenzene	*	64.8	%					
Toluene-D8	*	79.9	%					
1,2-Dichloroethane-D4		88.0	%					
Dibromofluoromethane		83.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6RA
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J	1.4	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J	4.9	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-6RA
Client ID: ~~IS66DP260708~~ IS66SB260708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82717

Analysis Date: 29-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 87.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-EE	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	26.5	%					
Toluene-D8	*	42.2	%					
1,2-Dichloroethane-D4		76.5	%					
Dibromofluoromethane		69.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U UL-SSL	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J B-FBL	16.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-DT	7.1	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UL-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	53.6	%					
Toluene-D8	*	83.1	%					
1,2-Dichloroethane-D4		110.	%					
Dibromofluoromethane		98.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7RA
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude 26	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.8	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone		31.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		11.	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-7RA
Client ID: ~~IS66DP290001~~ IS66SS290001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	47.3	%					
Toluene-D8	*	64.6	%					
1,2-Dichloroethane-D4		106.	%					
Dibromofluoromethane		87.9	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UL-SSL	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J-B-MBL	1.4	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-B1	6.1	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UL-SSL	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	71.3	%					
Toluene-D8	*	83.7	%					
1,2-Dichloroethane-D4		107.	%					
Dibromofluoromethane		94.0	%					

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8RA
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J	1.4	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene		7.6	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/10/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5903-8RA
Client ID: ~~IS66DP291617~~ IS66SB291617
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 24-SEP-10
Received Date: 25-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	77.0	%					
Toluene-D8		89.0	%					
1,2-Dichloroethane-D4		108.	%					
Dibromofluoromethane		96.1	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: 1S66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-1
Client ID: IS66EB01-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		98.0	%					
Toluene-d8		110.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSL	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J-GMBL	2.0	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U UJ-SSL	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	J-SSL	62.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U UJ-SSL	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J-J-DT	6.9	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U UJ-SSL	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	J	1.2	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene	*	58.5	%					
Toluene-D8		91.6	%					
1,2-Dichloroethane-D4		128.	%					
Dibromofluoromethane		112.	%					

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HK 12/10/2010

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2RA
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RC	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
Bromomethane	U	7.5	ug/Kgdrywt	1	10	15.	1.6	7.5
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Carbon Disulfide	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Methylene Chloride	U	19.	ug/Kgdrywt	1	25	38.	12.	19.
Acetone		140	ug/Kgdrywt	1	25	38.	7.6	19.
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
2-Butanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Cyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
4-Methyl-2-Pentanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Tetrachloroethene		8.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
2-Hexanone	U	19.	ug/Kgdrywt	1	25	38.	7.2	19.
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-2RA
Client ID: ~~IS66DP360001~~ IS66SS360001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Total Xylene	U	11.	ug/Kgdrywt	1	15	22.	2.0	11.
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Methyl Acetate	U	4.5	ug/Kgdrywt	1	5	7.5	4.0	4.5
Methylcyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
p-Bromofluorobenzene	*	63.6	%					
Toluene-D8		88.4	%					
1,2-Dichloroethane-D4		105.	%					
Dibromofluoromethane		100.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.91	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	9.9	0.86	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	9.9	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	9.9	0.90	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Carbon Disulfide	J	1.4	ug/Kgdrywt	1	5	5.0	0.77	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.89	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.8	12.
Acetone	J	17.	ug/Kgdrywt	1	25	25.	5.0	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.8	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.58	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.8	12.
Tetrachloroethene	J	4.6	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.85	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.99	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.64	2.5
Total Xylene	U	7.4	ug/Kgdrywt	1	15	15.	1.3	7.4
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.50	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.69	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.83	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.61	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.77	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.95	2.5
p-Bromofluorobenzene	*	84.1	%					
Toluene-D8		99.4	%					
1,2-Dichloroethane-D4		124.	%					
Dibromofluoromethane		111.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3RA
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RE	4.8	ug/Kgdrywt	1	10	9.5	0.87	4.8
Chloromethane	U	4.8	ug/Kgdrywt	1	10	9.5	1.3	4.8
Vinyl Chloride	U	4.8	ug/Kgdrywt	1	10	9.5	0.83	4.8
Bromomethane	U	4.8	ug/Kgdrywt	1	10	9.5	1.0	4.8
Chloroethane	U	4.8	ug/Kgdrywt	1	10	9.5	1.2	4.8
Trichlorofluoromethane	U	4.8	ug/Kgdrywt	1	10	9.5	0.86	4.8
1,1-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
Carbon Disulfide	U	2.4	ug/Kgdrywt	1	5	4.8	0.74	2.4
Freon-113	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	24.	7.5	12.
Acetone	J	11.	ug/Kgdrywt	1	25	24.	4.8	12.
trans-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.6	2.4
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.8	0.33	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.40	2.4
2-Butanone	U	12.	ug/Kgdrywt	1	25	24.	5.6	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Cyclohexane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.95	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.56	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.57	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.68	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	24.	5.6	12.
Tetrachloroethene		5.1	ug/Kgdrywt	1	5	4.8	1.1	2.4
trans-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.82	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.92	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.95	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.1	2.4
2-Hexanone	U	12.	ug/Kgdrywt	1	25	24.	4.6	12.
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.48	2.4

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-3RA
Client ID: ~~IS66DP360809~~ IS66SB360809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 88.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.62	2.4
Total Xylene	U	7.1	ug/Kgdrywt	1	15	14.	1.2	7.1
Styrene	U	2.4	ug/Kgdrywt	1	5	4.8	0.48	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.8	0.66	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.80	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.59	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.42	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.74	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.4	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
Methyl Acetate	U	2.8	ug/Kgdrywt	1	5	4.8	2.6	2.8
Methylcyclohexane	U	2.4	ug/Kgdrywt	1	5	4.8	0.91	2.4
p-Bromofluorobenzene	*	82.8	%					
Toluene-D8		95.1	%					
1,2-Dichloroethane-D4		105.	%					
Dibromofluoromethane		102.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	0.90	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J-B-FBL	10.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J-DT	7.0	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-4
Client ID: ~~IS66DP370001~~ IS66SS370001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 93.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		89.7	%					
Toluene-D8		96.5	%					
1,2-Dichloroethane-D4		115.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J g-MBL	1.4	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J J-QT	4.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-5
Client ID: ~~IS66DP371314~~ IS66SB371314
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 84.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		95.3	%					
Toluene-D8		96.2	%					
1,2-Dichloroethane-D4		120.	%					
Dibromofluoromethane		109.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.8	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	U	15.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J J-QT	5.4	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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http://www.katahdinlab.com

HK 12/10/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5971-6
Client ID: ~~IS66DP390001~~ IS66SS390001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-2

Sample Date: 28-SEP-10
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Extract Date:
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Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		95.0	%					
Toluene-D8		97.2	%					
1,2-Dichloroethane-D4		134	%					
Dibromofluoromethane		115	%					

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HK 12/10/2010

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services SDG JU04-3.

Samples were analyzed using the following analytical methods:

- SW6010/6020 Metals
- SW7470A/7471A Mercury
- SW8081A Pesticides
- SW8082 PCBs
- SW8260C Volatiles
- SW8270C and 8270C SIM Semivolatiles
- SW8330 Explosives
- 9012 Cyanide

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66MW050910	SD5938-001
IS66MW050910	SD5938-002
IS66FB092710	SD5938-003
IS66EB092710	SD5938-005
IS66EB092710	SD5938-006
IS66MW050910	SD5938-1
IS66FB092710	SD5938-3
IS66EB092710	SD5938-5
IS66TB092710	SD5938-7
IS66MW040910	SD5964-001
IS66MW040910	SD5964-002
IS66EB02-092810	SD5964-004
IS66EB02-092810	SD5964-005
IS66MW030910	SD5964-006
IS66MW030910	SD5964-007
IS66MW03P0910	SD5964-008
IS66MW03P0910	SD5964-009
IS66MW040910	SD5964-1
IS66TB092810	SD5964-3
IS66EB02-092810	SD5964-4
IS66MW030910	SD5964-6
IS66MW03P0910	SD5964-8
IS66DP391213	SD5972-001
IS66DP330001	SD5972-002
IS66DP331415	SD5972-003
IS66DP340001	SD5972-004
IS66DP340809	SD5972-005
IS66DP391213	SD5972-1
IS66DP330001	SD5972-2
IS66DP331415	SD5972-3
IS66DP340001	SD5972-4
IS66DP340809	SD5972-5

The original Sample IDs as submitted to the laboratory were incorrect. A cross-reference table with the correct Sample IDs is provided at the end of this report.

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), National Functional Guidelines for Inorganic Methods Data Review (EPA 2004), Region III Modifications for Organic Data Review (EPA 1994), and Region III Modifications for Inorganic Data Review (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Serial Dilutions
- Dual Column Confirmation
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data that has been qualified are summarized in **Attachment 1.**

Attachment 2 lists the specific non-conformance issues, such as the %Difference, Relative Percent Differences (RPD) and recoveries for data in this SDG.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/27/10 and 9/28/10. Samples were received at the laboratory on 9/28/10 and 9/29/10. All sample preparation analysis was performed within holding time requirements with the exception of sample IS66DP391213 for method 8081A. All sample results were qualified for being outside of holding time. Data are summarized in **Attachment 1.**

Calibration

Initial, continuing calibration, and second source verification were outside of criteria for the compounds listed below in methods 8270C and 8270C SIM. Affected data are summarized in **Attachment 1**.

Sample ID	Compound	Calibration
IS66DP330001	Benzaldehyde	IC
IS66DP331415	Benzaldehyde	IC
IS66DP340001	Benzaldehyde	IC
IS66DP340809	Benzaldehyde	IC
IS66DP391213	Benzaldehyde	IC
IS66EB092710	Benzaldehyde	IC
IS66EB092710	Di-n-octylphthalate	CC
IS66FB092710	Benzaldehyde	IC
IS66FB092710	Di-n-octylphthalate	CC
IS66MW030910	Benzaldehyde	IC
IS66MW030910	Di-n-octylphthalate	CC
IS66MW03P0910	Benzaldehyde	IC
IS66MW03P0910	Di-n-octylphthalate	CC
IS66MW040910	Benzaldehyde	IC
IS66MW040910	Di-n-octylphthalate	CC
IS66MW050910	Benzaldehyde	IC
IS66MW050910	Di-n-octylphthalate	CC
IS66DP330001	3,3'-Dichlorobenzidine	2nd source
IS66DP331415	3,3'-Dichlorobenzidine	2nd source
IS66DP340001	3,3'-Dichlorobenzidine	2nd source
IS66DP391213	3,3'-Dichlorobenzidine	2nd source

Sample ID	Compound	Calibration
IS66EB092710	2-Nitroaniline	2nd source
IS66EB092710	2,4-Dinitrophenol	IC
IS66EB092710	4-Nitroaniline	2nd source
IS66EB092710	3,3'-Dichlorobenzidine	2nd source
IS66FB092710	2,4-Dinitrophenol	IC
IS66FB092710	4-Nitroaniline	IC
IS66MW030910	2-Nitroaniline	2nd source
IS66MW030910	2,4-Dinitrophenol	IC
IS66MW030910	4-Nitroaniline	2nd source
IS66MW03P0910	2-Nitroaniline	2nd source
IS66MW03P0910	2,4-Dinitrophenol	IC
IS66MW03P0910	4-Nitroaniline	2nd source
IS66MW03P0910	3,3'-Dichlorobenzidine	2nd source
IS66MW040910	2-Nitroaniline	2nd source
IS66MW040910	2,4-Dinitrophenol	IC
IS66MW040910	4-Nitroaniline	2nd source
IS66MW040910	3,3'-Dichlorobenzidine	2nd source
IS66MW050910	2,4-Dinitrophenol	IC
IS66MW050910	4-Nitroaniline	IC

Blanks

Various compounds in methods 8260B, 8270C SIM, 6010B, 6020, and 9012 were detected in equipment blanks, field blanks, method blanks, and/or calibration blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Units	Action Level	Units
8260 - VOC					
IS66FB092710	Chloromethane	1.4	ug/L	7	ug/L or ug/Kg
IS66EB092710	Acetone	6.0	ug/L	60	ug/L
IS66EB02-092810	Acetone	6.4	ug/L	60	ug/L or ug/Kg
WG82812-2 – MB – 9/30	Carbon Disulfide	1.3	ug/L	6.5	ug/Kg
WG82949-2 – MB – 10/1	Carbon Disulfide	1.2	ug/L	6	ug/Kg
8270 SIM					

Blank ID	Compound	Conc.	Units	Action Level	Units
IS66FB092710	Naphthalene	0.16	ug/L	0.8	ug/L
WG82749-1RA – MB –9/30	BEHP	46	ug/Kg	460	ug/Kg
WG82758-1 – MB –9/30	BEHP	2.5	ug/L	25	ug/L
Cyanide					
IS66EB02-092810	Cyanide	5.2	ug/L	26	ug/L
Metals – 6010/6020 – Waters					
ISSFB01-092710	Arsenic - Total	2.4	ug/L	12	ug/L
	Zinc - Total	1.9	ug/L	9.5	ug/L
ISSEB01-092710	Arsenic - Total	1.9	ug/L	9.5	ug/L
	Zinc - Total	1.0	ug/L	5.0	ug/L
ISSEB01-092810	Aluminum - Total	15.5	ug/L	77.5	ug/L
	Arsenic – Total	2.2	ug/L	11	ug/L
	Zinc - Total	0.56	ug/L	2.8	ug/L
ISSEB01-092710	Arsenic – Dissolved	2.2	ug/L	11	ug/L
	Calcium - Dissolved	173	ug/L	865	ug/L
	Zinc – Dissolved	1.1	ug/L	5.5	ug/L
ISSEB01-092810	Arsenic – Dissolved	3.3	ug/L	16.5	ug/L
	Calcium - Dissolved	116	ug/L	580	ug/L
	Zinc – Dissolved	0.95	ug/L	4.75	ug/L
PBWAJ04ICW1 - PB	Calcium	9.97	ug/L	49.85	ug/L
	Copper	1.142	ug/L	5.71	ug/L
	Lead	1.007	ug/L	5.035	ug/L
	Magnesium	12.15	ug/L	60.75	ug/L
	Manganese	0.565	ug/L	2.825	ug/L
	Nickel	0.353	ug/L	1.765	ug/L
	Potassium	172.6	ug/L	863	ug/L
	Sodium	447.7	ug/L	2239	ug/L
PBWAJ04ICMW0 - PB	Chromium	1.615	ug/L	8.075	ug/L
	Vanadium	0.773	ug/L	3.865	ug/L
CCB 100710 1213	Magnesium	7.39	ug/L	36.95	ug/L
	Manganese	0.84	ug/L	4.2	ug/L
CCB 100710 1309	Copper	2.54	ug/L	12.7	ug/L
CCB 100710 1404	Lead	1.38	ug/L	6.9	ug/L
	Sodium	58.86	ug/L	294.3	ug/L
CCB 101210 1253	Antimony	0.01	ug/L	0.05	ug/L
Metals – 6010/6020 – Soils					
ISSEB01-092810 (soil)	Calcium	24	ug/L	12	mg/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
	Copper	0.17	ug/L	0.085	mg/Kg
ISSFB01-092710 (soil)	Arsenic	2.4	ug/L	1.2	mg/Kg
	Zinc	1.9	ug/L	0.95	mg/Kg
PBSAJ11ICS1	Cadmium	0.017	mg/Kg	0.085	mg/Kg
	Calcium	5.317	mg/Kg	26.585	mg/Kg
	Copper	0.132	mg/Kg	0.66	mg/Kg
	Iron	2.835	mg/Kg	14.175	mg/Kg
	Magnesium	2.256	mg/Kg	11.28	mg/Kg
	Sodium	29.36	mg/Kg	146.8	mg/Kg
	Zinc	0.305	mg/Kg	1.525	mg/Kg
PBSAJ11IMS1	Chromium	0.159	mg/Kg	0.795	mg/Kg
CCB 101410 1826	Barium	0.32	ug/L	0.160	mg/Kg
	Sodium	38.17	ug/L	19.085	mg/Kg
CCB 101410 1921	Iron	18.92	ug/L	9.46	mg/Kg
CCB 101410 2016	Beryllium	0.27	ug/L	0.135	mg/Kg
	Cadmium	0.34	ug/L	0.17	mg/Kg
	Manganese	1.58	ug/L	0.790	mg/Kg
	Nickel	0.65	ug/L	0.325	mg/Kg
CCB 101510 1751	Cadmium	0.16	ug/L	0.08	mg/Kg
	Magnesium	10.05	ug/L	5.025	mg/Kg
	Manganese	1.35	ug/L	0.675	mg/Kg

Lab Control Sample/Lab Control Duplicate

Acetone and bis(2-Ethylhexyl)phthalate exhibited high recoveries in the LCS/LCSD. Multiple compounds in methods 8270C and 8270C SIM exhibited low recoveries. Affected data are summarized in **Attachment 1.**

Matrix Spike/Spike Duplicate

Various other compounds for 8270C SIM were qualified due to low recoveries in the MS/MSD. 2,4,6-Trichlorphenol was rejected for lab sample SD5938-1 due to MS 9% and MSD 10% recoveries. 3,3-Dichlorobenzidine was also rejected for the same sample due to MS 0% and MSD 8% recoveries.

Affected data are summarized in **Attachment 1.**

Surrogates

Surrogates for the samples listed below exhibited recoveries below the lower control limits for methods 8081A, 8082, 8270C, 8270C SIM, and 8260B. Method 8260B had surrogates for

several samples that exhibited high recoveries. Affected data are summarized in **Attachment 1.**

Sample ID
IS66DP330001
IS66DP331415
IS66DP340001
IS66DP340809
IS66DP391213
IS66EB02-092810
IS66MW050910

Internal Standards
Internal standards were out low for sample IS66TB092810. The compounds affected by the low internal standard are summarized in **Attachment 1.**

Other Quality Control Issues
From the Case Narrative – "All of the soil samples had concentrations of Tetrachloroethene above the MDL. Upon investigation, Katahdin found that the freezer blank stored in the freezer at the same time as these samples had a Tetrachloroethene concentration of 15 ug/kg. Upon further investigation, Katahdin discovered that another client's sample which was also stored in the same freezer had an extremely high concentration of Tetrachloroethene. It is believed that this sample is the source of contamination. The sample was removed from the storage freezer and the subsequent freezer storage blank had no detection of Tetrachloroethene above the MDL." Therefore, qualify all detected Tetrachloroethene results as "J-OT".

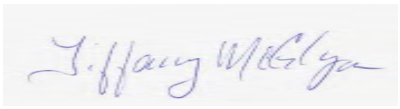
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Sample ID Cross-Reference Table

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP29	IS66DP291617	IS66SB291617
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66MW050910 GW
Matrix: WATER
SDG Name: JU04-3
Percent Solids: 0.00
Lab Sample ID: SD5938-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	76.1	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.4	J	B-BL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	102			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.09	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.13	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	12300			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.0	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	25.8			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	1.1	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	2920			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	2.9	J	B-ICCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	8920			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	876			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	21.0	J		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	875	J		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	35400			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.4	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	21.0	J		P	1	25	0.50	10

Bottle ID: J

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66GWMW050910
Matrix: WATER
SDG Name: JU04-3
Percent Solids: 0.00
Lab Sample ID: SD5938-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	21.5	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.12	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	3.2	J	B FB	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	101			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.10	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.19	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	12200			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	4.1	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	25.1			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	1.6	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	2640			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	2.7	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	8870			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	856			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	20.2	J		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	838	J	B-MBL	P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	35200			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	2.4	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	22.9	J		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66FB092710

Matrix: WATER
SDG Name: JU04-3

Percent Solids: 0.00
Lab Sample ID: SD5938-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	2.4	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	26.2	J	B-MBL	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.0	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	1.0	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	15.2	J	B-MBL	P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	0.84	J	B-CCBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	61.8	J	B-MBL	P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.4	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	1.9	J		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66EB092710

Matrix: WATER **SDG Name:** JU04-3

Percent Solids: 0.00 **Lab Sample ID:** SD5938-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.9	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	28.3	J	BMBL	P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.8	J	BMBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	1.5	J	BCCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	13.5	J	BMBL	P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	4.0	U		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.8	J	BMBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	1.0	J		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66EB092710

Matrix: WATER **SDG Name:** JU04-3

Percent Solids: 0.00 **Lab Sample ID:** SD5938-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	2.2	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	173			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	3.0	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	0.89	JBCCBL		P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	80	U		P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	0.86	JBCCBL		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	35.4	JB-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	1.0	JBCCBL		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	0.31	JBMBL		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	120	JBMBL		P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	1.8	JB-MBL		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	1.1	J		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66MW040910 GW
Matrix: WATER
SDG Name: JU04-3
Percent Solids: 0.00
Lab Sample ID: SD5964-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	277	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.11	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	3.1	J	B-FBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	144			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.18	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.26	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	13200			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	4.2	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	46.1			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	2.9	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	1820			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.8	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	12800			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	784			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	50.7			P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	1250			P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	71400			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	3.3	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	45.8			P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66MW040910 GW
Matrix: WATER
SDG Name: JU04-3
Percent Solids: 0.00
Lab Sample ID: SD5964-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, DISSOLVED	93.5	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.11	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	3.4	J	B-FBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	137			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.23	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.24	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	19800			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	3.9	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	40.0			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	4.9	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	2260			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	1.8	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	12800			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	826			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	44.6			P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	1610			P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	75900			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	2.8	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	40.3			P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-092810

Matrix: WATER | SDG Name: JU04-3

Percent Solids: 0.00 | Lab Sample ID: SD5964-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	15.5	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	2.2	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	12.9	JB-MBL		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.8	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	2.5	JB-CCBL		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	0.76	JB-CCBL		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	10.7	JB-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	0.90	JB-CCBL		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.68	JB-MBL		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	45.4	J		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.8	JB-MBL		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	0.56	J		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-092810

Matrix: WATER | SDG Name: JU04-3

Percent Solids: 0.00 | Lab Sample ID: SD5964-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, DISSOLVED	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	3.3	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	116			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	3.8	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	2.5	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	80	U		P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	0.91	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	28.6	J	B-MBL	P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	0.74	J	B-CCBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	70.1	J	B-MBL	P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	3.0	J	B-MBL	MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	0.95	J		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~MW~~GW030910

Matrix: WATER **SDG Name:** JU04-3

Percent Solids: 0.00 **Lab Sample ID:** SD5964-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	1010			P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.20	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	12.8			MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	164			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.16	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.24	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	42100			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.8	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	1.4			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	3.1	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	21200			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.2	J	B-CCBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	9850			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	732			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	1.8	J		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	6490			P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	125000			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	9.9			MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	4.1	J	B-FBL	P	1	25	0.50	10

Bottle ID: D

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66MW030910 GW

Matrix: WATER **SDG Name:** JU04-3

Percent Solids: 0.00 **Lab Sample ID:** SD5964-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	92.7	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.19	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	11.3	B-FBL		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	152			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	39700			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	1.2	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.94	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	1.8	JB-CCBL		P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	19300			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	1.9	JB-CCBL		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	9440			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	702			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	0.52	JB-MBL		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	6150			P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	122000			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	3.4	JB-MBL		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	1.4	JB-FBL		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~MW~~GW03P0910

Matrix: WATER **SDG Name:** JU04-3

Percent Solids: 0.00 **Lab Sample ID:** SD5964-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	691			P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.18	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	11.7	B-FBL		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	160			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.11	J		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.03	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	40000			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	2.0	J	B-mBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	1.2			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	2.2	J	B-ccBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	20100			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	3.7	J	B-ccBL	P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	9530			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	711			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.78	J	B-mBL	P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	6240			P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	123000			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	7.1			MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	5.1	J	B-FBL	P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66MW03P0910 GW
Matrix: WATER
SDG Name: JU04-3
Percent Solids: 0.00
Lab Sample ID: SD5964-009

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	115	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.16	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	11.2	B-FBL		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	155			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.04	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	40500			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	1.0	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.94	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	1.9	JB-CCBL		P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	19900			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	2.6	JB-CCBL		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	9670			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	725			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	6280			P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	121000			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	2.4	JB-MBL		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	1.5	JB-FBL		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB391213

Matrix: SOIL **SDG Name:** JU04-3

Percent Solids: 90.6 **Lab Sample ID:** SD5972-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	5860			P	1	20	1.04	6.7
7440-36-0	ANTIMONY, TOTAL	0.34	U		P	1	0.54	0.08	0.34
7440-38-2	ARSENIC, TOTAL	0.88	B-FBL		MS	5	0.34	0.08	0.27
7440-39-3	BARIUM, TOTAL	40.5			P	1	0.34	0.02	0.20
7440-41-7	BERYLLIUM, TOTAL	0.50			P	1	0.34	0.006	0.034
7440-43-9	CADMIUM, TOTAL	0.20	U		P	1	0.67	0.005	0.20
7440-70-2	CALCIUM, TOTAL	310			P	1	6.7	0.71	5.4
7440-47-3	CHROMIUM, TOTAL	8.5			MS	5	0.34	0.04	0.13
7440-48-4	COBALT, TOTAL	7.3			MS	5	0.067	0.003	0.020
7440-50-8	COPPER, TOTAL	4.4			P	1	1.7	0.05	0.67
7439-89-6	IRON, TOTAL	16700			P	1	6.7	0.22	5.4
7439-92-1	LEAD, TOTAL	4.3			P	1	0.34	0.07	0.27
7439-95-4	MAGNESIUM, TOTAL	946			P	1	6.7	0.24	5.4
7439-96-5	MANGANESE, TOTAL	224			P	1	0.34	0.04	0.27
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	10.4			P	1	2.7	0.04	0.27
7440-09-7	POTASSIUM, TOTAL	706			P	1	67	6.93	34
7782-49-2	SELENIUM, TOTAL	0.12	J		MS	5	0.34	0.02	0.20
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.067	0.007	0.027
7440-23-5	SODIUM, TOTAL	39.7	~~J~~ B-MBL		P	1	67	1.12	34
7440-28-0	THALLIUM, TOTAL	0.06	J		MS	5	0.13	0.003	0.027
7440-62-2	VANADIUM, TOTAL	10.6			MS	5	0.34	0.05	0.27
7440-66-6	ZINC, TOTAL	27.6			P	1	1.7	0.04	0.67

Bottle ID: E

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SS330001

Matrix: SOIL **SDG Name:** JU04-3

Percent Solids: 95.0 **Lab Sample ID:** SD5972-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	8840			P	1	22	1.16	7.5
7440-36-0	ANTIMONY, TOTAL	0.37	U		P	1	0.60	0.08	0.37
7440-38-2	ARSENIC, TOTAL	3.1			MS	5	0.37	0.09	0.30
7440-39-3	BARIUM, TOTAL	46.3			P	1	0.37	0.02	0.22
7440-41-7	BERYLLIUM, TOTAL	0.56			P	1	0.37	0.007	0.037
7440-43-9	CADMIUM, TOTAL	0.22	U		P	1	0.75	0.006	0.22
7440-70-2	CALCIUM, TOTAL	211			P	1	7.5	0.79	6.0
7440-47-3	CHROMIUM, TOTAL	13.8			MS	5	0.37	0.04	0.15
7440-48-4	COBALT, TOTAL	11.0			MS	5	0.075	0.003	0.022
7440-50-8	COPPER, TOTAL	20.7			P	1	1.9	0.05	0.75
7439-89-6	IRON, TOTAL	10700			P	1	7.5	0.24	6.0
7439-92-1	LEAD, TOTAL	29.6			P	1	0.37	0.08	0.30
7439-95-4	MAGNESIUM, TOTAL	634			P	1	7.5	0.27	6.0
7439-96-5	MANGANESE, TOTAL	232			P	1	0.37	0.04	0.30
7439-97-6	MERCURY, TOTAL	0.06			CV	1	0.030	0.001	0.016
7440-02-0	NICKEL, TOTAL	7.4			P	1	3.0	0.04	0.30
7440-09-7	POTASSIUM, TOTAL	529			P	1	75	7.69	37
7782-49-2	SELENIUM, TOTAL	0.56			MS	5	0.37	0.03	0.22
7440-22-4	SILVER, TOTAL	0.07	J		MS	5	0.075	0.007	0.030
7440-23-5	SODIUM, TOTAL	23.8	J	B-nBL	P	1	75	1.25	37
7440-28-0	THALLIUM, TOTAL	0.11	J		MS	5	0.15	0.004	0.030
7440-62-2	VANADIUM, TOTAL	33.7			MS	5	0.37	0.06	0.30
7440-66-6	ZINC, TOTAL	23.7			P	1	1.9	0.05	0.75

Bottle ID: E

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66SB331415

Matrix: SOIL | SDG Name: JU04-3

Percent Solids: 81.5 | Lab Sample ID: SD5972-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	11500			P	1	24	1.22	7.9
7440-36-0	ANTIMONY, TOTAL	0.79	U		P	2	1.2	0.18	0.79
7440-38-2	ARSENIC, TOTAL	1.0	B-FBL		MS	5	0.39	0.09	0.31
7440-39-3	BARIUM, TOTAL	82.4			P	1	0.39	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.79			P	1	0.39	0.007	0.039
7440-43-9	CADMIUM, TOTAL	0.47	U		P	2	1.6	0.01	0.47
7440-70-2	CALCIUM, TOTAL	467			P	1	7.9	0.83	6.3
7440-47-3	CHROMIUM, TOTAL	17.8			MS	5	0.39	0.05	0.16
7440-48-4	COBALT, TOTAL	12.4			MS	5	0.079	0.003	0.024
7440-50-8	COPPER, TOTAL	9.6			P	2	3.9	0.11	1.6
7439-89-6	IRON, TOTAL	20100			P	1	7.9	0.25	6.3
7439-92-1	LEAD, TOTAL	7.8			P	2	0.79	0.16	0.63
7439-95-4	MAGNESIUM, TOTAL	1940			P	2	16	0.57	12
7439-96-5	MANGANESE, TOTAL	131			P	2	0.79	0.09	0.63
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.038	0.001	0.020
7440-02-0	NICKEL, TOTAL	18.8			P	2	6.3	0.08	0.63
7440-09-7	POTASSIUM, TOTAL	928			P	1	79	8.10	39
7782-49-2	SELENIUM, TOTAL	0.24	J		MS	5	0.39	0.03	0.24
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.079	0.008	0.031
7440-23-5	SODIUM, TOTAL	76.0	J B-MBL		P	1	79	1.31	39
7440-28-0	THALLIUM, TOTAL	0.13	J		MS	5	0.16	0.004	0.031
7440-62-2	VANADIUM, TOTAL	22.0			MS	5	0.39	0.06	0.31
7440-66-6	ZINC, TOTAL	42.9			P	1	2.0	0.05	0.79

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66~~DP~~SS340001

Matrix: SOIL | SDG Name: JU04-3

Percent Solids: 84.8 | Lab Sample ID: SD5972-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	13600			P	1	23	1.18	7.6
7440-36-0	ANTIMONY, TOTAL	0.09	J		P	1	0.61	0.09	0.38
7440-38-2	ARSENIC, TOTAL	14.4			MS	5	0.38	0.09	0.30
7440-39-3	BARIUM, TOTAL	142			P	1	0.38	0.02	0.23
7440-41-7	BERYLLIUM, TOTAL	1.2			P	1	0.38	0.007	0.038
7440-43-9	CADMIUM, TOTAL	1.1			P	1	0.76	0.006	0.23
7440-70-2	CALCIUM, TOTAL	2720			P	1	7.6	0.81	6.1
7440-47-3	CHROMIUM, TOTAL	28.1			MS	5	0.38	0.05	0.15
7440-48-4	COBALT, TOTAL	8.5			MS	5	0.076	0.003	0.023
7440-50-8	COPPER, TOTAL	22.2			P	1	1.9	0.05	0.76
7439-89-6	IRON, TOTAL	16000			P	1	7.6	0.24	6.1
7439-92-1	LEAD, TOTAL	35.1			P	1	0.38	0.08	0.30
7439-95-4	MAGNESIUM, TOTAL	2170			P	1	7.6	0.28	6.1
7439-96-5	MANGANESE, TOTAL	155			P	1	0.38	0.04	0.30
7439-97-6	MERCURY, TOTAL	0.05			CV	1	0.030	0.001	0.015
7440-02-0	NICKEL, TOTAL	20.8			P	1	3.0	0.04	0.30
7440-09-7	POTASSIUM, TOTAL	1130			P	1	76	7.83	38
7782-49-2	SELENIUM, TOTAL	0.63			MS	5	0.38	0.03	0.23
7440-22-4	SILVER, TOTAL	0.08			MS	5	0.076	0.008	0.030
7440-23-5	SODIUM, TOTAL	204			P	1	76	1.27	38
7440-28-0	THALLIUM, TOTAL	0.32			MS	5	0.15	0.004	0.030
7440-62-2	VANADIUM, TOTAL	38.2			MS	5	0.38	0.06	0.30
7440-66-6	ZINC, TOTAL	63.5			P	1	1.9	0.05	0.76

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB340809

Matrix: SOIL **SDG Name:** JU04-3

Percent Solids: 82.5 **Lab Sample ID:** SD5972-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	14600			P	1	26	1.33	8.6
7440-36-0	ANTIMONY, TOTAL	0.43	U		P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	5.6			MS	5	0.43	0.10	0.34
7440-39-3	BARIUM, TOTAL	40.0			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	0.41	J		P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.26	U		P	1	0.86	0.007	0.26
7440-70-2	CALCIUM, TOTAL	168			P	1	8.6	0.91	6.9
7440-47-3	CHROMIUM, TOTAL	19.6			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	4.0			MS	5	0.086	0.003	0.026
7440-50-8	COPPER, TOTAL	7.7			P	1	2.1	0.06	0.86
7439-89-6	IRON, TOTAL	20500			P	1	8.6	0.28	6.9
7439-92-1	LEAD, TOTAL	7.8			P	1	0.43	0.09	0.34
7439-95-4	MAGNESIUM, TOTAL	1020			P	1	8.6	0.31	6.9
7439-96-5	MANGANESE, TOTAL	70.7			P	1	0.43	0.05	0.34
7439-97-6	MERCURY, TOTAL	0.009	J		CV	1	0.035	0.001	0.018
7440-02-0	NICKEL, TOTAL	9.1			P	1	3.4	0.05	0.34
7440-09-7	POTASSIUM, TOTAL	1060			P	1	86	8.86	43
7782-49-2	SELENIUM, TOTAL	0.35	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.01	J		MS	5	0.086	0.009	0.034
7440-23-5	SODIUM, TOTAL	97.3	B-MBL		P	1	86	1.44	43
7440-28-0	THALLIUM, TOTAL	0.15	J		MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	24.4			MS	5	0.43	0.06	0.34
7440-66-6	ZINC, TOTAL	23.0			P	1	2.1	0.05	0.86

Bottle ID: E

Comments:

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5938-1
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~MW~~GW050910	AQ	27-SEP-10	28-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	67. mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:03:00	N/A	N/A	
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82804	30-SEP-10 13:47:28	SW846 M9012	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5938-3
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66FB092710	AQ	27-SEP-10	28-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	U4.0 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:23:00	N/A	N/A	
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82804	30-SEP-10 13:53:08	SW846 M9012	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5938-5
Report Date: 19-OCT-10
Client PO: 935177 386329 N624 70
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66EB092710	AQ	27-SEP-10	28-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	U4.0 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:27:00	N/A	N/A	
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG82804	30-SEP-10 13:53:09	SW846 M9012	30-SEP-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5964-1
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~MW~~GW040910	AQ	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	91. mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:31:00	N/A	N/A	
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83041	05-OCT-10 14:07:01	SW846 M9012	05-OCT-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5964-4
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66EB02-092810	AQ	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	U4.0 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:39:00	N/A	N/A	
Total Cyanide	J5.2 ug/L	10.	8.0	SW846 M9012A	WG83041	05-OCT-10 12:28:03	SW846 M9012	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5964-6
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~MW~~GW030910	AQ	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	140 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:43:00	N/A	N/A	
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83041	05-OCT-10 14:07:02	SW846 M9012	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5964-8
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~MW~~GW03P0910	AQ	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	140 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:47:00	N/A	N/A	
Total Cyanide	B EBL ~~7~~7.4 ug/L	10.	8.0	SW846 M9012A	WG83041	05-OCT-10 14:07:03	SW846 M9012	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5972-1
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB391213	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG83042	05-OCT-10 16:15:21	SW846 M9012	05-OCT-10	
Total Solids	90. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:45:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5972-2
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS30001	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG83042	05-OCT-10 16:15:22	SW846 M9012	05-OCT-10	
Total Solids	95. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:46:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5972-3
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB331415	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83042	05-OCT-10 16:15:23	SW846 M9012	05-OCT-10	
Total Solids	81. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:47:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5972-4
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SS340001	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83042	05-OCT-10 16:15:24	SW846 M9012	05-OCT-10	
Total Solids	85. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:48:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5972-5
Report Date: 19-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-3

Sample Description	Matrix	Date Sampled	Date Received
IS66~~DP~~SB340809	SL	28-SEP-10	29-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83042	05-OCT-10 16:15:25	SW846 M9012	05-OCT-10	
Total Solids	82. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:49:00	ASTM D2216	06-OCT-10	

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.53	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.53	0.094	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.53	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.53	0.086	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.53	0.18	0.26
Tetrachloro-M-Xylene		98.1	%					
Decachlorobiphenyl		64.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.24	ug/L	1	.5	0.48	0.14	0.24
Aroclor-1221	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1232	U	0.24	ug/L	1	.5	0.48	0.086	0.24
Aroclor-1242	U	0.24	ug/L	1	.5	0.48	0.17	0.24
Aroclor-1248	U	0.24	ug/L	1	.5	0.48	0.19	0.24
Aroclor-1254	U	0.24	ug/L	1	.5	0.48	0.080	0.24
Aroclor-1260	U	0.24	ug/L	1	.5	0.48	0.16	0.24
Tetrachloro-M-Xylene		98.2	%					
Decachlorobiphenyl		49.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.093	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.085	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		105.	%					
Decachlorobiphenyl		75.2	%					

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.27	ug/L	1	.5	0.54	0.16	0.27
Aroclor-1221	U	0.27	ug/L	1	.5	0.54	0.22	0.27
Aroclor-1232	U	0.27	ug/L	1	.5	0.54	0.097	0.27
Aroclor-1242	U	0.27	ug/L	1	.5	0.54	0.20	0.27
Aroclor-1248	U	0.27	ug/L	1	.5	0.54	0.22	0.27
Aroclor-1254	U	0.27	ug/L	1	.5	0.54	0.089	0.27
Aroclor-1260	U	0.27	ug/L	1	.5	0.54	0.18	0.27
Tetrachloro-M-Xylene		76.7	%					
Decachlorobiphenyl		68.2	%					

600 Technology Way
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Tel:(207) 874-2400 Fax:(207) 775-4029

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.15	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.092	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.084	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		98.0	%					
Decachlorobiphenyl		80.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.53	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.53	0.094	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.53	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.53	0.086	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.53	0.18	0.26
Tetrachloro-M-Xylene		88.8	%					
Decachlorobiphenyl		53.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82779

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.093	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.085	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		82.8	%					
Decachlorobiphenyl		53.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ SSL	9.3	ug/Kgdrywt	1	17	18.	6.6	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	18.	8.6	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	18.	6.3	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	18.	6.7	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	18.	5.1	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	18.	6.6	9.3
Tetrachloro-M-Xylene	*	42.8	%					
Decachlorobiphenyl		59.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Aroclor-1221	U	8.5	ug/Kgdrywt	1	17	17.	7.9	8.5
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.3	10.
Aroclor-1242	U	8.5	ug/Kgdrywt	1	17	17.	5.8	8.5
Aroclor-1248	U	8.5	ug/Kgdrywt	1	17	17.	6.1	8.5
Aroclor-1254	U	8.5	ug/Kgdrywt	1	17	17.	4.7	8.5
Aroclor-1260	U	8.5	ug/Kgdrywt	1	17	17.	6.0	8.5
Tetrachloro-M-Xylene		56.6	%					
Decachlorobiphenyl		84.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 12-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		58.3	%					
Decachlorobiphenyl		87.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 12-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Aroclor-1221	U	9.8	ug/Kgdrywt	1	17	20.	9.2	9.8
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	9.8	ug/Kgdrywt	1	17	20.	6.7	9.8
Aroclor-1248	U	9.8	ug/Kgdrywt	1	17	20.	7.1	9.8
Aroclor-1254	U	9.8	ug/Kgdrywt	1	17	20.	5.4	9.8
Aroclor-1260	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Tetrachloro-M-Xylene		68.4	%					
Decachlorobiphenyl		83.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82759

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Tetrachloro-M-Xylene		56.6	%					
Decachlorobiphenyl		59.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.053	0.0073	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.053	0.0076	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.053	0.0084	0.026
Aldrin	U	0.026	ug/L	1	.05	0.053	0.0078	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.053	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.053	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.053	0.0078	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.053	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0063	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0080	0.026
4,4'-DDE	U	0.053	ug/L	1	.1	0.10	0.0052	0.053
Dieldrin	U	0.053	ug/L	1	.1	0.10	0.0068	0.053
Endrin	U	0.053	ug/L	1	.1	0.10	0.0088	0.053
4,4'-DDD	U	0.053	ug/L	1	.1	0.10	0.0095	0.053
Endosulfan II	U	0.053	ug/L	1	.1	0.10	0.0060	0.053
4,4'-DDT	U	0.053	ug/L	1	.1	0.10	0.0094	0.053
Endrin Aldehyde	U	0.053	ug/L	1	.1	0.10	0.0065	0.053
Endosulfan Sulfate	U	0.053	ug/L	1	.1	0.10	0.0070	0.053
Methoxychlor	U	0.26	ug/L	1	.5	0.53	0.0088	0.26
Endrin Ketone	U	0.053	ug/L	1	.1	0.10	0.0082	0.053
Toxaphene	U	0.53	ug/L	1	1	1.0	0.18	0.53
Tetrachloro-M-Xylene		83.1	%					
Decachlorobiphenyl		51.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.024	ug/L	1	.05	0.048	0.0067	0.024
Gamma-BHC	U	0.024	ug/L	1	.05	0.048	0.0070	0.024
Heptachlor	U	0.024	ug/L	1	.05	0.048	0.0078	0.024
Aldrin	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
beta-BHC	U	0.024	ug/L	1	.05	0.048	0.0061	0.024
delta-BHC	U	0.024	ug/L	1	.05	0.048	0.013	0.024
Heptachlor Epoxide	U	0.024	ug/L	1	.05	0.048	0.0072	0.024
Endosulfan I	U	0.024	ug/L	1	.05	0.048	0.0062	0.024
Gamma-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0058	0.024
Alpha-Chlordane	U	0.024	ug/L	1	.05	0.048	0.0074	0.024
4,4'-DDE	U	0.048	ug/L	1	.1	0.097	0.0048	0.048
Dieldrin	U	0.048	ug/L	1	.1	0.097	0.0063	0.048
Endrin	U	0.048	ug/L	1	.1	0.097	0.0082	0.048
4,4'-DDD	U	0.048	ug/L	1	.1	0.097	0.0087	0.048
Endosulfan II	U	0.048	ug/L	1	.1	0.097	0.0055	0.048
4,4'-DDT	U	0.048	ug/L	1	.1	0.097	0.0086	0.048
Endrin Aldehyde	U	0.048	ug/L	1	.1	0.097	0.0060	0.048
Endosulfan Sulfate	U	0.048	ug/L	1	.1	0.097	0.0065	0.048
Methoxychlor	U	0.24	ug/L	1	.5	0.48	0.0082	0.24
Endrin Ketone	U	0.048	ug/L	1	.1	0.097	0.0076	0.048
Toxaphene	U	0.48	ug/L	1	1	0.97	0.16	0.48
Tetrachloro-M-Xylene		77.8	%					
Decachlorobiphenyl		40.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0072	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0075	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0083	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0079	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0051	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0068	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0088	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0094	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0070	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0088	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0081	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		87.3	%					
Decachlorobiphenyl		55.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.027	ug/L	1	.05	0.054	0.0075	0.027
Gamma-BHC	U	0.027	ug/L	1	.05	0.054	0.0078	0.027
Heptachlor	J	0.021	ug/L	1	.05	0.054	0.0087	0.027
Aldrin	U	0.027	ug/L	1	.05	0.054	0.0080	0.027
beta-BHC	U	0.027	ug/L	1	.05	0.054	0.0068	0.027
delta-BHC	J	0.030	ug/L	1	.05	0.054	0.014	0.027
Heptachlor Epoxide	U	0.027	ug/L	1	.05	0.054	0.0080	0.027
Endosulfan I	U	0.027	ug/L	1	.05	0.054	0.0070	0.027
Gamma-Chlordane	U	0.027	ug/L	1	.05	0.054	0.0065	0.027
Alpha-Chlordane	U	0.027	ug/L	1	.05	0.054	0.0083	0.027
4,4'-DDE	U	0.054	ug/L	1	.1	0.11	0.0053	0.054
Dieldrin	U	0.054	ug/L	1	.1	0.11	0.0071	0.054
Endrin	U	0.054	ug/L	1	.1	0.11	0.0091	0.054
4,4'-DDD	U	0.054	ug/L	1	.1	0.11	0.0098	0.054
Endosulfan II	U	0.054	ug/L	1	.1	0.11	0.0062	0.054
4,4'-DDT	U	0.054	ug/L	1	.1	0.11	0.0097	0.054
Endrin Aldehyde	U	0.054	ug/L	1	.1	0.11	0.0067	0.054
Endosulfan Sulfate	U	0.054	ug/L	1	.1	0.11	0.0073	0.054
Methoxychlor	U	0.27	ug/L	1	.5	0.54	0.0091	0.27
Endrin Ketone	U	0.054	ug/L	1	.1	0.11	0.0085	0.054
Toxaphene	U	0.54	ug/L	1	1	1.1	0.18	0.54
Tetrachloro-M-Xylene		55.8	%					
Decachlorobiphenyl		51.7	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66GW040910
~~IS66MW040910~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5964-1 Date(s) Analyzed: 10/05/10 10/05/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
Heptachlor	1	5.12	5.08	5.18	0.0192	
	2	4.92	4.86	4.96	0.0211	9.4
delta-BHC	1	5.02	4.97	5.07	0.0304	
	2	5.14	5.10	5.20	0.0291	4.4
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0071	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0074	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0082	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0065	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.013	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0078	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0050	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0067	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0086	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0092	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0069	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0086	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0080	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		75.3	%					
Decachlorobiphenyl		61.2	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.053	0.0073	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.053	0.0076	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.053	0.0084	0.026
Aldrin	U	0.026	ug/L	1	.05	0.053	0.0078	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.053	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.053	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.053	0.0078	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.053	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0063	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0080	0.026
4,4'-DDE	U	0.053	ug/L	1	.1	0.10	0.0052	0.053
Dieldrin	U	0.053	ug/L	1	.1	0.10	0.0068	0.053
Endrin	U	0.053	ug/L	1	.1	0.10	0.0088	0.053
4,4'-DDD	U	0.053	ug/L	1	.1	0.10	0.0095	0.053
Endosulfan II	U	0.053	ug/L	1	.1	0.10	0.0060	0.053
4,4'-DDT	U	0.053	ug/L	1	.1	0.10	0.0094	0.053
Endrin Aldehyde	U	0.053	ug/L	1	.1	0.10	0.0065	0.053
Endosulfan Sulfate	U	0.053	ug/L	1	.1	0.10	0.0070	0.053
Methoxychlor	U	0.26	ug/L	1	.5	0.53	0.0088	0.26
Endrin Ketone	U	0.053	ug/L	1	.1	0.10	0.0082	0.053
Toxaphene	U	0.53	ug/L	1	1	1.0	0.18	0.53
Tetrachloro-M-Xylene		70.3	%					
Decachlorobiphenyl		38.1	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82778

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0072	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0075	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0083	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0079	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0051	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0068	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0088	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0094	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0070	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0088	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0081	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		68.6	%					
Decachlorobiphenyl		38.2	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 12-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U exclude RE	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	45.6	%					
Decachlorobiphenyl	*	53.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1RE
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ HT	0.89	ug/Kgdrywt	1	1.7	1.8	0.36	0.89
gamma-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.28	0.89
Heptachlor	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.30	0.89
Aldrin	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.29	0.89
beta-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.34	0.89
delta-BHC	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.34	0.89
Heptachlor Epoxide	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.23	0.89
Endosulfan I	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.25	0.89
Gamma-Chlordane	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.24	0.89
Alpha-Chlordane	U	0.89	ug/Kgdrywt	1	1.7	1.8	0.22	0.89
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.89	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.36	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.51	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.61	1.7
Methoxychlor	U	8.9	ug/Kgdrywt	1	17	18.	0.52	8.9
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	34.	7.3	17.
Tetrachloro-M-Xylene	*	68.2	%					
Decachlorobiphenyl		71.6	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 12-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ SSL	0.85	ug/Kgdrywt	1	1.7	1.7	0.34	0.85
gamma-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.27	0.85
Heptachlor	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.29	0.85
Aldrin	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.28	0.85
beta-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.33	0.85
delta-BHC	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.32	0.85
Heptachlor Epoxide	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.22	0.85
Endosulfan I	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.24	0.85
Gamma-Chlordane	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.23	0.85
Alpha-Chlordane	U	0.85	ug/Kgdrywt	1	1.7	1.7	0.21	0.85
4,4'-DDE	J SSL	0.65	ug/Kgdrywt	1	3.3	3.3	0.19	1.6
Dieldrin	U UJ SSL	1.6	ug/Kgdrywt	1	3.3	3.3	0.22	1.6
Endrin	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.85	1.6
4,4'-DDD	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.20	1.6
Endosulfan II	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.34	1.6
4,4'-DDT	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.31	1.6
Endrin Aldehyde	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.49	1.6
Endosulfan Sulfate	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.58	1.6
Methoxychlor	U	8.5	ug/Kgdrywt	1	17	17.	0.50	8.5
Endrin Ketone	U	1.6	ug/Kgdrywt	1	3.3	3.3	0.40	1.6
Toxaphene	U	16.	ug/Kgdrywt	1	33	33.	7.0	16.
Tetrachloro-M-Xylene	*	60.5	%					
Decachlorobiphenyl		75.9	%					

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HK 12/15/2010

FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66SS330001
~~IS66DP330001~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5972-2 Date(s) Analyzed: 10/12/10 10/12/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	6.95	6.88	7.02	0.652	
	2	6.76	6.69	6.83	0.533	20.1
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2RE
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U exclude RE	0.86	ug/Kgdrywt	1	1.7	1.7	0.35	0.86
gamma-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.28	0.86
Heptachlor	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.30	0.86
Aldrin	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.28	0.86
beta-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.34	0.86
delta-BHC	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.32	0.86
Heptachlor Epoxide	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.22	0.86
Endosulfan I	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.24	0.86
Gamma-Chlordane	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.23	0.86
Alpha-Chlordane	U	0.86	ug/Kgdrywt	1	1.7	1.7	0.21	0.86
4,4'-DDE	J	1.8	ug/Kgdrywt	1	3.3	3.4	0.19	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.22	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.86	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	J	1.5	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.50	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.59	1.7
Methoxychlor	U	8.6	ug/Kgdrywt	1	17	17.	0.51	8.6
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.41	1.7
Toxaphene	U	16.	ug/Kgdrywt	1	33	34.	7.1	16.
Tetrachloro-M-Xylene	*	56.6	%					
Decachlorobiphenyl		67.6	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66SS330001
~~IS66DP330001~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5972-2RE Date(s) Analyzed: 10/19/10 10/19/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	6.94	6.87	7.01	1.83	
	2	6.75	6.68	6.82	1.67	9.1
4,4'-DDT	1	8.15	8.08	8.22	1.48	
	2	7.95	7.88	8.02	1.53	3.3
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ SSL	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.26	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.60	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.61	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.49	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	58.5	%					
Decachlorobiphenyl		77.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3RE
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U exclude RE	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.26	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.60	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.61	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.49	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	49.6	%					
Decachlorobiphenyl		63.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	~~U~~ UJ SSL	0.98	ug/Kgdrywt	1	1.7	2.0	0.39	0.98
gamma-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.31	0.98
Heptachlor	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.34	0.98
Aldrin	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.32	0.98
beta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.38	0.98
delta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.37	0.98
Heptachlor Epoxide	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.26	0.98
Endosulfan I	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.28	0.98
Gamma-Chlordane	J	0.76	ug/Kgdrywt	1	1.7	2.0	0.27	0.98
Alpha-Chlordane	J	1.0	ug/Kgdrywt	1	1.7	2.0	0.24	0.98
4,4'-DDE	J	4.3	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	~~JJ~~	0.73	ug/Kgdrywt	1	3.3	3.8	0.26	1.9
Endrin	~~U~~ UJ	1.9	ug/Kgdrywt	1	3.3	3.8	0.98	1.9
4,4'-DDD	J	2.7	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	~~U~~ UJ	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	J	4.8	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	U UJ	1.9	ug/Kgdrywt	1	3.3	3.8	0.57	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.8	ug/Kgdrywt	1	17	20.	0.58	9.8
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.1	18.
Tetrachloro-M-Xylene	*	68.4	%					
Decachlorobiphenyl		77.5	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID
IS66SS340001
~~IS66DP340001~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5972-4 Date(s) Analyzed: 10/13/10 10/13/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
gamma-Chlordane	1	6.54	6.47	6.61	0.765	
	2	6.42	6.35	6.49	0.540	34.5
alpha-Chlordane	1	6.65	6.57	6.71	0.766	
	2	6.47	6.42	6.56	1.02	28.4
4,4'-DDE	1	6.95	6.88	7.02	4.32	
	2	6.76	6.69	6.83	4.16	3.8
Dieldrin	1	7.10	7.04	7.18	0.464	
	2	6.95	6.88	7.02	0.726	44.0
4,4'-DDD	1	7.71	7.65	7.79	2.73	
	2	7.58	7.51	7.65	1.82	40.0
4,4'-DDT	1	8.15	8.08	8.22	3.71	
	2	7.96	7.89	8.03	4.83	26.2
	1					
	2					
	1					
	2					

FORM X PEST-1

HK 12/15/2010

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4RE
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U exclude RE	0.94	ug/Kgdrywt	1	1.7	1.9	0.38	0.94
gamma-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.30	0.94
Heptachlor	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.32	0.94
Aldrin	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.31	0.94
beta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.37	0.94
delta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.36	0.94
Heptachlor Epoxide	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.24	0.94
Endosulfan I	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.27	0.94
Gamma-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.26	0.94
Alpha-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.23	0.94
4,4'-DDE	J	3.3	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.94	1.8
4,4'-DDD	JJ	2.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT		5.6	ug/Kgdrywt	1	3.3	3.7	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.64	1.8
Methoxychlor	U	9.4	ug/Kgdrywt	1	17	19.	0.56	9.4
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.8	18.
Tetrachloro-M-Xylene	*	64.9	%					
Decachlorobiphenyl		67.8	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66SS340001
~~IS66DP340001~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5972-4RE Date(s) Analyzed: 10/19/10 10/19/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDE	1	6.94	6.87	7.01	3.30	
	2	6.75	6.68	6.82	3.31	0.3
4,4'-DDD	1	7.71	7.64	7.78	2.78	
	2	7.57	7.51	7.65	1.16	82.2
4,4'-DDT	1	8.14	8.08	8.22	4.33	
	2	7.95	7.88	8.02	5.61	25.8
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

HK 12/15/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82760

Analysis Date: 13-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.22	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	J	0.68	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U UJ	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.47	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.3	19.
Tetrachloro-M-Xylene	*	49.0	%					
Decachlorobiphenyl		62.9	%					

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FORM 10
PESTICIDE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66SB340809
~~IS66DP340809~~

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5972-5 Date(s) Analyzed: 10/13/10 10/13/10

Instrument ID (1): GC01 Instrument ID (2): GC01

GC Column(1): ZB-MULTIRESIDUE-1 ID: 0.53(mm) GC Column(2): ZB-MULTIRESIDUE-2 ID: 0.53(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
4,4'-DDD	1	7.72	7.65	7.79	0.681	
	2	7.58	7.51	7.65	0.475	35.6
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5RE
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 15-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83520

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U exclude RE	1.0	ug/Kgdrywt	1	1.7	2.0	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.60	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.4	19.
Tetrachloro-M-Xylene	*	48.4	%					
Decachlorobiphenyl		66.8	%					

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HK 12/15/2010

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U UL MSL	0.10	ug/L	1	.2	0.21	0.043	0.10
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.076	0.10
Hexachloroethane	U UJ MSL	0.10	ug/L	1	.2	0.21	0.077	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.092	0.10
2,4,6-Trichlorophenol	U R MSL	0.53	ug/L	1	1	1.0	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2,4-Dinitrophenol	U UJ ICB	0.53	ug/L	1	1	1.0	0.25	0.53
4-Nitrophenol	U	0.53	ug/L	1	1	1.0	0.24	0.53
Dibenzofuran	U	0.10	ug/L	1	.2	0.21	0.072	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.037	0.10
4-Nitroaniline	U UJ ICB	0.10	ug/L	1	.2	0.21	0.068	0.10
4,6-Dinitro-2-methylphenol	U	0.79	ug/L	1	1	1.0	0.53	0.79
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.058	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.040	0.10
Pentachlorophenol	U	0.53	ug/L	1	1	1.0	0.35	0.53
3,3'-Dichlorobenzidine	U R MSL	0.10	ug/L	1	.2	0.21	0.059	0.10
Benzo(a)anthracene	U UL MSL	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U UL MSL	0.10	ug/L	1	.2	0.21	0.038	0.10
bis(2-Ethylhexyl)phthalate ~~MSL~~	B MBL	1.1	ug/L	1	1	1.0	0.53	0.53
Benzo(b)fluoranthene	U UL MSL	0.10	ug/L	1	.2	0.21	0.094	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.052	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.055	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2-Methylnaphthalene-D10		83.9	%					
Fluorene-D10		49.2	%					
pyrene-d10		97.7	%					
2,4-Dibromophenol		20.8	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.095	ug/L	1	.2	0.19	0.039	0.095
2,2'-Oxybis(1-chloropropane)	U	0.14	ug/L	1	.2	0.19	0.11	0.14
n-Nitroso-di-n-propylamine	U	0.095	ug/L	1	.2	0.19	0.068	0.095
Hexachloroethane	U	0.095	ug/L	1	.2	0.19	0.070	0.095
Nitrobenzene	EXCLUDE-RE ~~U~~	0.14	ug/L	1	.2	0.19	0.12	0.14
Naphthalene	J ~~J~~	0.16	ug/L	1	.2	0.19	0.061	0.095
Hexachlorobutadiene	U	0.095	ug/L	1	.2	0.19	0.083	0.095
2,4,6-Trichlorophenol	U	0.48	ug/L	1	1	0.95	0.11	0.48
2-Nitroaniline	U	0.14	ug/L	1	.2	0.19	0.11	0.14
2,6-Dinitrotoluene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
2,4-Dinitrophenol	U	0.48	ug/L	1	1	0.95	0.23	0.48
4-Nitrophenol	U	0.48	ug/L	1	1	0.95	0.22	0.48
Dibenzofuran	U	0.095	ug/L	1	.2	0.19	0.065	0.095
2,4-Dinitrotoluene	U	0.095	ug/L	1	.2	0.19	0.033	0.095
4-Nitroaniline	U	0.095	ug/L	1	.2	0.19	0.062	0.095
4,6-Dinitro-2-methylphenol	U	0.71	ug/L	1	1	0.95	0.48	0.71
Hexachlorobenzene	U	0.095	ug/L	1	.2	0.19	0.052	0.095
Atrazine	U	0.095	ug/L	1	.2	0.19	0.036	0.095
Pentachlorophenol	U	0.48	ug/L	1	1	0.95	0.31	0.48
3,3'-Dichlorobenzidine	U	0.095	ug/L	1	.2	0.19	0.053	0.095
Benzo(a)anthracene	U	0.095	ug/L	1	.2	0.19	0.044	0.095
Chrysene	U	0.095	ug/L	1	.2	0.19	0.034	0.095
bis(2-Ethylhexyl)phthalate	U	0.48	ug/L	1	1	0.95	0.48	0.48
Benzo(b)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.085	0.095
Benzo(k)fluoranthene	U	0.095	ug/L	1	.2	0.19	0.047	0.095
Benzo(a)pyrene	U	0.095	ug/L	1	.2	0.19	0.063	0.095
Indeno(1,2,3-cd)pyrene	U	0.095	ug/L	1	.2	0.19	0.050	0.095
Dibenzo(a,h)anthracene	U	0.095	ug/L	1	.2	0.19	0.067	0.095
2-Methylnaphthalene-D10		87.8	%					
Fluorene-D10		43.9	%					
pyrene-d10		100.	%					
2,4-Dibromophenol		49.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.10	ug/L	1	.2	0.21	0.042	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.21	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.074	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.21	0.075	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.21	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.066	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.090	0.10
2,4,6-Trichlorophenol	U	0.52	ug/L	1	1	1.0	0.12	0.52
2-Nitroaniline	U U3 25	0.15	ug/L	1	.2	0.21	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
2,4-Dinitrophenol	U U3 4B	0.52	ug/L	1	1	1.0	0.25	0.52
4-Nitrophenol	U	0.52	ug/L	1	1	1.0	0.24	0.52
Dibenzofuran	U	0.10	ug/L	1	.2	0.21	0.070	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.036	0.10
4-Nitroaniline	U U3 25	0.10	ug/L	1	.2	0.21	0.067	0.10
4,6-Dinitro-2-methylphenol	U	0.77	ug/L	1	1	1.0	0.52	0.77
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.057	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.039	0.10
Pentachlorophenol	U	0.52	ug/L	1	1	1.0	0.34	0.52
3,3'-Dichlorobenzidine	U U3 25	0.10	ug/L	1	.2	0.21	0.058	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.037	0.10
bis(2-Ethylhexyl)phthalate	U U1 B5L	0.52	ug/L	1	1	1.0	0.52	0.52
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.092	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.068	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.054	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.072	0.10
2-Methylnaphthalene-D10		62.5	%					
Fluorene-D10		46.8	%					
pyrene-d10		71.7	%					
2,4-Dibromophenol		54.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.098	ug/L	1	.2	0.20	0.040	0.098
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.098	ug/L	1	.2	0.20	0.070	0.098
Hexachloroethane	U	0.098	ug/L	1	.2	0.20	0.072	0.098
Nitrobenzene EXCLUDE-RE	~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.098	ug/L	1	.2	0.20	0.063	0.098
Hexachlorobutadiene	U	0.098	ug/L	1	.2	0.20	0.085	0.098
2,4,6-Trichlorophenol	U	0.49	ug/L	1	1	0.98	0.12	0.49
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.098	ug/L	1	.2	0.20	0.069	0.098
2,4-Dinitrophenol	U	0.49	ug/L	1	1	0.98	0.24	0.49
4-Nitrophenol	U	0.49	ug/L	1	1	0.98	0.22	0.49
Dibenzofuran	U	0.098	ug/L	1	.2	0.20	0.067	0.098
2,4-Dinitrotoluene	U	0.098	ug/L	1	.2	0.20	0.034	0.098
4-Nitroaniline	U	0.098	ug/L	1	.2	0.20	0.064	0.098
4,6-Dinitro-2-methylphenol	U	0.74	ug/L	1	1	0.98	0.49	0.74
Hexachlorobenzene	U	0.098	ug/L	1	.2	0.20	0.054	0.098
Atrazine	U	0.098	ug/L	1	.2	0.20	0.037	0.098
Pentachlorophenol	U	0.49	ug/L	1	1	0.98	0.32	0.49
3,3'-Dichlorobenzidine	U	0.098	ug/L	1	.2	0.20	0.055	0.098
Benzo(a)anthracene	U	0.098	ug/L	1	.2	0.20	0.045	0.098
Chrysene	U	0.098	ug/L	1	.2	0.20	0.035	0.098
bis(2-Ethylhexyl)phthalate	B MBL	1.1	ug/L	1	1	0.98	0.49	0.49
Benzo(b)fluoranthene	U	0.098	ug/L	1	.2	0.20	0.087	0.098
Benzo(k)fluoranthene	U	0.098	ug/L	1	.2	0.20	0.048	0.098
Benzo(a)pyrene	U	0.098	ug/L	1	.2	0.20	0.065	0.098
Indeno(1,2,3-cd)pyrene	U	0.098	ug/L	1	.2	0.20	0.051	0.098
Dibenzo(a,h)anthracene	U	0.098	ug/L	1	.2	0.20	0.069	0.098
2-Methylnaphthalene-D10		71.0	%					
Fluorene-D10		53.7	%					
pyrene-d10		75.6	%					
2,4-Dibromophenol		62.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.098	ug/L	1	.2	0.20	0.040	0.098
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.098	ug/L	1	.2	0.20	0.070	0.098
Hexachloroethane	U	0.098	ug/L	1	.2	0.20	0.072	0.098
Nitrobenzene	U	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	J	0.12	ug/L	1	.2	0.20	0.063	0.098
Hexachlorobutadiene	U	0.098	ug/L	1	.2	0.20	0.085	0.098
2,4,6-Trichlorophenol	U	0.49	ug/L	1	1	0.98	0.12	0.49
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.098	ug/L	1	.2	0.20	0.069	0.098
2,4-Dinitrophenol	U	0.49	ug/L	1	1	0.98	0.24	0.49
4-Nitrophenol	U	0.49	ug/L	1	1	0.98	0.22	0.49
Dibenzofuran	U	0.098	ug/L	1	.2	0.20	0.067	0.098
2,4-Dinitrotoluene	U	0.098	ug/L	1	.2	0.20	0.034	0.098
4-Nitroaniline	U	0.098	ug/L	1	.2	0.20	0.064	0.098
4,6-Dinitro-2-methylphenol	U	0.74	ug/L	1	1	0.98	0.49	0.74
Hexachlorobenzene	U	0.098	ug/L	1	.2	0.20	0.054	0.098
Atrazine	U	0.098	ug/L	1	.2	0.20	0.037	0.098
Pentachlorophenol	U	0.49	ug/L	1	1	0.98	0.32	0.49
3,3'-Dichlorobenzidine	U	0.098	ug/L	1	.2	0.20	0.055	0.098
Benzo(a)anthracene	U	0.098	ug/L	1	.2	0.20	0.045	0.098
Chrysene	U	0.098	ug/L	1	.2	0.20	0.035	0.098
bis(2-Ethylhexyl)phthalate	U	0.49	ug/L	1	1	0.98	0.49	0.49
Benzo(b)fluoranthene	U	0.098	ug/L	1	.2	0.20	0.087	0.098
Benzo(k)fluoranthene	U	0.098	ug/L	1	.2	0.20	0.048	0.098
Benzo(a)pyrene	U	0.098	ug/L	1	.2	0.20	0.065	0.098
Indeno(1,2,3-cd)pyrene	U	0.098	ug/L	1	.2	0.20	0.051	0.098
Dibenzo(a,h)anthracene	U	0.098	ug/L	1	.2	0.20	0.069	0.098
2-Methylnaphthalene-D10	*	29.5	%					
Fluorene-D10	*	28.7	%					
pyrene-d10	*	40.4	%					
2,4-Dibromophenol		35.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 13-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.10	ug/L	1	.2	0.21	0.043	0.10
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.076	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.21	0.077	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene		1.7	ug/L	1	.2	0.21	0.067	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.092	0.10
2,4,6-Trichlorophenol	U	0.53	ug/L	1	1	1.0	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2,4-Dinitrophenol	U	0.53	ug/L	1	1	1.0	0.25	0.53
4-Nitrophenol	U	0.53	ug/L	1	1	1.0	0.24	0.53
Dibenzofuran		0.28	ug/L	1	.2	0.21	0.072	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.037	0.10
4-Nitroaniline	U	0.10	ug/L	1	.2	0.21	0.068	0.10
4,6-Dinitro-2-methylphenol	U	0.79	ug/L	1	1	1.0	0.53	0.79
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.058	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.040	0.10
Pentachlorophenol	U	0.53	ug/L	1	1	1.0	0.35	0.53
3,3'-Dichlorobenzidine	U	0.10	ug/L	1	.2	0.21	0.059	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.038	0.10
bis(2-Ethylhexyl)phthalate	B	1.2	ug/L	1	1	1.0	0.53	0.53
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.094	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.052	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.055	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2-Methylnaphthalene-D10		82.8	%					
Fluorene-D10		55.9	%					
pyrene-d10		71.8	%					
2,4-Dibromophenol		54.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82758

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.10	ug/L	1	.2	0.20	0.042	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene		0.98	ug/L	1	.2	0.20	0.065	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
2,4,6-Trichlorophenol	U	0.51	ug/L	1	1	1.0	0.12	0.51
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2,4-Dinitrophenol	U	0.51	ug/L	1	1	1.0	0.24	0.51
4-Nitrophenol	U	0.51	ug/L	1	1	1.0	0.23	0.51
Dibenzofuran		0.24	ug/L	1	.2	0.20	0.069	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
4-Nitroaniline	U	0.10	ug/L	1	.2	0.20	0.066	0.10
4,6-Dinitro-2-methylphenol	U	0.76	ug/L	1	1	1.0	0.51	0.76
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.039	0.10
Pentachlorophenol	U	0.51	ug/L	1	1	1.0	0.34	0.51
3,3'-Dichlorobenzidine	U	0.10	ug/L	1	.2	0.20	0.057	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.037	0.10
bis(2-Ethylhexyl)phthalate	~~U~~ JB	0.75	ug/L	1	1	1.0	0.51	0.51
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.091	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.053	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2-Methylnaphthalene-D10		58.7	%					
Fluorene-D10		42.0	%					
pyrene-d10		79.0	%					
2,4-Dibromophenol		45.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U ML BSL	55.	ug/Kgdrywt	1	100	110	9.3	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.3	11.
2,4-Dimethylphenol	U ML BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U ML BSL	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.7	55.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U ML BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene	U ML BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U ML BSL	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U ML JS	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	E Exclude-LR	190	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	50.	55.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		40.4	%					
Fluorene-D10		48.8	%					
Pyrene-D10		70.2	%					
2,4-Dibromophenol		53.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1DL
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	160	ug/Kgdrywt	3	100	330	20.	160
bis(2-Chloroethyl)ether	U	33.	ug/Kgdrywt	3	20	66.	5.6	33.
2-Chlorophenol	U	160	ug/Kgdrywt	3	100	330	17.	160
2-Methylphenol	U	160	ug/Kgdrywt	3	100	330	28.	160
3&4-Methylphenol	U	160	ug/Kgdrywt	3	100	330	32.	160
n-Nitroso-di-n-propylamine	U	33.	ug/Kgdrywt	3	20	66.	6.2	33.
Nitrobenzene	U	33.	ug/Kgdrywt	3	20	66.	16.	33.
2,4-Dimethylphenol	U	33.	ug/Kgdrywt	3	20	66.	10.	33.
2,4-Dichlorophenol	U	33.	ug/Kgdrywt	3	20	66.	7.2	33.
Naphthalene	U	33.	ug/Kgdrywt	3	20	66.	8.6	33.
Hexachlorobutadiene	U	33.	ug/Kgdrywt	3	20	66.	7.6	33.
2-Methylnaphthalene	U	33.	ug/Kgdrywt	3	20	66.	7.2	33.
Hexachlorocyclopentadiene	U	33.	ug/Kgdrywt	3	20	66.	4.9	33.
2,4,6-Trichlorophenol	U	160	ug/Kgdrywt	3	100	330	11.	160
2,4,5-Trichlorophenol	U	160	ug/Kgdrywt	3	100	330	8.2	160
Dimethyl phthalate	U	33.	ug/Kgdrywt	3	20	66.	4.6	33.
Acenaphthylene	U	33.	ug/Kgdrywt	3	20	66.	3.9	33.
Acenaphthene	U	33.	ug/Kgdrywt	3	20	66.	4.9	33.
4-Nitrophenol	U	160	ug/Kgdrywt	3	100	330	26.	160
2,4-Dinitrotoluene	U	33.	ug/Kgdrywt	3	20	66.	23.	33.
Fluorene	U	33.	ug/Kgdrywt	3	20	66.	10.	33.
4,6-Dinitro-2-methylphenol	U	490	ug/Kgdrywt	3	310	1000	330	490
Hexachlorobenzene	U	33.	ug/Kgdrywt	3	20	66.	5.9	33.
Atrazine	U	33.	ug/Kgdrywt	3	20	66.	3.3	33.
Pentachlorophenol	U	160	ug/Kgdrywt	3	100	330	46.	160
Phenanthrene	U	33.	ug/Kgdrywt	3	20	66.	5.9	33.
Anthracene	U	33.	ug/Kgdrywt	3	20	66.	3.9	33.
Fluoranthene	U	33.	ug/Kgdrywt	3	20	66.	5.9	33.
Pyrene	U	33.	ug/Kgdrywt	3	20	66.	6.9	33.
3,3'-Dichlorobenzidine	U	33.	ug/Kgdrywt	3	20	66.	9.9	33.
Benzo (a) anthracene	U	33.	ug/Kgdrywt	3	20	66.	6.2	33.
Chrysene	U	33.	ug/Kgdrywt	3	20	66.	5.6	33.
bis(2-Ethylhexyl)phthalate	K	530	ug/Kgdrywt	3	100	330	100	160
Di-n-octylphthalate	U	160	ug/Kgdrywt	3	100	330	150	160
Benzo (b) Fluoranthene	U	33.	ug/Kgdrywt	3	20	66.	7.9	33.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1DL
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	33.	ug/Kgdrywt	3	20	66.	10.	33.
Benzo(a)pyrene	U	33.	ug/Kgdrywt	3	20	66.	11.	33.
Indeno (1,2,3-cd) pyrene	U	33.	ug/Kgdrywt	3	20	66.	6.2	33.
Dibenzo (a,h) anthracene	U	33.	ug/Kgdrywt	3	20	66.	5.9	33.
Benzo(g,h,i)perylene	U	33.	ug/Kgdrywt	3	20	66.	6.6	33.
2-Methylnaphthalene-D10		43.4	%					
Fluorene-D10		22.7	%					
Pyrene-D10		78.5	%					
2,4-Dibromophenol		47.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	51.	ug/Kgdrywt	1	100	100	6.2	51.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	20.	1.7	10.
2-Chlorophenol	U	51.	ug/Kgdrywt	1	100	100	5.4	51.
2-Methylphenol	U LL BSL	51.	ug/Kgdrywt	1	100	100	8.6	51.
3&4-Methylphenol	U	51.	ug/Kgdrywt	1	100	100	10.	51.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	20.	1.9	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	20.	4.8	10.
2,4-Dimethylphenol	U LL BSL	10.	ug/Kgdrywt	1	20	20.	3.2	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	20.	2.2	10.
Naphthalene	U LL BSL	10.	ug/Kgdrywt	1	20	20.	2.6	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	20.	2.3	10.
2-Methylnaphthalene	U	10.	ug/Kgdrywt	1	20	20.	2.2	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	20.	1.5	10.
2,4,6-Trichlorophenol	U	51.	ug/Kgdrywt	1	100	100	3.3	51.
2,4,5-Trichlorophenol	U	51.	ug/Kgdrywt	1	100	100	2.5	51.
Dimethyl phthalate	U	10.	ug/Kgdrywt	1	20	20.	1.4	10.
Acenaphthylene	U	10.	ug/Kgdrywt	1	20	20.	1.2	10.
Acenaphthene	U LL BSL	10.	ug/Kgdrywt	1	20	20.	1.5	10.
4-Nitrophenol	U	51.	ug/Kgdrywt	1	100	100	8.1	51.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	20.	7.1	10.
Fluorene	U LL BSL	10.	ug/Kgdrywt	1	20	20.	3.2	10.
4,6-Dinitro-2-methylphenol	U	150	ug/Kgdrywt	1	310	310	100	150
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	20.	1.8	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	20.	1.0	10.
Pentachlorophenol	U	51.	ug/Kgdrywt	1	100	100	14.	51.
Phenanthrene	U	10.	ug/Kgdrywt	1	20	20.	1.8	10.
Anthracene	U	10.	ug/Kgdrywt	1	20	20.	1.2	10.
Fluoranthene	J L BSL	2.9	ug/Kgdrywt	1	20	20.	1.8	10.
Pyrene	J	2.7	ug/Kgdrywt	1	20	20.	2.1	10.
3,3'-Dichlorobenzidine	U LL 25	10.	ug/Kgdrywt	1	20	20.	3.0	10.
Benzo (a) anthracene	U	10.	ug/Kgdrywt	1	20	20.	1.9	10.
Chrysene	U	10.	ug/Kgdrywt	1	20	20.	1.7	10.
bis(2-Ethylhexyl)phthalate	E Exclude-LR	10	ug/Kgdrywt	1	100	100	32.	51.
Di-n-octylphthalate	U	51.	ug/Kgdrywt	1	100	100	46.	51.
Benzo (b) Fluoranthene	U	10.	ug/Kgdrywt	1	20	20.	2.4	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	10.	ug/Kgdrywt	1	20	20.	3.1	10.
Benzo(a)pyrene	U	10.	ug/Kgdrywt	1	20	20.	3.3	10.
Indeno (1,2,3-cd) pyrene	U	10.	ug/Kgdrywt	1	20	20.	1.9	10.
Dibenzo (a,h) anthracene	U	10.	ug/Kgdrywt	1	20	20.	1.8	10.
Benzo(g,h,i)perylene	U	10.	ug/Kgdrywt	1	20	20.	2.0	10.
2-Methylnaphthalene-D10		41.0	%					
Fluorene-D10		52.1	%					
Pyrene-D10		85.6	%					
2,4-Dibromophenol		57.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2DL
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U exclude DL	150	ug/Kgdrywt	3	100	300	18.	150
bis(2-Chloroethyl)ether	U	30.	ug/Kgdrywt	3	20	61.	5.2	30.
2-Chlorophenol	U	150	ug/Kgdrywt	3	100	300	16.	150
2-Methylphenol	U	150	ug/Kgdrywt	3	100	300	26.	150
3&4-Methylphenol	U	150	ug/Kgdrywt	3	100	300	30.	150
n-Nitroso-di-n-propylamine	U	30.	ug/Kgdrywt	3	20	61.	5.8	30.
Nitrobenzene	U	30.	ug/Kgdrywt	3	20	61.	14.	30.
2,4-Dimethylphenol	U	30.	ug/Kgdrywt	3	20	61.	9.7	30.
2,4-Dichlorophenol	U	30.	ug/Kgdrywt	3	20	61.	6.7	30.
Naphthalene	U	30.	ug/Kgdrywt	3	20	61.	7.9	30.
Hexachlorobutadiene	U	30.	ug/Kgdrywt	3	20	61.	7.0	30.
2-Methylnaphthalene	U	30.	ug/Kgdrywt	3	20	61.	6.7	30.
Hexachlorocyclopentadiene	U	30.	ug/Kgdrywt	3	20	61.	4.6	30.
2,4,6-Trichlorophenol	U	150	ug/Kgdrywt	3	100	300	10.	150
2,4,5-Trichlorophenol	U	150	ug/Kgdrywt	3	100	300	7.6	150
Dimethyl phthalate	U	30.	ug/Kgdrywt	3	20	61.	4.2	30.
Acenaphthylene	U	30.	ug/Kgdrywt	3	20	61.	3.6	30.
Acenaphthene	U	30.	ug/Kgdrywt	3	20	61.	4.6	30.
4-Nitrophenol	U	150	ug/Kgdrywt	3	100	300	24.	150
2,4-Dinitrotoluene	U	30.	ug/Kgdrywt	3	20	61.	21.	30.
Fluorene	U	30.	ug/Kgdrywt	3	20	61.	9.7	30.
4,6-Dinitro-2-methylphenol	U	460	ug/Kgdrywt	3	310	940	300	460
Hexachlorobenzene	U	30.	ug/Kgdrywt	3	20	61.	5.5	30.
Atrazine	U	30.	ug/Kgdrywt	3	20	61.	3.0	30.
Pentachlorophenol	U	150	ug/Kgdrywt	3	100	300	42.	150
Phenanthrene	U	30.	ug/Kgdrywt	3	20	61.	5.5	30.
Anthracene	U	30.	ug/Kgdrywt	3	20	61.	3.6	30.
Fluoranthene	U	30.	ug/Kgdrywt	3	20	61.	5.5	30.
Pyrene	U	30.	ug/Kgdrywt	3	20	61.	6.4	30.
3,3'-Dichlorobenzidine	U	30.	ug/Kgdrywt	3	20	61.	9.1	30.
Benzo (a) anthracene	U	30.	ug/Kgdrywt	3	20	61.	5.8	30.
Chrysene	U	30.	ug/Kgdrywt	3	20	61.	5.2	30.
bis(2-Ethylhexyl)phthalate	K B SH	540	ug/Kgdrywt	3	100	300	97.	150
Di-n-octylphthalate	U exclude DL	150	ug/Kgdrywt	3	100	300	140	150
Benzo (b) Fluoranthene	U	30.	ug/Kgdrywt	3	20	61.	7.3	30.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2DL
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	30.	ug/Kgdrywt	3	20	61.	9.4	30.
Benzo(a)pyrene	U	30.	ug/Kgdrywt	3	20	61.	10.	30.
Indeno (1,2,3-cd) pyrene	U	30.	ug/Kgdrywt	3	20	61.	5.8	30.
Dibenzo (a,h) anthracene	U	30.	ug/Kgdrywt	3	20	61.	5.5	30.
Benzo(g,h,i)perylene	U	30.	ug/Kgdrywt	3	20	61.	6.1	30.
2-Methylnaphthalene-D10		70.7	%					
Fluorene-D10		42.7	%					
Pyrene-D10		72.0	%					
2,4-Dibromophenol		49.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	59.	ug/Kgdrywt	1	100	120	7.2	59.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
2-Chlorophenol	U	59.	ug/Kgdrywt	1	100	120	6.3	59.
2-Methylphenol	U MAL BSL	59.	ug/Kgdrywt	1	100	120	10.	59.
3&4-Methylphenol	U	59.	ug/Kgdrywt	1	100	120	12.	59.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.7	12.
2,4-Dimethylphenol	U MAL BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Naphthalene	U MAL BSL	12.	ug/Kgdrywt	1	20	24.	3.1	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.7	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.9	59.
2,4,5-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.0	59.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	24.	1.7	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U MAL BSL	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	U	59.	ug/Kgdrywt	1	100	120	9.5	59.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.3	12.
Fluorene	U MAL BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	370	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	U	59.	ug/Kgdrywt	1	100	120	17.	59.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	U MAL BSL	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.5	12.
3,3'-Dichlorobenzidine	U MJ 25	12.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
bis(2-Ethylhexyl)phthalate	EExclude-LR	580	ug/Kgdrywt	1	100	120	38.	59.
Di-n-octylphthalate	U	59.	ug/Kgdrywt	1	100	120	55.	59.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		42.6	%					
Fluorene-D10		50.4	%					
Pyrene-D10		76.6	%					
2,4-Dibromophenol		55.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3DL
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	180	ug/Kgdrywt	3	100	360	22.	180
bis(2-Chloroethyl)ether	U	36.	ug/Kgdrywt	3	20	71.	6.0	36.
2-Chlorophenol	U	180	ug/Kgdrywt	3	100	360	19.	180
2-Methylphenol	U	180	ug/Kgdrywt	3	100	360	30.	180
3&4-Methylphenol	U	180	ug/Kgdrywt	3	100	360	35.	180
n-Nitroso-di-n-propylamine	U	36.	ug/Kgdrywt	3	20	71.	6.8	36.
Nitrobenzene	U	36.	ug/Kgdrywt	3	20	71.	17.	36.
2,4-Dimethylphenol	U	36.	ug/Kgdrywt	3	20	71.	11.	36.
2,4-Dichlorophenol	U	36.	ug/Kgdrywt	3	20	71.	7.8	36.
Naphthalene	U	36.	ug/Kgdrywt	3	20	71.	9.3	36.
Hexachlorobutadiene	U	36.	ug/Kgdrywt	3	20	71.	8.2	36.
2-Methylnaphthalene	U	36.	ug/Kgdrywt	3	20	71.	7.8	36.
Hexachlorocyclopentadiene	U	36.	ug/Kgdrywt	3	20	71.	5.3	36.
2,4,6-Trichlorophenol	U	180	ug/Kgdrywt	3	100	360	12.	180
2,4,5-Trichlorophenol	U	180	ug/Kgdrywt	3	100	360	8.9	180
Dimethyl phthalate	U	36.	ug/Kgdrywt	3	20	71.	5.0	36.
Acenaphthylene	U	36.	ug/Kgdrywt	3	20	71.	4.3	36.
Acenaphthene	U	36.	ug/Kgdrywt	3	20	71.	5.3	36.
4-Nitrophenol	U	180	ug/Kgdrywt	3	100	360	28.	180
2,4-Dinitrotoluene	U	36.	ug/Kgdrywt	3	20	71.	25.	36.
Fluorene	U	36.	ug/Kgdrywt	3	20	71.	11.	36.
4,6-Dinitro-2-methylphenol	U	530	ug/Kgdrywt	3	310	1100	360	530
Hexachlorobenzene	U	36.	ug/Kgdrywt	3	20	71.	6.4	36.
Atrazine	U	36.	ug/Kgdrywt	3	20	71.	3.6	36.
Pentachlorophenol	U	180	ug/Kgdrywt	3	100	360	50.	180
Phenanthrene	U	36.	ug/Kgdrywt	3	20	71.	6.4	36.
Anthracene	U	36.	ug/Kgdrywt	3	20	71.	4.3	36.
Fluoranthene	U	36.	ug/Kgdrywt	3	20	71.	6.4	36.
Pyrene	U	36.	ug/Kgdrywt	3	20	71.	7.5	36.
3,3'-Dichlorobenzidine	U	36.	ug/Kgdrywt	3	20	71.	11.	36.
Benzo (a) anthracene	U	36.	ug/Kgdrywt	3	20	71.	6.8	36.
Chrysene	U	36.	ug/Kgdrywt	3	20	71.	6.0	36.
bis(2-Ethylhexyl)phthalate	K	650	ug/Kgdrywt	3	100	360	110	180
Di-n-octylphthalate	U	180	ug/Kgdrywt	3	100	360	160	180
Benzo (b) Fluoranthene	U	36.	ug/Kgdrywt	3	20	71.	8.6	36.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3DL
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	36.	ug/Kgdrywt	3	20	71.	11.	36.
Benzo(a)pyrene	U	36.	ug/Kgdrywt	3	20	71.	12.	36.
Indeno (1,2,3-cd) pyrene	U	36.	ug/Kgdrywt	3	20	71.	6.8	36.
Dibenzo (a,h) anthracene	U	36.	ug/Kgdrywt	3	20	71.	6.4	36.
Benzo(g,h,i)perylene	U	36.	ug/Kgdrywt	3	20	71.	7.1	36.
2-Methylnaphthalene-D10		74.0	%					
Fluorene-D10		41.5	%					
Pyrene-D10		78.5	%					
2,4-Dibromophenol		48.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	59.	ug/Kgdrywt	1	100	120	7.2	59.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
2-Chlorophenol	U	59.	ug/Kgdrywt	1	100	120	6.2	59.
2-Methylphenol	U LL BSL	59.	ug/Kgdrywt	1	100	120	10.	59.
3&4-Methylphenol	U	59.	ug/Kgdrywt	1	100	120	12.	59.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.6	12.
2,4-Dimethylphenol	U LL BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Naphthalene	U LL BSL	12.	ug/Kgdrywt	1	20	24.	3.1	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.7	12.
2-Methylnaphthalene	U	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.9	59.
2,4,5-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	2.9	59.
Dimethyl phthalate	J	2.0	ug/Kgdrywt	1	20	24.	1.6	12.
Acenaphthylene	J	7.6	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U LL BSL	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	U	59.	ug/Kgdrywt	1	100	120	9.4	59.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.2	12.
Fluorene	U LL BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	360	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	U	59.	ug/Kgdrywt	1	100	120	16.	59.
Phenanthrene		55.	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	J	11.	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	L BSL	140	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene		180	ug/Kgdrywt	1	20	24.	2.5	12.
3,3'-Dichlorobenzidine	U LJ ZS	12.	ug/Kgdrywt	1	20	24.	3.5	12.
Benzo (a) anthracene		100	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene		98.	ug/Kgdrywt	1	20	24.	2.0	12.
bis(2-Ethylhexyl)phthalate	~~K BSH~~ B HBL	290	ug/Kgdrywt	1	100	120	38.	59.
Di-n-octylphthalate	U	59.	ug/Kgdrywt	1	100	120	54.	59.
Benzo (b) Fluoranthene		180	ug/Kgdrywt	1	20	24.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 11-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		50.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno (1,2,3-cd) pyrene		68.	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo (a,h) anthracene	J	22.	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene		84.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		44.3	%					
Fluorene-D10		50.5	%					
Pyrene-D10		88.0	%					
2,4-Dibromophenol		56.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	56.	ug/Kgdrywt	1	100	110	6.8	56.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	56.	ug/Kgdrywt	1	100	110	6.0	56.
2-Methylphenol	U UL BSL	56.	ug/Kgdrywt	1	100	110	9.5	56.
3&4-Methylphenol	U	56.	ug/Kgdrywt	1	100	110	11.	56.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.4	11.
2,4-Dimethylphenol	U UL BSL	11.	ug/Kgdrywt	1	20	22.	3.6	11.
2,4-Dichlorophenol	J	2.6	ug/Kgdrywt	1	20	22.	2.5	11.
Naphthalene	U UL BSL	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.
2-Methylnaphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.7	11.
2,4,6-Trichlorophenol	U	56.	ug/Kgdrywt	1	100	110	3.7	56.
2,4,5-Trichlorophenol	U	56.	ug/Kgdrywt	1	100	110	2.8	56.
Dimethyl phthalate	J	3.1	ug/Kgdrywt	1	20	22.	1.6	11.
Acenaphthylene	J	6.6	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	J L BSL	5.6	ug/Kgdrywt	1	20	22.	1.7	11.
4-Nitrophenol	U	56.	ug/Kgdrywt	1	100	110	9.0	56.
2,4-Dinitrotoluene	J	8.2	ug/Kgdrywt	1	20	22.	7.8	11.
Fluorene	U UL BSL	11.	ug/Kgdrywt	1	20	22.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	J	1.9	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	56.	ug/Kgdrywt	1	100	110	16.	56.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J L BSL	2.4	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
3,3'-Dichlorobenzidine	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo (a) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	J	2.0	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate ~~K BSH~~ JB MBL		38.	ug/Kgdrywt	1	100	110	36.	56.
Di-n-octylphthalate	U	56.	ug/Kgdrywt	1	100	110	52.	56.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82749

Analysis Date: 12-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 15-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	22.	3.7	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		66.0	%					
Fluorene-D10		37.2	%					
Pyrene-D10		68.2	%					
2,4-Dibromophenol		46.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	7.9	ug/L	1	10	10.	1.0	7.9
Phenol	U R SSL	7.9	ug/L	1	10	10.	1.9	7.9
2-Chlorophenol	U	7.9	ug/L	1	10	10.	3.4	7.9
2-Methylphenol	U	7.9	ug/L	1	10	10.	4.0	7.9
Acetophenone	U	7.9	ug/L	1	10	10.	4.1	7.9
3&4-Methylphenol	~~U~~ R SSL	7.9	ug/L	1	10	10.	5.9	7.9
Isophorone	U	7.9	ug/L	1	10	10.	1.8	7.9
2-Nitrophenol	~~U~~ R SSL	7.9	ug/L	1	10	10.	2.8	7.9
2,4-Dimethylphenol	~~U~~ R SSL	7.9	ug/L	1	10	10.	4.6	7.9
Bis(2-Chloroethoxy) Methane	U	7.9	ug/L	1	10	10.	2.2	7.9
2,4-Dichlorophenol	~~U~~ R SSL	7.9	ug/L	1	10	10.	3.2	7.9
4-Chloroaniline	U	7.9	ug/L	1	10	10.	2.0	7.9
Caprolactam	U	7.9	ug/L	1	10	10.	0.42	7.9
4-Chloro-3-Methylphenol	~~U~~ R SSL	7.9	ug/L	1	10	10.	3.8	7.9
2-Methylnaphthalene	U	7.9	ug/L	1	10	10.	3.4	7.9
Hexachlorocyclopentadiene	U	7.9	ug/L	1	10	10.	1.3	7.9
2,4,5-Trichlorophenol	~~U~~ R SSL	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	7.9	ug/L	1	10	10.	2.8	7.9
2-Chloronaphthalene	U	7.9	ug/L	1	10	10.	3.0	7.9
Dimethyl Phthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Acenaphthylene	U	7.9	ug/L	1	10	10.	1.6	7.9
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	7.9	ug/L	1	10	10.	1.6	7.9
Diethylphthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Fluorene	U	7.9	ug/L	1	10	10.	2.2	7.9
4-Chlorophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.3	7.9
N-Nitrosodiphenylamine	U	7.9	ug/L	1	10	10.	3.9	7.9
4-Bromophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.0	7.9
Phenanthrene	U	7.9	ug/L	1	10	10.	2.5	7.9
Anthracene	U	7.9	ug/L	1	10	10.	1.8	7.9
Carbazole	U	7.9	ug/L	1	10	10.	2.2	7.9
Di-N-Butylphthalate	U	7.9	ug/L	1	10	10.	2.6	7.9
Fluoranthene	U	7.9	ug/L	1	10	10.	2.5	7.9
Pyrene	U	7.9	ug/L	1	10	10.	2.0	7.9
Butylbenzylphthalate	U	7.9	ug/L	1	10	10.	2.0	7.9

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.9	ug/L	1	10	10.	1.9	7.9
Benzo(g,h,i)perylene	U	7.9	ug/L	1	10	10.	1.6	7.9
2-Fluorophenol	*	0.00	%					
Phenol-D6	*	0.00	%					
Nitrobenzene-d5		55.3	%					
2-Fluorobiphenyl		62.0	%					
2,4,6-Tribromophenol		48.2	%					
Terphenyl-d14		73.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~J~~ J ICB	2.2	ug/L	1	10	9.5	0.95	7.1
Phenol	U	7.1	ug/L	1	10	9.5	1.7	7.1
2-Chlorophenol	U	7.1	ug/L	1	10	9.5	3.0	7.1
2-Methylphenol	U	7.1	ug/L	1	10	9.5	3.6	7.1
Acetophenone	U	7.1	ug/L	1	10	9.5	3.7	7.1
3&4-Methylphenol	U	7.1	ug/L	1	10	9.5	5.3	7.1
Isophorone	U	7.1	ug/L	1	10	9.5	1.6	7.1
2-Nitrophenol	U	7.1	ug/L	1	10	9.5	2.6	7.1
2,4-Dimethylphenol	U	7.1	ug/L	1	10	9.5	4.2	7.1
Bis(2-Chloroethoxy) Methane	U	7.1	ug/L	1	10	9.5	2.0	7.1
2,4-Dichlorophenol	U	7.1	ug/L	1	10	9.5	2.8	7.1
4-Chloroaniline	U	7.1	ug/L	1	10	9.5	1.8	7.1
Caprolactam	U	7.1	ug/L	1	10	9.5	0.38	7.1
4-Chloro-3-Methylphenol	U	7.1	ug/L	1	10	9.5	3.4	7.1
2-Methylnaphthalene	U	7.1	ug/L	1	10	9.5	3.0	7.1
Hexachlorocyclopentadiene	U	7.1	ug/L	1	10	9.5	1.1	7.1
2,4,5-Trichlorophenol	U	18.	ug/L	1	25	24.	3.4	18.
1,1'-Biphenyl	U	7.1	ug/L	1	10	9.5	2.6	7.1
2-Chloronaphthalene	U	7.1	ug/L	1	10	9.5	2.8	7.1
Dimethyl Phthalate	U	7.1	ug/L	1	10	9.5	1.9	7.1
Acenaphthylene	U	7.1	ug/L	1	10	9.5	1.4	7.1
3-Nitroaniline	U	18.	ug/L	1	25	24.	1.4	18.
Acenaphthene	U	7.1	ug/L	1	10	9.5	1.4	7.1
Diethylphthalate	U	7.1	ug/L	1	10	9.5	1.9	7.1
Fluorene	U	7.1	ug/L	1	10	9.5	2.0	7.1
4-Chlorophenyl-Phenylether	U	7.1	ug/L	1	10	9.5	2.1	7.1
N-Nitrosodiphenylamine	U	7.1	ug/L	1	10	9.5	3.5	7.1
4-Bromophenyl-Phenylether	U	7.1	ug/L	1	10	9.5	1.8	7.1
Phenanthrene	U	7.1	ug/L	1	10	9.5	2.3	7.1
Anthracene	U	7.1	ug/L	1	10	9.5	1.6	7.1
Carbazole	U	7.1	ug/L	1	10	9.5	2.0	7.1
Di-N-Butylphthalate	U	7.1	ug/L	1	10	9.5	2.4	7.1
Fluoranthene	U	7.1	ug/L	1	10	9.5	2.3	7.1
Pyrene	U	7.1	ug/L	1	10	9.5	1.8	7.1
Butylbenzylphthalate	U	7.1	ug/L	1	10	9.5	1.8	7.1

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.1	ug/L	1	10	9.5	1.7	7.1
Benzo(g,h,i)perylene	U	7.1	ug/L	1	10	9.5	1.4	7.1
2-Fluorophenol		26.8	%					
Phenol-D6		16.5	%					
Nitrobenzene-d5		55.9	%					
2-Fluorobiphenyl		60.7	%					
2,4,6-Tribromophenol		73.6	%					
Terphenyl-d14		63.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	7.7	ug/L	1	10	10.	1.0	7.7
Phenol	U	7.7	ug/L	1	10	10.	1.8	7.7
2-Chlorophenol	U	7.7	ug/L	1	10	10.	3.3	7.7
2-Methylphenol	U	7.7	ug/L	1	10	10.	3.9	7.7
Acetophenone	U	7.7	ug/L	1	10	10.	4.0	7.7
3&4-Methylphenol	U	7.7	ug/L	1	10	10.	5.8	7.7
Isophorone	U	7.7	ug/L	1	10	10.	1.8	7.7
2-Nitrophenol	U	7.7	ug/L	1	10	10.	2.8	7.7
2,4-Dimethylphenol	U	7.7	ug/L	1	10	10.	4.5	7.7
Bis(2-Chloroethoxy) Methane	U	7.7	ug/L	1	10	10.	2.2	7.7
2,4-Dichlorophenol	U	7.7	ug/L	1	10	10.	3.1	7.7
4-Chloroaniline	U	7.7	ug/L	1	10	10.	2.0	7.7
Caprolactam	U	7.7	ug/L	1	10	10.	0.41	7.7
4-Chloro-3-Methylphenol	U	7.7	ug/L	1	10	10.	3.7	7.7
2-Methylnaphthalene	U	7.7	ug/L	1	10	10.	3.3	7.7
Hexachlorocyclopentadiene	U	7.7	ug/L	1	10	10.	1.2	7.7
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.7	ug/L	1	10	10.	2.8	7.7
2-Chloronaphthalene	U	7.7	ug/L	1	10	10.	3.0	7.7
Dimethyl Phthalate	U	7.7	ug/L	1	10	10.	2.1	7.7
Acenaphthylene	U	7.7	ug/L	1	10	10.	1.5	7.7
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.7	ug/L	1	10	10.	1.5	7.7
Diethylphthalate	U	7.7	ug/L	1	10	10.	2.1	7.7
Fluorene	U	7.7	ug/L	1	10	10.	2.2	7.7
4-Chlorophenyl-Phenylether	U	7.7	ug/L	1	10	10.	2.3	7.7
N-Nitrosodiphenylamine	U	7.7	ug/L	1	10	10.	3.8	7.7
4-Bromophenyl-Phenylether	U	7.7	ug/L	1	10	10.	2.0	7.7
Phenanthrene	U	7.7	ug/L	1	10	10.	2.5	7.7
Anthracene	U	7.7	ug/L	1	10	10.	1.8	7.7
Carbazole	U	7.7	ug/L	1	10	10.	2.2	7.7
Di-N-Butylphthalate	U	7.7	ug/L	1	10	10.	2.6	7.7
Fluoranthene	U	7.7	ug/L	1	10	10.	2.5	7.7
Pyrene	U	7.7	ug/L	1	10	10.	2.0	7.7
Butylbenzylphthalate	U	7.7	ug/L	1	10	10.	2.0	7.7

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 15-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.7	ug/L	1	10	10.	1.8	7.7
Benzo(g,h,i)perylene	U	7.7	ug/L	1	10	10.	1.5	7.7
2-Fluorophenol		27.7	%					
Phenol-D6		17.0	%					
Nitrobenzene-d5		56.6	%					
2-Fluorobiphenyl		59.0	%					
2,4,6-Tribromophenol		68.4	%					
Terphenyl-d14		58.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	7.4	ug/L	1	10	9.8	0.98	7.4
Phenol	U	7.4	ug/L	1	10	9.8	1.8	7.4
2-Chlorophenol	U	7.4	ug/L	1	10	9.8	3.1	7.4
2-Methylphenol	U	7.4	ug/L	1	10	9.8	3.7	7.4
Acetophenone	U	7.4	ug/L	1	10	9.8	3.8	7.4
3&4-Methylphenol	U	7.4	ug/L	1	10	9.8	5.5	7.4
Isophorone	U	7.4	ug/L	1	10	9.8	1.7	7.4
2-Nitrophenol	U	7.4	ug/L	1	10	9.8	2.6	7.4
2,4-Dimethylphenol	U	7.4	ug/L	1	10	9.8	4.3	7.4
Bis(2-Chloroethoxy) Methane	U	7.4	ug/L	1	10	9.8	2.0	7.4
2,4-Dichlorophenol	U	7.4	ug/L	1	10	9.8	2.9	7.4
4-Chloroaniline	U	7.4	ug/L	1	10	9.8	1.9	7.4
Caprolactam	U	7.4	ug/L	1	10	9.8	0.39	7.4
4-Chloro-3-Methylphenol	U	7.4	ug/L	1	10	9.8	3.5	7.4
2-Methylnaphthalene	U	7.4	ug/L	1	10	9.8	3.1	7.4
Hexachlorocyclopentadiene	U	7.4	ug/L	1	10	9.8	1.2	7.4
2,4,5-Trichlorophenol	U	18.	ug/L	1	25	24.	3.5	18.
1,1'-Biphenyl	U	7.4	ug/L	1	10	9.8	2.6	7.4
2-Chloronaphthalene	U	7.4	ug/L	1	10	9.8	2.8	7.4
Dimethyl Phthalate	U	7.4	ug/L	1	10	9.8	2.0	7.4
Acenaphthylene	U	7.4	ug/L	1	10	9.8	1.5	7.4
3-Nitroaniline	U	18.	ug/L	1	25	24.	1.5	18.
Acenaphthene	U	7.4	ug/L	1	10	9.8	1.5	7.4
Diethylphthalate	U	7.4	ug/L	1	10	9.8	2.0	7.4
Fluorene	U	7.4	ug/L	1	10	9.8	2.0	7.4
4-Chlorophenyl-Phenylether	U	7.4	ug/L	1	10	9.8	2.2	7.4
N-Nitrosodiphenylamine	U	7.4	ug/L	1	10	9.8	3.6	7.4
4-Bromophenyl-Phenylether	U	7.4	ug/L	1	10	9.8	1.9	7.4
Phenanthrene	U	7.4	ug/L	1	10	9.8	2.4	7.4
Anthracene	U	7.4	ug/L	1	10	9.8	1.7	7.4
Carbazole	U	7.4	ug/L	1	10	9.8	2.0	7.4
Di-N-Butylphthalate	U	7.4	ug/L	1	10	9.8	2.4	7.4
Fluoranthene	U	7.4	ug/L	1	10	9.8	2.4	7.4
Pyrene	U	7.4	ug/L	1	10	9.8	1.9	7.4
Butylbenzylphthalate	U	7.4	ug/L	1	10	9.8	1.9	7.4

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.4	ug/L	1	10	9.8	1.8	7.4
Benzo(g,h,i)perylene	U	7.4	ug/L	1	10	9.8	1.5	7.4
2-Fluorophenol		28.5	%					
Phenol-D6		20.2	%					
Nitrobenzene-d5		58.0	%					
2-Fluorobiphenyl		63.4	%					
2,4,6-Tribromophenol		72.4	%					
Terphenyl-d14		67.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UL SSL	7.4	ug/L	1	10	9.8	0.98	7.4
Phenol	U	7.4	ug/L	1	10	9.8	1.8	7.4
2-Chlorophenol	U	7.4	ug/L	1	10	9.8	3.1	7.4
2-Methylphenol	U	7.4	ug/L	1	10	9.8	3.7	7.4
Acetophenone	U	7.4	ug/L	1	10	9.8	3.8	7.4
3&4-Methylphenol	U	7.4	ug/L	1	10	9.8	5.5	7.4
Isophorone	U	7.4	ug/L	1	10	9.8	1.7	7.4
2-Nitrophenol	U	7.4	ug/L	1	10	9.8	2.6	7.4
2,4-Dimethylphenol	U	7.4	ug/L	1	10	9.8	4.3	7.4
Bis(2-Chloroethoxy) Methane	U	7.4	ug/L	1	10	9.8	2.0	7.4
2,4-Dichlorophenol	U	7.4	ug/L	1	10	9.8	2.9	7.4
4-Chloroaniline	U	7.4	ug/L	1	10	9.8	1.9	7.4
Caprolactam	U	7.4	ug/L	1	10	9.8	0.39	7.4
4-Chloro-3-Methylphenol	U	7.4	ug/L	1	10	9.8	3.5	7.4
2-Methylnaphthalene	U	7.4	ug/L	1	10	9.8	3.1	7.4
Hexachlorocyclopentadiene	U	7.4	ug/L	1	10	9.8	1.2	7.4
2,4,5-Trichlorophenol	U	18.	ug/L	1	25	24.	3.5	18.
1,1'-Biphenyl	U	7.4	ug/L	1	10	9.8	2.6	7.4
2-Chloronaphthalene	U	7.4	ug/L	1	10	9.8	2.8	7.4
Dimethyl Phthalate	U	7.4	ug/L	1	10	9.8	2.0	7.4
Acenaphthylene	U	7.4	ug/L	1	10	9.8	1.5	7.4
3-Nitroaniline	U	18.	ug/L	1	25	24.	1.5	18.
Acenaphthene	U	7.4	ug/L	1	10	9.8	1.5	7.4
Diethylphthalate	U	7.4	ug/L	1	10	9.8	2.0	7.4
Fluorene	U	7.4	ug/L	1	10	9.8	2.0	7.4
4-Chlorophenyl-Phenylether	U	7.4	ug/L	1	10	9.8	2.2	7.4
N-Nitrosodiphenylamine	U	7.4	ug/L	1	10	9.8	3.6	7.4
4-Bromophenyl-Phenylether	U	7.4	ug/L	1	10	9.8	1.9	7.4
Phenanthrene	U	7.4	ug/L	1	10	9.8	2.4	7.4
Anthracene	U	7.4	ug/L	1	10	9.8	1.7	7.4
Carbazole	U	7.4	ug/L	1	10	9.8	2.0	7.4
Di-N-Butylphthalate	U	7.4	ug/L	1	10	9.8	2.4	7.4
Fluoranthene	U	7.4	ug/L	1	10	9.8	2.4	7.4
Pyrene	U	7.4	ug/L	1	10	9.8	1.9	7.4
Butylbenzylphthalate	U	7.4	ug/L	1	10	9.8	1.9	7.4

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U UL SSL	7.4	ug/L	1	10	9.8	1.8	7.4
Benzo(g,h,i)perylene	U	7.4	ug/L	1	10	9.8	1.5	7.4
2-Fluorophenol	*	19.3	%					
Phenol-D6		12.0	%					
Nitrobenzene-d5	*	29.4	%					
2-Fluorobiphenyl	*	33.6	%					
2,4,6-Tribromophenol	*	38.6	%					
Terphenyl-d14	*	42.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	7.9	ug/L	1	10	10.	1.0	7.9
Phenol	U	7.9	ug/L	1	10	10.	1.9	7.9
2-Chlorophenol	U	7.9	ug/L	1	10	10.	3.4	7.9
2-Methylphenol	U	7.9	ug/L	1	10	10.	4.0	7.9
Acetophenone	U	7.9	ug/L	1	10	10.	4.1	7.9
3&4-Methylphenol	U	7.9	ug/L	1	10	10.	5.9	7.9
Isophorone	U	7.9	ug/L	1	10	10.	1.8	7.9
2-Nitrophenol	U	7.9	ug/L	1	10	10.	2.8	7.9
2,4-Dimethylphenol	U	7.9	ug/L	1	10	10.	4.6	7.9
Bis(2-Chloroethoxy) Methane	U	7.9	ug/L	1	10	10.	2.2	7.9
2,4-Dichlorophenol	U	7.9	ug/L	1	10	10.	3.2	7.9
4-Chloroaniline	U	7.9	ug/L	1	10	10.	2.0	7.9
Caprolactam	U	7.9	ug/L	1	10	10.	0.42	7.9
4-Chloro-3-Methylphenol	U	7.9	ug/L	1	10	10.	3.8	7.9
2-Methylnaphthalene	U	7.9	ug/L	1	10	10.	3.4	7.9
Hexachlorocyclopentadiene	U	7.9	ug/L	1	10	10.	1.3	7.9
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	7.9	ug/L	1	10	10.	2.8	7.9
2-Chloronaphthalene	U	7.9	ug/L	1	10	10.	3.0	7.9
Dimethyl Phthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Acenaphthylene	U	7.9	ug/L	1	10	10.	1.6	7.9
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	7.9	ug/L	1	10	10.	1.6	7.9
Diethylphthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Fluorene	U	7.9	ug/L	1	10	10.	2.2	7.9
4-Chlorophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.3	7.9
N-Nitrosodiphenylamine	U	7.9	ug/L	1	10	10.	3.9	7.9
4-Bromophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.0	7.9
Phenanthrene	U	7.9	ug/L	1	10	10.	2.5	7.9
Anthracene	U	7.9	ug/L	1	10	10.	1.8	7.9
Carbazole	U	7.9	ug/L	1	10	10.	2.2	7.9
Di-N-Butylphthalate	U	7.9	ug/L	1	10	10.	2.6	7.9
Fluoranthene	U	7.9	ug/L	1	10	10.	2.5	7.9
Pyrene	U	7.9	ug/L	1	10	10.	2.0	7.9
Butylbenzylphthalate	U	7.9	ug/L	1	10	10.	2.0	7.9

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.9	ug/L	1	10	10.	1.9	7.9
Benzo(g,h,i)perylene	U	7.9	ug/L	1	10	10.	1.6	7.9
2-Fluorophenol		37.9	%					
Phenol-D6		25.5	%					
Nitrobenzene-d5		60.0	%					
2-Fluorobiphenyl		65.5	%					
2,4,6-Tribromophenol		88.6	%					
Terphenyl-d14		72.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	7.6	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.3	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.9	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	4.0	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.7	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U	7.6	ug/L	1	10	10.	2.8	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.5	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.1	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.41	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.7	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.3	7.6
Hexachlorocyclopentadiene	U	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.8	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	3.0	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.8	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.6	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82757

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	~~U~~ UJ CCL	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		22.5	%					
Phenol-D6		17.2	%					
Nitrobenzene-d5	*	38.0	%					
2-Fluorobiphenyl		55.5	%					
2,4,6-Tribromophenol		77.9	%					
Terphenyl-d14		66.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	98.	270
Acetophenone	~~U~~ UL BSL	270	ug/Kgdrywt	1	330	360	200	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	82.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	~~U~~ UL BSL	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	~~U~~ UL BSL	270	ug/Kgdrywt	1	330	360	95.	270
2-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	82.	670
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	87.	270
3-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	100	670
2,4-Dinitrophenol	U	670	ug/Kgdrywt	1	820	900	410	670
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	87.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	88.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Nitroaniline	U	670	ug/Kgdrywt	1	820	900	150	670
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	93.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		55.7	%					
Phenol-D6		59.0	%					
Nitrobenzene-d5		57.4	%					
2-Fluorobiphenyl		60.1	%					
2,4,6-Tribromophenol		62.6	%					
Terphenyl-d14		66.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	250	ug/Kgdrywt	1	330	330	120	250
2,2'-Oxybis(1-Chloropropane)	U	250	ug/Kgdrywt	1	330	330	90.	250
Acetophenone	~~U~~ UL BSL	250	ug/Kgdrywt	1	330	330	180	250
Hexachloroethane	U	250	ug/Kgdrywt	1	330	330	97.	250
Isophorone	U	250	ug/Kgdrywt	1	330	330	76.	250
2-Nitrophenol	U	250	ug/Kgdrywt	1	330	330	170	250
Bis(2-Chloroethoxy) Methane	~~U~~ UL BSL	250	ug/Kgdrywt	1	330	330	97.	250
4-Chloroaniline	U	250	ug/Kgdrywt	1	330	330	120	250
Caprolactam	U	250	ug/Kgdrywt	1	330	330	140	250
4-Chloro-3-Methylphenol	U	250	ug/Kgdrywt	1	330	330	170	250
1,1'-Biphenyl	U	250	ug/Kgdrywt	1	330	330	74.	250
2-Chloronaphthalene	~~U~~ UL BSL	250	ug/Kgdrywt	1	330	330	88.	250
2-Nitroaniline	U	620	ug/Kgdrywt	1	820	830	76.	620
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	250	ug/Kgdrywt	1	330	330	80.	250
3-Nitroaniline	U	620	ug/Kgdrywt	1	820	830	95.	620
2,4-Dinitrophenol	U	620	ug/Kgdrywt	1	820	830	380	620
Dibenzofuran	U	250	ug/Kgdrywt	1	330	330	80.	250
Diethylphthalate	U	250	ug/Kgdrywt	1	330	330	81.	250
4-Chlorophenyl-Phenylether	U	250	ug/Kgdrywt	1	330	330	79.	250
4-Nitroaniline	U	620	ug/Kgdrywt	1	820	830	140	620
N-Nitrosodiphenylamine	U	250	ug/Kgdrywt	1	330	330	220	250
4-Bromophenyl-Phenylether	U	250	ug/Kgdrywt	1	330	330	86.	250
Carbazole	U	250	ug/Kgdrywt	1	330	330	110	250
Di-N-Butylphthalate	U	250	ug/Kgdrywt	1	330	330	100	250
Butylbenzylphthalate	U	250	ug/Kgdrywt	1	330	330	94.	250
2-Fluorophenol		52.2	%					
Phenol-D6		54.6	%					
Nitrobenzene-d5		50.9	%					
2-Fluorobiphenyl		56.4	%					
2,4,6-Tribromophenol		70.0	%					
Terphenyl-d14		65.1	%					

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Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	290	ug/Kgdrywt	1	330	390	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	390	100	290
Acetophenone	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	390	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	390	89.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	390	200	290
Bis(2-Chloroethoxy) Methane	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	390	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	390	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	390	200	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	390	87.	290
2-Chloronaphthalene	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	100	290
2-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	89.	730
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	290	ug/Kgdrywt	1	330	390	94.	290
3-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	110	730
2,4-Dinitrophenol	U	730	ug/Kgdrywt	1	820	970	450	730
Dibenzofuran	U	290	ug/Kgdrywt	1	330	390	94.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	390	95.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	93.	290
4-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	160	730
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	390	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	100	290
Carbazole	U	290	ug/Kgdrywt	1	330	390	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	390	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	390	110	290
2-Fluorophenol		54.5	%					
Phenol-D6		56.6	%					
Nitrobenzene-d5		55.0	%					
2-Fluorobiphenyl		59.6	%					
2,4,6-Tribromophenol		64.4	%					
Terphenyl-d14		63.6	%					

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Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	290	ug/Kgdrywt	1	330	390	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	390	100	290
Acetophenone	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	390	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	390	88.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	390	200	290
Bis(2-Chloroethoxy) Methane	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	390	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	390	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	390	200	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	390	86.	290
2-Chloronaphthalene	~~U~~ UL BSL	290	ug/Kgdrywt	1	330	390	100	290
2-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	88.	720
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	290	ug/Kgdrywt	1	330	390	93.	290
3-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	110	720
2,4-Dinitrophenol	U	720	ug/Kgdrywt	1	820	970	440	720
Dibenzofuran	U	290	ug/Kgdrywt	1	330	390	93.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	390	94.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	92.	290
4-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	160	720
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	390	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	100	290
Carbazole	U	290	ug/Kgdrywt	1	330	390	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	390	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	390	110	290
2-Fluorophenol		56.7	%					
Phenol-D6		62.3	%					
Nitrobenzene-d5		58.7	%					
2-Fluorobiphenyl		68.4	%					
2,4,6-Tribromophenol		75.3	%					
Terphenyl-d14		83.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82748

Analysis Date: 16-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ ICB	280	ug/Kgdrywt	1	330	370	130	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	370	100	280
Acetophenone	~~U~~ UL BSL	280	ug/Kgdrywt	1	330	370	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	370	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	370	84.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	370	190	280
Bis(2-Chloroethoxy) Methane	~~U~~ UL BSL	280	ug/Kgdrywt	1	330	370	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	370	130	280
Caprolactam	U	280	ug/Kgdrywt	1	330	370	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	370	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	370	82.	280
2-Chloronaphthalene	~~U~~ UL BSL	280	ug/Kgdrywt	1	330	370	98.	280
2-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	84.	690
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	370	89.	280
3-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	100	690
2,4-Dinitrophenol	U	690	ug/Kgdrywt	1	820	920	420	690
Dibenzofuran	U	280	ug/Kgdrywt	1	330	370	89.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	370	90.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	88.	280
4-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	150	690
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	370	240	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	95.	280
Carbazole	U	280	ug/Kgdrywt	1	330	370	120	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	370	110	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	370	100	280
2-Fluorophenol		48.9	%					
Phenol-D6		51.6	%					
Nitrobenzene-d5		49.5	%					
2-Fluorobiphenyl		53.0	%					
2,4,6-Tribromophenol		58.6	%					
Terphenyl-d14		53.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 30-SEP-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		103.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		110.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX		2.2	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		117.	%					

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FORM 10
SEMIVOLATILE IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES

CLIENT SAMPLE ID

IS66EB092710

Lab Name: KATAHDIN ANALYTICAL SERVICES Project: CTO-JU04 INDIA

Lab Code: KAS PO No.: SDG No.: JU04-3

Lab Sample ID: SD5938-5 Date(s) Analyzed: 10/01/10 10/18/10

Instrument ID (1): HPLC02 Instrument ID (2): HPLC02

GC Column(1): ACCLAIM EXP E1 ID: 4.60(mm) GC Column(2): ACCLAIM EXP E2 ID: 4.60(mm)

ANALYTE	COL	RT	RT WINDOW FROM	RT WINDOW TO	CONCENTRATION	RPD
RDX	1	8.51	8.42	8.62	2.20	
	2	11.18	10.12	12.12	1.60	31.6
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					
	1					
	2					

FORM X PEST-1

Katahdin Analytical Services A0000514

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		101.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		111.	%					

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REISSUE

HK 12/20/2010

Katahdin Analytical Services A0000516

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		105.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 30-SEP-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG82755

Analysis Date: 01-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		111.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 90.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	51.	ug/Kgdrywt	1	100	100	8.7	51.
RDX	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
1,3,5-Trinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.8	51.
1,3-Dinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.3	51.
Tetryl	U	51.	ug/Kgdrywt	1	100	100	5.5	51.
Nitrobenzene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	22.	51.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	810	120	400
2,4,6-Trinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	6.8	51.
4-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	17.	51.
2-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	21.	51.
2,6-Dinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	27.	51.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	15.	51.
2-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	12.	51.
4-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	27.	51.
3-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	8.0	51.
1,2-Dinitrobenzene		94.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 95.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	51.	ug/Kgdrywt	1	100	100	8.7	51.
RDX	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
1,3,5-Trinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.8	51.
1,3-Dinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.3	51.
Tetryl	U	51.	ug/Kgdrywt	1	100	100	5.5	51.
Nitrobenzene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	22.	51.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	810	120	400
2,4,6-Trinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	6.8	51.
4-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	17.	51.
2-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	21.	51.
2,6-Dinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	27.	51.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	15.	51.
2-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	12.	51.
4-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	27.	51.
3-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	8.0	51.
1,2-Dinitrobenzene		96.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 81.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	61.	ug/Kgdrywt	1	100	120	10.	61.
RDX	U	61.	ug/Kgdrywt	1	100	120	8.3	61.
1,3,5-Trinitrobenzene	U	61.	ug/Kgdrywt	1	100	120	8.2	61.
1,3-Dinitrobenzene	U	61.	ug/Kgdrywt	1	100	120	7.6	61.
Tetryl	U	61.	ug/Kgdrywt	1	100	120	6.6	61.
Nitrobenzene	EXCLUDE-RE ~~U~~	61.	ug/Kgdrywt	1	100	120	27.	61.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	980	150	490
2,4,6-Trinitrotoluene	U	61.	ug/Kgdrywt	1	100	120	8.2	61.
4-Am-DNT	U	61.	ug/Kgdrywt	1	100	120	21.	61.
2-Am-DNT	U	61.	ug/Kgdrywt	1	100	120	26.	61.
2,6-Dinitrotoluene	U	61.	ug/Kgdrywt	1	100	120	33.	61.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	61.	ug/Kgdrywt	1	100	120	18.	61.
2-Nitrotoluene	U	61.	ug/Kgdrywt	1	100	120	15.	61.
4-Nitrotoluene	U	61.	ug/Kgdrywt	1	100	120	33.	61.
3-Nitrotoluene	U	61.	ug/Kgdrywt	1	100	120	9.7	61.
1,2-Dinitrobenzene		92.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58.	ug/Kgdrywt	1	100	120	9.9	58.
RDX	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
1,3,5-Trinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.7	58.
1,3-Dinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58.	ug/Kgdrywt	1	100	120	6.2	58.
Nitrobenzene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	25.	58.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	920	140	460
2,4,6-Trinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	7.7	58.
4-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	20.	58.
2-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	24.	58.
2,6-Dinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	17.	58.
2-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	14.	58.
4-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
3-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	9.1	58.
1,2-Dinitrobenzene		94.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83028

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 82.
Report Date: 20-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	53.	ug/Kgdrywt	1	100	100	9.1	53.
RDX	U	53.	ug/Kgdrywt	1	100	100	7.2	53.
1,3,5-Trinitrobenzene	U	53.	ug/Kgdrywt	1	100	100	7.1	53.
1,3-Dinitrobenzene	U	53.	ug/Kgdrywt	1	100	100	6.5	53.
Tetryl	U	53.	ug/Kgdrywt	1	100	100	5.7	53.
Nitrobenzene	EXCLUDE-RE ~~U~~	53.	ug/Kgdrywt	1	100	100	23.	53.
Nitroglycerin	U	420	ug/Kgdrywt	1	800	840	130	420
2,4,6-Trinitrotoluene	U	53.	ug/Kgdrywt	1	100	100	7.1	53.
4-Am-DNT	U	53.	ug/Kgdrywt	1	100	100	18.	53.
2-Am-DNT	U	53.	ug/Kgdrywt	1	100	100	22.	53.
2,6-Dinitrotoluene	U	53.	ug/Kgdrywt	1	100	100	28.	53.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	53.	ug/Kgdrywt	1	100	100	16.	53.
2-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	100	13.	53.
4-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	100	28.	53.
3-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	100	8.3	53.
1,2-Dinitrobenzene		96.6	%					

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HK 12/20/2010

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SB391213

HPLC

Lot-Sample #...:	G0I300565-008	**Work Order #...:**	L7RNF1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	09/30/10	**Analysis Date..:**	10/06/10		
Prep Batch #...:	0273467				
Dilution Factor:	1.01				
% Moisture.....:	6.8	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.29 J**	**5.4**	**ug/kg**	**0.28**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/20/2010

Katahdin Analytical Services

SS

Client Sample ID: IS66DP330001

HPLC

Lot-Sample #...:	G0I300565-009	**Work Order #...:**	L7RNK1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	09/30/10	**Analysis Date..:**	10/06/10		
Prep Batch #...:	0273467				
Dilution Factor:	0.97				
% Moisture.....:	7.5	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.46 J**	**5.2**	**ug/kg**	**0.27**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

HK 12/20/2010

Katahdin Analytical Services

SB

Client Sample ID: IS66DP331415

HPLC

Lot-Sample #...:	G0I300565-010	Work Order #...:	L7RNN1AC	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273467				
Dilution Factor:	1.01				
% Moisture.....:	20	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	1.0 J	6.3	ug/kg	0.33

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66~~DP~~SS340001

HPLC

Lot-Sample #...:	G0I300565-011	**Work Order #...:**	L7RNT1AC	**Matrix.....:**	SOLID
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	09/30/10	**Analysis Date..:**	10/06/10		
Prep Batch #...:	0273467				
Dilution Factor:	1				
% Moisture.....:	15	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.47 U**	**5.9**	**ug/kg**	**0.31**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

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Katahdin Analytical Services

Client Sample ID: IS66SBP340809

HPLC

Lot-Sample #...:	G0I300565-012	Work Order #...:	L7RNV1AC	Matrix.....:	SOLID
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	09/30/10	Analysis Date..:	10/06/10		
Prep Batch #...:	0273467				
Dilution Factor:	0.97				
% Moisture.....:	16	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.46 U	5.8	ug/kg	0.30

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66GW050910

Dissolved HPLC

Lot-Sample #...:	G0I300565-001	Work Order #...:	L7RL71AA	Matrix.....:	WATER
Date Sampled...:	09/27/10	Date Received..:	09/30/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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Katahdin Analytical Services

Client Sample ID: IS66FB092710

Dissolved HPLC

Lot-Sample #...:	G0I300565-002	**Work Order #...:**	L7RMC1AA	**Matrix.....:**	WATER
Date Sampled...:	09/27/10	**Date Received..:**	09/30/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.25 U**	**0.50**	**ug/L**	**0.082**

Katahdin Analytical Services

Client Sample ID: IS66EB092710

Dissolved HPLC

Lot-Sample #...:	G0I300565-003	**Work Order #...:**	L7RMG1AA	**Matrix.....:**	WATER
Date Sampled...:	09/27/10	**Date Received..:**	09/30/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.25 U**	**0.50**	**ug/L**	**0.082**

Katahdin Analytical Services

Client Sample ID: IS66GW040910

Dissolved HPLC

Lot-Sample #...: G0I300565-004	Work Order #...: L7RMM1AA		Matrix.....: WATER	
Date Sampled...: 09/28/10	Date Received..: 09/30/10			
Prep Date.....: 10/04/10	Analysis Date..: 10/07/10			
Prep Batch #...: 0277365				
Dilution Factor: 1	Method.....: SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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Katahdin Analytical Services

Client Sample ID: IS66EB02-092810

Dissolved HPLC

Lot-Sample #...:	G0I300565-005	**Work Order #...:**	L7RMT1AA	**Matrix.....:**	WATER
Date Sampled...:	09/28/10	**Date Received..:**	09/30/10		
Prep Date.....:	10/04/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.25 U**	**0.50**	**ug/L**	**0.082**

Katahdin Analytical Services

GW

Client Sample ID: IS66MW030910

Dissolved HPLC

Lot-Sample #...:	G0I300565-006	Work Order #...:	L7RM31AA	Matrix.....:	WATER
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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GW

Client Sample ID: IS66MW03P0910

Dissolved HPLC

Lot-Sample #...:	G0I300565-007	Work Order #...:	L7RM81AA	Matrix.....:	WATER
Date Sampled...:	09/28/10	Date Received..:	09/30/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	B FBL	2.6	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ B EBL	4.6	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-1
Client ID: ~~IS66MW050910~~ IS66GW050910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		90.8	%					
Toluene-d8		90.7	%					
1,2-Dichloroethane-d4	*	121.	%					
Dibromofluoromethane		98.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.4	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~J~~ K BSH	4.8	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.64	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-3
Client ID: IS66FB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		83.8	%					
Toluene-d8		89.1	%					
1,2-Dichloroethane-d4		106.	%					
Dibromofluoromethane		94.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.6	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	K BSH	6.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.60	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-5
Client ID: IS66EB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		90.9	%					
Toluene-d8		92.2	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane		97.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-7
Client ID: IS66TB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.72	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5938-7
Client ID: IS66TB092710
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 27-SEP-10
Received Date: 28-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83198

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		89.5	%					
Toluene-d8		91.0	%					
1,2-Dichloroethane-d4		119.	%					
Dibromofluoromethane		96.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1RA
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	B EBL	6.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-1RA
Client ID: ~~IS66MW040910~~ IS66GW040910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		89.2	%					
Toluene-d8		98.2	%					
1,2-Dichloroethane-d4		95.4	%					
Dibromofluoromethane		91.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-3
Client ID: IS66TB092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.70	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-3
Client ID: IS66TB092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		90.9	%					
Toluene-d8		106.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		99.6	%					

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4RA
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	B EBL	6.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	J	0.38	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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REISSUE

HK 12/15/2010

Katahdin Analytical Services A0000017

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-4RA
Client ID: IS66EB02-092810
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		87.0	%					
Toluene-d8		96.5	%					
1,2-Dichloroethane-d4		103.	%					
Dibromofluoromethane		100.	%					

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REISSUE

HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	~~J~~ B FBL	1.1	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene		5.1	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-6
Client ID: ~~IS66MW030910~~ IS66GW030910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		93.2	%					
Toluene-d8		105.	%					
1,2-Dichloroethane-d4		113.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene		5.5	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5964-8
Client ID: ~~IS66MW03P0910~~ IS66GW03P0910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83196

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		92.3	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		114.	%					
Dibromofluoromethane		104.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSH	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	~~J~~ B MBL	1.5	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	U	14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	~~J~~ J OT	5.2	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		101.	%					
Toluene-D8		110.	%					
1,2-Dichloroethane-D4	*	136.	%					
Dibromofluoromethane		118.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1RA
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U exclude RE	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.7	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	U	14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		6.2	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-1RA
Client ID: ~~IS66DP391213~~ IS66SB391213
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U exclude RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		108.	%					
Toluene-D8	*	118.	%					
1,2-Dichloroethane-D4	*	144.	%					
Dibromofluoromethane		128.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	~~J~~ B MBL	1.6	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	~~J~~ B EBL	8.0	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	~~J~~ J OT	3.6	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-2
Client ID: ~~IS66DP330001~~ IS66SS330001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		89.1	%					
Toluene-D8		101.	%					
1,2-Dichloroethane-D4		133.	%					
Dibromofluoromethane		115.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U exclude RE	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.5	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J	9.5	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J	2.4	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Tel:(207) 874-2400 Fax:(207) 775-4029

HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U exclude RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		106.	%					
Toluene-D8	*	116.	%					
1,2-Dichloroethane-D4	*	144.	%					
Dibromofluoromethane		128.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3RA
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSH	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J B MBL	1.6	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U UJ-SSH	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J B EBL	8.8	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J OT	6.1	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-3RA
Client ID: ~~IS66DP331415~~ IS66SB331415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-SSH	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		102.	%					
Toluene-D8		112.	%					
1,2-Dichloroethane-D4	*	138.	%					
Dibromofluoromethane		122.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U exclude RE	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J	1.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene		6.1	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82812

Analysis Date: 30-SEP-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U exclude RE	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	53.9	%					
Toluene-D8		87.3	%					
1,2-Dichloroethane-D4		123.	%					
Dibromofluoromethane		106.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4RA
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ SSL	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B MBL	1.6	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U UJ SSL	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U UJ SSL	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J B EBL	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U UJ SSL	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J OT	5.8	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U UJ SSL	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/15/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-4RA
Client ID: ~~IS66DP340001~~ IS66SS340001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ SSL	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	79.6	%					
Toluene-D8		97.0	%					
1,2-Dichloroethane-D4		130.	%					
Dibromofluoromethane		112.	%					

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HK 12/15/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	~~J~~ B MBL	1.4	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	B EBL	47.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J OT	6.6	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5972-5
Client ID: ~~IS66DP340809~~ IS66SB340809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-3

Sample Date: 28-SEP-10
Received Date: 29-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82949

Analysis Date: 01-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 21-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		86.8	%					
Toluene-D8		96.9	%					
1,2-Dichloroethane-D4		128.	%					
Dibromofluoromethane		111.	%					

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HK 12/15/2010

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001042.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66EB092410	E1001042-001
IS66DP270001	E1001042-002
IS66DP270910	E1001042-003
IS66DP260001	E1001042-004
IS66DP260708	E1001042-005
IS66DP290001	E1001042-006
IS66DP291617	E1001042-007
IS66MW050910	E1001042-008
IS66FB092710	E1001042-009
IS66EB092710	E1001042-010

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times
According to the chain of custody records, sampling was performed on 9/24/10 and 9/27/10. Samples were received at the laboratory on 9/28/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66DP270001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP260001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP260708	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP290001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP291617	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP291617	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66DP270001	1,2,3,7,8-Pentachlorodibenzofuran
IS66DP270910	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP260001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP260001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP260708	Octachlorodibenzofuran
IS66DP290001	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP290001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP290001	2,3,4,6,7,8-Hexachlorodibenzofuran

Blanks

Various compounds in were detected in the method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	Total heptachlorodibenzo-p-dioxin	0.175	0.875
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	52	260
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	50	250
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	78	390
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	59	295
Method Blank	Octachlorodibenzo-p-dioxin-C13	40	400
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	48	240
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	52	260
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	78	390
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	62	310
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	62	310
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1.17	5.85
Method Blank	Octachlorodibenzo-p-dioxin	9.01	90.1
Method Blank	Total heptachlorodibenzo-p-dioxin	2.95	14.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	66	330
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	73	365
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	52	260
Method Blank	Octachlorodibenzo-p-dioxin-C13	32	320
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	57	285
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	55	275
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	45	225
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	88	440

Internal Standards

Internal standards were low for the samples listed below. Octachlorodibenzo-p-dioxin was the only compound affected by the low internal standard. Data are summarized in **Attachment 1.**

Sample ID
IS66DP270001
IS66DP260001
IS66DP290001
IS66DP291617

Linear Range
Octachlorodibenzo-p-dioxin was outside of linear range for sample IS66DP270910. Affected data are summarized in **Attachment 1.**

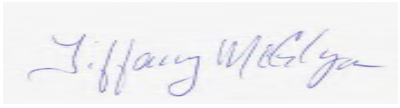
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001043.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66DP280001	E1001043-001
IS66DP280607	E1001043-002
IS66DP310001	E1001043-003
IS66DP311415	E1001043-004
IS66EB092310	E1001043-005

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/23/10. Samples were received at the laboratory on 9/27/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66DP280001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP280607	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP310001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66DP280001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP280001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP280001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP280607	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP310001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP310001	1,2,3,4,7,8,9-Heptachlorodibenzofuran
IS66EB092310	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66EB092310	1,2,3,4,6,7,8-Heptachlorodibenzofuran

Blanks

Various compounds in were detected in the method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.631	3.155
Method Blank	Octachlorodibenzo-p-dioxin	6.99	69.9
Method Blank	Octachlorodibenzofuran	0.909	4.545
Method Blank	Total heptachlorodibenzo-p-dioxin	1.65	8.25
Method Blank	Total heptachlorodibenzofuran	0.458	2.29
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	44	220
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	38	190
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	48	240
Method Blank	Octachlorodibenzo-p-dioxin-C13	42	420
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	37	185
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	41	205
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	58	290
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	51	255
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	50	250
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1.17	5.85
Method Blank	Octachlorodibenzo-p-dioxin	9.01	90.1
Method Blank	Total heptachlorodibenzo-p-dioxin	2.95	14.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	66	330
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	73	365
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	52	260
Method Blank	Octachlorodibenzo-p-dioxin-C13	32	320
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	57	285
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	55	275
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	45	225
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	88	440

Lab Control Spike/Spike Duplicate

Octachlorodibenzo-p-dioxin exhibited high recoveries for the LCS/LCSD. This affected all data except the equipment blank. Data are summarized in **Attachment 1.**

Matrix Spike/Spike Duplicate

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin exhibited high recoveries in the MS/MSD affecting native sample IS66DP280001. Data are summarized in **Attachment 1.**

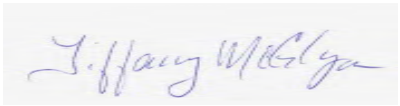
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 29th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001044.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66MW040910	E1001044-001
IS66EB01-092810	E1001044-002
IS66EB02-092810	E1001044-003
IS66MW030910	E1001044-004
IS66MW03P0910	E1001044-005
IS66DP360001	E1001044-006
IS66DP360809	E1001044-007
IS66DP370001	E1001044-008
IS66DP371314	E1001044-009
IS66DP390001	E1001044-010
IS66DP391213	E1001044-011
IS66DP330001	E1001044-012
IS66DP331415	E1001044-013

IS66DP340001	E1001044-014
IS66DP340809	E1001044-015

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times
According to the chain of custody records, sampling was performed on 9/28/10. Samples were received at the laboratory on 9/29/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66DP360001	2,3,7,8-Tetrachlorodibenzofuran
IS66DP390001	1,2,3,4,6,7,8-Heptachlorodibenzofuran
IS66DP330001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP330001	1,2,3,7,8-Pentachlorodibenzofuran

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66DP370001	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP330001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP340001	2,3,4,7,8-Pentachlorodibenzofuran
IS66DP340809	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin

Blanks

Various compounds in were detected in the method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.631	3.155
Method Blank	Octachlorodibenzo-p-dioxin	6.99	69.9
Method Blank	Octachlorodibenzofuran	0.909	4.545
Method Blank	Total heptachlorodibenzo-p-dioxin	1.65	8.25
Method Blank	Total heptachlorodibenzofuran	0.458	2.29
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	44	220
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	38	190
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	48	240
Method Blank	Octachlorodibenzo-p-dioxin-C13	42	420
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	37	185
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	41	205
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	58	290
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	51	255
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	50	250
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	1.17	5.85
Method Blank	Octachlorodibenzo-p-dioxin	9.01	90.1
Method Blank	Total heptachlorodibenzo-p-dioxin	2.95	14.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	66	330
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	73	365
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	59	295
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	52	260
Method Blank	Octachlorodibenzo-p-dioxin-C13	32	320
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	57	285
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	55	275
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	45	225
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	88	440

Lab Control Spike/Spike Duplicate

Octachlorodibenzo-p-dioxin exhibited high recoveries for the LCS/LCSD. This affected those samples listed below. Data are summarized in **Attachment 1.**

Sample_Name

Sample_Name
IS66DP360001
IS66DP360809
IS66DP370001
IS66DP371314
IS66DP390001
IS66DP391213
IS66DP330001
IS66DP331415
IS66DP340001
IS66DP340809

Internal Standards
Internal standards were low for the samples listed below. Octachlorodibenzo-p-dioxin and 2,3,7,8-Tetrachlorodibenzofuran were the only compounds affected by the low internal standard. Data are summarized in **Attachment 1.**

Sample_Name
IS66EB01-092810
IS66DP370001

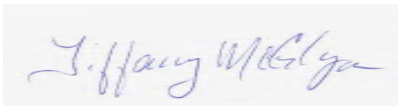
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1030
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092410	**Units:**	pg/L
Lab Code:	E1001042-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 0003
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209703	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.637	10.0			1
1,2,3,7,8-PeCDD	ND	U	0.409	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.489	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.437	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.511	25.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.392	25.0			1
OCDD	**2.91**	~~BJ~~ J	0.435	50.0	0.87	1.000	1
2,3,7,8-TCDF	ND	U	0.619	10.0			1
1,2,3,7,8-PeCDF	ND	U	0.611	25.0			1
2,3,4,7,8-PeCDF	ND	U	0.568	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.374	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.370	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.532	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.416	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.341	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.449	25.0			1
OCDF	ND	U	0.955	50.0			1
Total Tetra-Dioxins	ND	U	0.637	10.0			1
Total Penta-Dioxins	ND	U	0.409	25.0			1
Total Hexa-Dioxins	ND	U	0.437	25.0			1
Total Hepta-Dioxins	ND	U	0.392	25.0			1
Total Tetra-Furans	ND	U	0.619	10.0			1
Total Penta-Furans	ND	U	0.568	25.0			1
Total Hexa-Furans	ND	U	0.370	25.0			1
Total Hepta-Furans	ND	U	0.341	25.0			1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1030
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092410	**Units:**	Percent
Lab Code:	E1001042-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 0003
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209703	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	642.010	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	550.967	55		40-135	1.57	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1641.869	66		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1455.235	58		40-135	1.05	1.068
13C-OCDD	5000	2448.921	49		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	541.793	54		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	564.637	56		40-135	1.58	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1494.475	60		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1264.642	51		40-135	0.42	1.045
37Cl-2,3,7,8-TCDD	800	612.250	77		40-135	NA	1.009

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1030
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092410	**Units:**	pg/L
Lab Code:	E1001042-001	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.637	1	1	
1,2,3,7,8-PeCDD	ND	0.409	1	1	
1,2,3,4,7,8-HxCDD	ND	0.489	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.437	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.511	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.392	1	0.01	
OCDD	**2.91**	0.435	1	0.0003	0.000873
2,3,7,8-TCDF	ND	0.619	1	0.1	
1,2,3,7,8-PeCDF	ND	0.611	1	0.03	
2,3,4,7,8-PeCDF	ND	0.568	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.374	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.370	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.532	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.416	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.341	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.449	1	0.01	
OCDF	ND	0.955	1	0.0003	
		Total TEQ			0.000873

2005 WHO TEFs, ND = 0

TWD 12/13/2010

FB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.715	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.539	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.438	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.391	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.459	25.5			1
1,2,3,4,6,7,8-HpCDD	**1.17**	~~BJ~~ J	0.393	25.5	1.07	1.000	1
OCDD	**8.02**	~~BJK~~ X-2R15	1.21	51.0	1.11	1.000	1
2,3,7,8-TCDF	ND	U	0.690	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.588	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.545	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.193	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.191	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.274	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.215	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.476	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.626	25.5			1
OCDF	ND	U	0.687	51.0			1
Total Tetra-Dioxins	ND	U	0.715	10.2			1
Total Penta-Dioxins	ND	U	0.539	25.5			1
Total Hexa-Dioxins	ND	U	0.391	25.5			1
Total Hepta-Dioxins	**2.35**	J	0.393	25.5	1.04		1
Total Tetra-Furans	ND	U	0.690	10.2			1
Total Penta-Furans	ND	U	0.545	25.5			1
Total Hexa-Furans	ND	U	0.191	25.5			1
Total Hepta-Furans	ND	U	0.476	25.5			1

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	Percent
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	681.605	68		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	600.424	60		40-135	1.56	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1810.870	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1605.222	64		40-135	1.03	1.068
13C-OCDD	5000	2762.208	55		40-135	0.92	1.146
13C-2,3,7,8-TCDF	1000	594.302	59		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	616.696	62		40-135	1.56	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1678.519	67		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1447.825	58		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	672.757	84		40-135	NA	1.009

TWD 12/13/2010

Analytical Report

FB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.715	1	1	
1,2,3,7,8-PeCDD	ND	0.539	1	1	
1,2,3,4,7,8-HxCDD	ND	0.438	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.391	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.459	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.17**	0.393	1	0.01	0.0117
OCDD	**8.02**	1.21	1	0.0003	0.00241
2,3,7,8-TCDF	ND	0.690	1	0.1	
1,2,3,7,8-PeCDF	ND	0.588	1	0.03	
2,3,4,7,8-PeCDF	ND	0.545	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.193	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.191	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.274	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.215	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.476	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.626	1	0.01	
OCDF	ND	0.687	1	0.0003	
		Total TEQ			0.0141

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1000
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	SS IS66DP270001	**Units:**	ng/Kg
Lab Code:	E1001042-002	**Basis:**	Dry
		Percent Solids:	92.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 2331
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	11.648g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209727	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0329	0.928			1
1,2,3,7,8-PeCDD	**0.454**	J	0.0332	2.32	1.99	1.001	1
1,2,3,4,7,8-HxCDD	**0.767**	J	0.0609	2.32	1.30	0.998	1
1,2,3,6,7,8-HxCDD	**1.46**	J	0.0534	2.32	1.37	1.000	1
1,2,3,7,8,9-HxCDD	**1.53**	J	0.0583	2.32	1.20	1.008	1
1,2,3,4,6,7,8-HpCDD	**35.8**		0.176	2.32	1.02	1.000	1
OCDD	**1820**		0.0255	4.64	0.90	1.000	1
2,3,7,8-TCDF	**1.97**		0.0634	0.928	0.81	1.001	1
1,2,3,7,8-PeCDF	**0.655**	J	0.0504	2.32	1.21	1.001	1
2,3,4,7,8-PeCDF	**0.920**	J	0.0498	2.32	1.41	1.025	1
1,2,3,4,7,8-HxCDF	**1.74**	J	0.0637	2.32	1.38	1.000	1
1,2,3,6,7,8-HxCDF	**0.696**	J	0.0606	2.32	1.21	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0791	2.32			1
2,3,4,6,7,8-HxCDF	**0.764**	J	0.0679	2.32	1.19	1.017	1
1,2,3,4,6,7,8-HpCDF	**4.12**		0.0481	2.32	1.10	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.375**	J	0.0652	2.32	1.04	1.033	1
OCDF	**9.53**		0.0672	4.64	0.94	1.004	1
Total Tetra-Dioxins	**1.66**		0.0329	0.928	0.72		1
Total Penta-Dioxins	**5.12**		0.0332	2.32	1.60		1
Total Hexa-Dioxins	**19.2**		0.0534	2.32	1.21		1
Total Hepta-Dioxins	**90.7**		0.176	2.32	1.04		1
Total Tetra-Furans	**9.41**		0.0634	0.928	0.85		1
Total Penta-Furans	**12.5**		0.0498	2.32	1.41		1
Total Hexa-Furans	**9.37**		0.0606	2.32	1.24		1
Total Hepta-Furans	**6.94**		0.0481	2.32	1.10		1

TWD 12/13/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1000
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP270001 SS	**Units:**	Percent
Lab Code:	E1001042-002	**Basis:**	Dry
		Percent Solids:	92.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 2331
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	11.648g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209727	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	607.379	61		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	745.855	75		40-135	1.56	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1342.671	54		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1263.050	51		40-135	1.07	1.069
13C-OCDD	5000	1660.077	33	Y	40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	593.208	59		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	888.853	89		40-135	1.59	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1555.726	62		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1320.520	53		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	607.826	76		40-135	NA	1.009

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1000
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66SS270001	**Units:**	ng/Kg
Lab Code:	E1001042-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0329	1	1	
1,2,3,7,8-PeCDD	**0.454**	0.0332	1	1	0.454
1,2,3,4,7,8-HxCDD	**0.767**	0.0609	1	0.1	0.0767
1,2,3,6,7,8-HxCDD	**1.46**	0.0534	1	0.1	0.146
1,2,3,7,8,9-HxCDD	**1.53**	0.0583	1	0.1	0.153
1,2,3,4,6,7,8-HpCDD	**35.8**	0.176	1	0.01	0.358
OCDD	**1820**	0.0255	1	0.0003	0.546
2,3,7,8-TCDF	**0.947**	0.329	1	0.1	0.0947
1,2,3,7,8-PeCDF	**0.655**	0.0504	1	0.03	0.0197
2,3,4,7,8-PeCDF	**0.920**	0.0498	1	0.3	0.276
1,2,3,4,7,8-HxCDF	**1.74**	0.0637	1	0.1	0.174
1,2,3,6,7,8-HxCDF	**0.696**	0.0606	1	0.1	0.0696
1,2,3,7,8,9-HxCDF	ND	0.0791	1	0.1	
2,3,4,6,7,8-HxCDF	**0.764**	0.0679	1	0.1	0.0764
1,2,3,4,6,7,8-HpCDF	**4.12**	0.0481	1	0.01	0.0412
1,2,3,4,7,8,9-HpCDF	**0.375**	0.0652	1	0.01	0.00375
OCDF	**9.53**	0.0672	1	0.0003	0.00286
		Total TEQ			2.49

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1000
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66D270001 SS	**Units:**	ng/Kg
Lab Code:	E1001042-002	**Basis:**	Dry
		Percent Solids:	92.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 1401
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	11.648g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137864	**Blank File Name:**	U137855
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137854

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	0.947		0.329	0.928	0.88	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	296.476	30	Y	40-135	0.78	1.061
37Cl-2,3,7,8-TCDD	800	612.215	77		40-135	NA	0.988

already flagged J-LR TWD
No!

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1020
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP270910 SS	**Units:**	ng/Kg
Lab Code:	E1001042-003	**Basis:**	Dry
		Percent Solids:	82.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0019
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.913g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209728	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0765	1.11			1
1,2,3,7,8-PeCDD	ND	U	0.0331	2.76			1
1,2,3,4,7,8-HxCDD	**0.494**	J	0.0627	2.76	1.29	0.999	1
1,2,3,6,7,8-HxCDD	**2.17**	J	0.0550	2.76	1.09	1.000	1
1,2,3,7,8,9-HxCDD	**3.51**	K	0.0601	2.76	0.98	1.008	1
1,2,3,4,6,7,8-HpCDD	**148**		0.208	2.76	1.03	1.000	1
OCDD	**5040**	E	0.0749	5.53	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.0554	1.11			1
1,2,3,7,8-PeCDF	ND	U	0.0372	2.76			1
2,3,4,7,8-PeCDF	ND	U	0.0367	2.76			1
1,2,3,4,7,8-HxCDF	ND	U	0.0291	2.76			1
1,2,3,6,7,8-HxCDF	ND	U	0.0277	2.76			1
1,2,3,7,8,9-HxCDF	ND	U	0.0361	2.76			1
2,3,4,6,7,8-HxCDF	ND	U	0.0310	2.76			1
1,2,3,4,6,7,8-HpCDF	**0.137**	J	0.0489	2.76	0.93	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0663	2.76			1
OCDF	**0.841**	J	0.0847	5.53	0.86	1.004	1
Total Tetra-Dioxins	**1.50**		0.0765	1.11	0.79		1
Total Penta-Dioxins	**5.25**		0.0331	2.76	1.49		1
Total Hexa-Dioxins	**64.1**		0.0550	2.76	1.27		1
Total Hepta-Dioxins	**362**		0.208	2.76	1.06		1
Total Tetra-Furans	ND	U	0.0554	1.11			1
Total Penta-Furans	**0.0896**	J	0.0367	2.76	1.40		1
Total Hexa-Furans	**0.394**	J	0.0277	2.76	1.07		1
Total Hepta-Furans	**0.137**	J	0.0489	2.76	0.93		1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1020
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66~~DP~~SS270910	**Units:**	Percent
Lab Code:	E1001042-003	**Basis:**	Dry
		Percent Solids:	82.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0019
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.913g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209728	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	503.035	50		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	644.569	64		40-135	1.62	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1361.840	54		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1531.459	61		40-135	1.07	1.069
13C-OCDD	5000	2083.045	42		40-135	0.93	1.146
13C-2,3,7,8-TCDF	1000	546.541	55		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	682.591	68		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1690.621	68		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1610.024	64		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	532.487	67		40-135	NA	1.010

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1020
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP270910 SS	**Units:**	ng/Kg
Lab Code:	E1001042-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0765	1	1	
1,2,3,7,8-PeCDD	ND	0.0331	1	1	
1,2,3,4,7,8-HxCDD	**0.494**	0.0627	1	0.1	0.0494
1,2,3,6,7,8-HxCDD	**2.17**	0.0550	1	0.1	0.217
1,2,3,7,8,9-HxCDD	**3.51**	0.0601	1	0.1	0.351
1,2,3,4,6,7,8-HpCDD	**148**	0.208	1	0.01	1.48
OCDD	**5040**	0.0749	1	0.0003	1.51
2,3,7,8-TCDF	ND	0.0554	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0372	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0367	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0291	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0277	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0361	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0310	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.137**	0.0489	1	0.01	0.00137
1,2,3,4,7,8,9-HpCDF	ND	0.0663	1	0.01	
OCDF	**0.841**	0.0847	1	0.0003	0.000252
		Total TEQ			3.61

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1150
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP260001	**Units:**	ng/Kg
Lab Code:	E1001042-004	**Basis:**	Dry
		Percent Solids:	90.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0108
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.030g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209729	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0526	1.10			1
1,2,3,7,8-PeCDD	0.599	JK	0.0475	2.74	1.24	1.000	1
1,2,3,4,7,8-HxCDD	1.70	J	0.0920	2.74	1.40	0.998	1
1,2,3,6,7,8-HxCDD	2.57	J	0.0807	2.74	1.17	1.000	1
1,2,3,7,8,9-HxCDD	2.00	J	0.0881	2.74	1.36	1.008	1
1,2,3,4,6,7,8-HpCDD	85.3		0.312	2.74	1.03	1.000	1
OCDD	3610	E	0.145	5.48	0.90	1.000	1
2,3,7,8-TCDF	2.05		0.0844	1.10	0.81	1.001	1
1,2,3,7,8-PeCDF	0.722	J	0.0512	2.74	1.40	1.001	1
2,3,4,7,8-PeCDF	0.880	J	0.0506	2.74	1.71	1.025	1
1,2,3,4,7,8-HxCDF	1.38	J	0.109	2.74	1.15	1.000	1
1,2,3,6,7,8-HxCDF	0.592	JK	0.104	2.74	1.57	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.136	2.74			1
2,3,4,6,7,8-HxCDF	0.662	JK	0.116	2.74	1.51	1.017	1
1,2,3,4,6,7,8-HpCDF	3.61		0.0774	2.74	0.91	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.105	2.74			1
OCDF	7.71		0.0917	5.48	0.97	1.004	1
Total Tetra-Dioxins	0.409	J	0.0526	1.10	0.72		1
Total Penta-Dioxins	5.87		0.0475	2.74	1.45		1
Total Hexa-Dioxins	36.7		0.0807	2.74	1.23		1
Total Hepta-Dioxins	234		0.312	2.74	1.09		1
Total Tetra-Furans	9.50		0.0844	1.10	0.86		1
Total Penta-Furans	12.5		0.0506	2.74	1.49		1
Total Hexa-Furans	6.73		0.104	2.74	1.20		1
Total Hepta-Furans	5.81		0.0774	2.74	0.91		1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66386329	**Date Collected:**	9/24/10 1150
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP260001 SS	**Units:**	Percent
Lab Code:	E1001042-004	**Basis:**	Dry
		Percent Solids:	90.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0108
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.030g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209729	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	582.759	58		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	696.736	70		40-135	1.61	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1328.685	53		40-135	1.30	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1265.838	51		40-135	1.09	1.068
13C-OCDD	5000	1776.117	36	Y	40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	569.010	57		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	805.073	81		40-135	1.64	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1598.669	64		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1369.359	55		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	579.614	72		40-135	NA	1.010

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1150
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	1S66DP260001 SS	**Units:**	ng/Kg
Lab Code:	E1001042-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration	
2,3,7,8-TCDD	ND	0.0526	1	1		
1,2,3,7,8-PeCDD	**0.599**	0.0475	1	1	0.599	
1,2,3,4,7,8-HxCDD	**1.70**	0.0920	1	0.1	0.170	
1,2,3,6,7,8-HxCDD	**2.57**	0.0807	1	0.1	0.257	
1,2,3,7,8,9-HxCDD	**2.00**	0.0881	1	0.1	0.200	
1,2,3,4,6,7,8-HpCDD	**85.3**	0.312	1	0.01	0.853	
OCDD	**3610**	0.145	1	0.0003	1.08	
2,3,7,8-TCDF	**1.00**	0.517	1	0.1	0.100	
1,2,3,7,8-PeCDF	**0.722**	0.0512	1	0.03	0.0217	
2,3,4,7,8-PeCDF	**0.880**	0.0506	1	0.3	0.264	
1,2,3,4,7,8-HxCDF	**1.38**	0.109	1	0.1	0.138	
1,2,3,6,7,8-HxCDF	**0.592**	0.104	1	0.1	0.0592	
1,2,3,7,8,9-HxCDF	ND	0.136	1	0.1		
2,3,4,6,7,8-HxCDF	**0.662**	0.116	1	0.1	0.0662	~
1,2,3,4,6,7,8-HpCDF	**3.61**	0.0774	1	0.01	0.0361	
1,2,3,4,7,8,9-HpCDF	ND	0.105	1	0.01		
OCDF	**7.71**	0.0917	1	0.0003	0.00231	
		Total TEQ			3.85	

2005 WHO TEFs. ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1150
Sample Matrix:	Soil	**Date Received:**	9.28/10
Sample Name:	IS66~~DP~~SS260001	**Units:**	ng/Kg
Lab Code:	E1001042-004	**Basis:**	Dry
		Percent Solids:	90.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 1438
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.030g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137865	**Blank File Name:**	U137855
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137854

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**1.00**	J	0.517	1.10	0.87	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	304.283	30	Y	40-135	0.81	1.062
37Cl-2,3,7,8-TCDD	800	587.980	73		40-135	NA	0.988

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1215
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	SB IS66DP260708	**Units:**	ng/Kg
Lab Code:	E1001042-005	**Basis:**	Dry
		Percent Solids:	86.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0156
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	12.222g	**Instrument Name:**	F-HRMS-04
		GC Column:	DB-5
Data File Name:	P209730	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0375	0.947			1
1,2,3,7,8-PeCDD	ND	U	0.0230	2.37			1
1,2,3,4,7,8-HxCDD	**0.130**	J	0.0414	2.37	1.18	0.998	1
1,2,3,6,7,8-HxCDD	**0.197**	J	0.0364	2.37	1.33	1.000	1
1,2,3,7,8,9-HxCDD	**0.352**	JX-EMPC	0.0397	2.37	1.56	1.008	1
1,2,3,4,6,7,8-HpCDD	**8.81**		0.0698	2.37	0.97 ok	1.000	1
OCDD	**386**		0.0715	4.73	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.0546	0.947			1
1,2,3,7,8-PeCDF	ND	U	0.0307	2.37			1
2,3,4,7,8-PeCDF	ND	U	0.0304	2.37			1
1,2,3,4,7,8-HxCDF	ND	U	0.0304	2.37			1
1,2,3,6,7,8-HxCDF	ND	U	0.0289	2.37			1
1,2,3,7,8,9-HxCDF	ND	U	0.0377	2.37			1
2,3,4,6,7,8-HxCDF	ND	U	0.0324	2.37			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0332	2.37			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0450	2.37			1
OCDF	**0.512**	JX-I215	0.0590	4.73	0.70	1.004	1
Total Tetra-Dioxins	ND	U	0.0375	0.947			1
Total Penta-Dioxins	ND	U	0.0230	2.37			1
Total Hexa-Dioxins	**12.2**		0.0364	2.37	1.23		1
Total Hepta-Dioxins	**40.2**		0.0698	2.37	1.04		1
Total Tetra-Furans	ND	U	0.0546	0.947			1
Total Penta-Furans	ND	U	0.0304	2.37			1
Total Hexa-Furans	ND	U	0.0289	2.37			1
Total Hepta-Furans	ND	U	0.0332	2.37			1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1215
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66~~DP~~SB260708	**Units:**	Percent
Lab Code:	E1001042-005	**Basis:**	Dry
		Percent Solids:	86.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0156
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	12.222g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209730	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	554.495	55		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	727.383	73		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1658.111	66		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1666.143	67		40-135	1.09	1.068
13C-OCDD	5000	2079.933	42		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	582.349	58		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	799.328	80		40-135	1.57	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1936.058	77		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1882.447	75		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	572.822	72		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1215
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DF260708 SB	**Units:**	ng/Kg
Lab Code:	E1001042-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0375	1	1	
1,2,3,7,8-PeCDD	ND	0.0230	1	1	
1,2,3,4,7,8-HxCDD	**0.130**	0.0414	1	0.1	0.0130
1,2,3,6,7,8-HxCDD	**0.197**	0.0364	1	0.1	0.0197
1,2,3,7,8,9-HxCDD	**0.352**	0.0397	1	0.1	0.0352
1,2,3,4,6,7,8-HpCDD	**8.81**	0.0698	1	0.01	0.0881
OCDD	**386**	0.0715	1	0.0003	0.116
2,3,7,8-TCDF	ND	0.0546	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0307	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0304	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0304	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0289	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0377	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0324	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0332	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0450	1	0.01	
OCDF	**0.512**	0.0590	1	0.0003	0.000154
		Total TEQ			0.272

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1510
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66SP290001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001042-006	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0245
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.052g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209731	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0424	1.06			1
1,2,3,7,8-PeCDD	**0.358**	~~JK~~ X-EMPC	0.0250	2.66	2.13	1.000	1
1,2,3,4,7,8-HxCDD	**0.769**	J	0.154	2.66	1.29	0.998	1
1,2,3,6,7,8-HxCDD	**1.15**	~~JK~~ X-IRIS EMPC	0.135	2.66	1.50	1.000	1
1,2,3,7,8,9-HxCDD	**0.972**	J	0.147	2.66	1.32	1.008	1
1,2,3,4,6,7,8-HpCDD	**36.7**		0.104	2.66	1.09	1.000	1
OCDD	J-ISL **2230**	~~E~~ J-CR	0.0842	5.31	0.90	1.000	1
2,3,7,8-TCDF	**1.43**	C Exclude-OT	0.0467	1.06	0.72	1.001	1
1,2,3,7,8-PeCDF	**0.529**	J	0.0410	2.66	1.64	1.000	1
2,3,4,7,8-PeCDF	**0.741**	J	0.0405	2.66	1.67	1.025	1
1,2,3,4,7,8-HxCDF	**1.25**	J	0.0505	2.66	1.33	1.000	1
1,2,3,6,7,8-HxCDF	**0.420**	~~JK~~ X-IRIS	0.0481	2.66	0.96	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.0628	2.66			1
2,3,4,6,7,8-HxCDF	**0.330**	~~JK~~ X-IRIS	0.0538	2.66	1.02	1.017	1
1,2,3,4,6,7,8-HpCDF	**2.99**		0.0437	2.66	1.08	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.142**	J	0.0593	2.66	1.01	1.033	1
OCDF	**6.72**		0.0854	5.31	0.92	1.004	1
Total Tetra-Dioxins	**0.784**	J	0.0424	1.06	0.80		1
Total Penta-Dioxins	**3.97**		0.0250	2.66	1.60		1
Total Hexa-Dioxins	**14.6**		0.135	2.66	1.25		1
Total Hepta-Dioxins	**86.3**		0.104	2.66	1.04		1
Total Tetra-Furans	**4.82**		0.0467	1.06	0.85		1
Total Penta-Furans	**8.40**		0.0405	2.66	1.68		1
Total Hexa-Furans	**4.98**		0.0481	2.66	1.06		1
Total Hepta-Furans	**5.10**		0.0437	2.66	1.08		1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1510
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP290001 SS	**Units:**	Percent
Lab Code:	E1001042-006	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0245
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.052g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209731	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	613.951	61		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	803.970	80		40-135	1.61	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1481.712	59		40-135	1.30	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1483.253	59		40-135	1.07	1.068
13C-OCDD	5000	1809.054	36	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	671.587	67		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	876.878	88		40-135	1.61	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1692.831	68		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1482.426	59		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	612.336	77		40-135	NA	1.010

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1510
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66SS290001	**Units:**	ng/Kg
Lab Code:	E1001042-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0424	1	1	
1,2,3,7,8-PeCDD	**0.358**	0.0250	1	1	0.358
1,2,3,4,7,8-HxCDD	**0.769**	0.154	1	0.1	0.0769
1,2,3,6,7,8-HxCDD	**1.15**	0.135	1	0.1	0.115
1,2,3,7,8,9-HxCDD	**0.972**	0.147	1	0.1	0.0972
1,2,3,4,6,7,8-HpCDD	**36.7**	0.104	1	0.01	0.367
OCDD	**2230**	0.0842	1	0.0003	0.669
2,3,7,8-TCDF	**0.813**	0.293	1	0.1	0.0813
1,2,3,7,8-PeCDF	**0.529**	0.0410	1	0.03	0.0159
2,3,4,7,8-PeCDF	**0.741**	0.0405	1	0.3	0.222
1,2,3,4,7,8-HxCDF	**1.25**	0.0505	1	0.1	0.125
1,2,3,6,7,8-HxCDF	**0.420**	0.0481	1	0.1	0.0420
1,2,3,7,8,9-HxCDF	ND	0.0628	1	0.1	
2,3,4,6,7,8-HxCDF	**0.330**	0.0538	1	0.1	0.0330
1,2,3,4,6,7,8-HpCDF	**2.99**	0.0437	1	0.01	0.0299
1,2,3,4,7,8,9-HpCDF	**0.142**	0.0593	1	0.01	0.00142
OCDF	**6.72**	0.0854	1	0.0003	0.00202
		Total TEQ			2.24

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1510
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66SS290001	**Units:**	ng/Kg
Lab Code:	E1001042-006	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 1515
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.052g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137866	**Blank File Name:**	U137855
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137854

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.813**	J	0.293	1.06	0.88	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	383.805	38	Y	40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	571.072	71		40-135	NA	0.988

OK 10:1 met

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1540
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	IS66DP291617 SB	**Units:**	ng/Kg
Lab Code:	E1001042-007	**Basis:**	Dry
		Percent Solids:	82.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0333
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.432g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209732	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.766**	J	0.0634	1.17	0.76	1.001	1
1,2,3,7,8-PeCDD	**0.304**	JK X-EMPC	0.0537	2.92	1.99	1.000	1
1,2,3,4,7,8-HxCDD	**0.285**	J	0.108	2.92	1.35	0.998	1
1,2,3,6,7,8-HxCDD	**0.883**	JK X-EMPC	0.0947	2.92	1.61	1.000	1
1,2,3,7,8,9-HxCDD	**2.04**	J	0.104	2.92	1.33	1.007	1
1,2,3,4,6,7,8-HpCDD	**37.7**		0.323	2.92	1.05	1.000	1
OCDD	**2220**	PJ-ISL	0.0765	5.85	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.0696	1.17			1
1,2,3,7,8-PeCDF	ND	U	0.0380	2.92			1
2,3,4,7,8-PeCDF	ND	U	0.0376	2.92			1
1,2,3,4,7,8-HxCDF	ND	U	0.0282	2.92			1
1,2,3,6,7,8-HxCDF	ND	U	0.0268	2.92			1
1,2,3,7,8,9-HxCDF	ND	U	0.0350	2.92			1
2,3,4,6,7,8-HxCDF	ND	U	0.0301	2.92			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0355	2.92			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0481	2.92			1
OCDF	**0.506**	J	0.0850	5.85	0.86	1.004	1
Total Tetra-Dioxins	**22.4**		0.0634	1.17	0.67		1
Total Penta-Dioxins	**15.1**		0.0537	2.92	1.47		1
Total Hexa-Dioxins	**70.7**		0.0947	2.92	1.25		1
Total Hepta-Dioxins	**228**		0.323	2.92	1.05		1
Total Tetra-Furans	ND	U	0.0696	1.17			1
Total Penta-Furans	ND	U	0.0376	2.92			1
Total Hexa-Furans	ND	U	0.0268	2.92			1
Total Hepta-Furans	ND	U	0.0355	2.92			1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1540
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	SB IS66~~DP~~291617	**Units:**	Percent
Lab Code:	E1001042-007	**Basis:**	Dry
		Percent Solids:	82.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 0333
Prep Method:	Method	**Date Extracted:**	9/29/10
Sample Amount:	10.432g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209732	**Blank File Name:**	P110848
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	572.443	57		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	710.999	71		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1545.471	62		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1348.944	54		40-135	1.07	1.068
13C-OCDD	5000	1902.672	38	Y	40-135	0.92	1.146
13C-2,3,7,8-TCDF	1000	648.533	65		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	785.213	79		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1811.938	72		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1700.863	68		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	595.919	74		40-135	NA	1.010

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/24/10 1540
Sample Matrix:	Soil	**Date Received:**	9/28/10
Sample Name:	SB IS66DF291617	**Units:**	ng/Kg
Lab Code:	E1001042-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.766**	0.0634	1	1	0.766
1,2,3,7,8-PeCDD	**0.304**	0.0537	1	1	0.304
1,2,3,4,7,8-HxCDD	**0.285**	0.108	1	0.1	0.0285
1,2,3,6,7,8-HxCDD	**0.883**	0.0947	1	0.1	0.0883
1,2,3,7,8,9-HxCDD	**2.04**	0.104	1	0.1	0.204
1,2,3,4,6,7,8-HpCDD	**37.7**	0.323	1	0.01	0.377
OCDD	**2220**	0.0765	1	0.0003	0.666
2,3,7,8-TCDF	ND	0.0696	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0380	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0376	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0282	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0268	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0350	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0301	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0355	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0481	1	0.01	
OCDF	**0.506**	0.0850	1	0.0003	0.000152
		Total TEQ			2.43

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1505
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66MW050910	**Units:**	pg/L
Lab Code:	E1001042-008	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 0051
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209704	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.638	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.293	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.594	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.530	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.621	25.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.513	25.5			1
OCDD	3.83	BJK	1.34	51.0	0.73	1.000	1
2,3,7,8-TCDF	ND	U	0.688	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.443	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.411	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.343	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.340	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.489	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.383	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.309	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.406	25.5			1
OCDF	ND	U	0.848	51.0			1
Total Tetra-Dioxins	ND	U	0.638	10.2			1
Total Penta-Dioxins	ND	U	0.293	25.5			1
Total Hexa-Dioxins	ND	U	0.530	25.5			1
Total Hepta-Dioxins	ND	U	0.513	25.5			1
Total Tetra-Furans	ND	U	0.688	10.2			1
Total Penta-Furans	ND	U	0.411	25.5			1
Total Hexa-Furans	ND	U	0.340	25.5			1
Total Hepta-Furans	ND	U	0.309	25.5			1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1505
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66GW050910	**Units:**	Percent
Lab Code:	E1001042-008	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 0051
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209704	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	586.537	59		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	511.344	51		40-135	1.55	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1508.134	60		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1260.426	50		40-135	1.05	1.068
13C-OCDD	5000	1863.081	37	Y	40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	506.075	51		40-135	0.76	0.977
13C-1,2,3,7,8-PeCDF	1000	520.568	52		40-135	1.57	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1350.268	54		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1175.164	47		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	566.952	71		40-135	NA	1.009

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1505
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66~~MW~~GW050910	**Units:**	pg/L
Lab Code:	E1001042-008	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.638	1	1	
1,2,3,7,8-PeCDD	ND	0.293	1	1	
1,2,3,4,7,8-HxCDD	ND	0.594	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.530	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.621	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.513	1	0.01	
OCDD	**3.83**	1.34	1	0.0003	0.00115
2,3,7,8-TCDF	ND	0.688	1	0.1	
1,2,3,7,8-PeCDF	ND	0.443	1	0.03	
2,3,4,7,8-PeCDF	ND	0.411	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.343	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.340	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.489	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.383	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.309	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.406	1	0.01	
OCDF	ND	0.848	1	0.0003	
		Total TEQ			0.00115

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1445
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66FB092710	**Units:**	pg/L
Lab Code:	E1001042-009	**Basis:**	NA

FB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1256
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209713

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.271	9.80			1
1,2,3,7,8-PeCDD	ND	U	0.301	24.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.288	24.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.252	24.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.275	24.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.295	24.5			1
OCDD	3.54	B	0.421	49.0	0.98	1.000	1
2,3,7,8-TCDF	ND	U	0.411	9.80			1
1,2,3,7,8-PeCDF	ND	U	0.381	24.5			1
2,3,4,7,8-PeCDF	ND	U	0.377	24.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.110	24.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.105	24.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.137	24.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.117	24.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.228	24.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.309	24.5			1
OCDF	ND	U	0.568	49.0			1
Total Tetra-Dioxins	ND	U	0.271	9.80			1
Total Penta-Dioxins	ND	U	0.301	24.5			1
Total Hexa-Dioxins	ND	U	0.252	24.5			1
Total Hepta-Dioxins	ND	U	0.295	24.5			1
Total Tetra-Furans	ND	U	0.411	9.80			1
Total Penta-Furans	ND	U	0.377	24.5			1
Total Hexa-Furans	ND	U	0.105	24.5			1
Total Hepta-Furans	ND	U	0.228	24.5			1

MB-MBL

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1445
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66FB092710	**Units:**	Percent
Lab Code:	E1001042-009	**Basis:**	NA

FB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1256
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	641.773	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	747.011	75		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1812.083	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1602.195	64		40-135	1.06	1.068
13C-OCDD	5000	2165.257	43		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	607.162	61		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	697.334	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1658.315	66		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1484.918	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.137	81		40-135	NA	1.010

TWD 12/13/2010

FB

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1445
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66FB092710	**Units:**	pg/L
Lab Code:	E1001042-009	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.271	1	1	
1,2,3,7,8-PeCDD	ND	0.301	1	1	
1,2,3,4,7,8-HxCDD	ND	0.288	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.252	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.275	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.295	1	0.01	
OCDD	3.54	0.421	1	0.0003	0.00106
2,3,7,8-TCDF	ND	0.411	1	0.1	
1,2,3,7,8-PeCDF	ND	0.381	1	0.03	
2,3,4,7,8-PeCDF	ND	0.377	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.117	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.228	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.309	1	0.01	
OCDF	ND	0.568	1	0.0003	
		Total TEQ			0.00106

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1700
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092710	**Units:**	pg/L
Lab Code:	E1001042-010	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1344
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209716	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209713

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.308	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.311	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.173	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.153	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.166	26.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.383	26.0			1
OCDD	2.37	B/K	0.587	52.1	1.05	1.000	1
2,3,7,8-TCDF	ND	U	0.460	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.360	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.356	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.146	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.139	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.182	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.156	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.309	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.418	26.0			1
OCDF	ND	U	0.857	52.1			1
Total Tetra-Dioxins	ND	U	0.308	10.4			1
Total Penta-Dioxins	ND	U	0.311	26.0			1
Total Hexa-Dioxins	ND	U	0.153	26.0			1
Total Hepta-Dioxins	ND	U	0.383	26.0			1
Total Tetra-Furans	ND	U	0.460	10.4			1
Total Penta-Furans	ND	U	0.356	26.0			1
Total Hexa-Furans	ND	U	0.139	26.0			1
Total Hepta-Furans	ND	U	0.309	26.0			1

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386529	**Date Collected:**	9/27/10 1700
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092710	**Units:**	Percent
Lab Code:	E1001042-010	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1344
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209716	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	631.502	63		40-135	0.81	1.008
13C-1,2,3,7,8-PeCDD	1000	714.090	71		40-135	1.59	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1778.581	71		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1497.348	60		40-135	1.05	1.068
13C-OCDD	5000	1797.398	36	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	610.183	61		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	652.280	65		40-135	1.56	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1630.309	65		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1365.514	55		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	633.521	79		40-135	NA	1.009

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1700
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66EB092710	**Units:**	pg/L
Lab Code:	E1001042-010	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.308	1	1	
1,2,3,7,8-PeCDD	ND	0.311	1	1	
1,2,3,4,7,8-HxCDD	ND	0.173	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.153	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.166	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.383	1	0.01	
OCDD	**2.37**	0.587	1	0.0003	0.000711
2,3,7,8-TCDF	ND	0.460	1	0.1	
1,2,3,7,8-PeCDF	ND	0.360	1	0.03	
2,3,4,7,8-PeCDF	ND	0.356	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.146	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.139	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.182	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.156	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.309	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.418	1	0.01	
OCDF	ND	0.857	1	0.0003	
		Total TEQ			0.000711

2005 WHO TEFs, ND = 0

TWD 12/13/2010

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1500
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP280001 SS	**Units:**	ng/Kg
Lab Code:	E1001043-001	**Basis:**	Dry
		Percent Solids:	91.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2317
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.199g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110879	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0746	1.08			1
1,2,3,7,8-PeCDD	**0.124**	J	0.0680	2.69	2.36	1.001	1
1,2,3,4,7,8-HxCDD	**0.429**	J	0.104	2.69	1.45	0.998	1
1,2,3,6,7,8-HxCDD	**0.703**	J	0.0813	2.69	1.41	1.000	1
1,2,3,7,8,9-HxCDD	**0.787**	J	0.109	2.69	1.24	1.008	1
1,2,3,4,6,7,8-HpCDD	**37.7**	B	0.0726	2.69	1.06	1.000	1
OCDD	**3530**	BJ	0.132	5.38	0.90	1.000	1
2,3,7,8-TCDF	**0.171**	CJ	0.101	1.08	0.56	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0640	2.69			1
2,3,4,7,8-PeCDF	ND	U	0.0567	2.69			1
1,2,3,4,7,8-HxCDF	**0.430**	J	0.0600	2.69	1.20	1.000	1
1,2,3,6,7,8-HxCDF	**0.155**	J	0.0521	2.69	1.45	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0856	2.69			1
2,3,4,6,7,8-HxCDF	**0.133**	J	0.0662	2.69	1.01	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.85**	J	0.0588	2.69	1.16	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.208**	J	0.0850	2.69	1.18	1.034	1
OCDF	**4.60**	BJ	0.120	5.38	0.91	1.004	1
Total Tetra-Dioxins	ND	U	0.0746	1.08			1
Total Penta-Dioxins	**0.824**	J	0.0680	2.69	1.45		1
Total Hexa-Dioxins	**8.41**		0.0813	2.69	1.23		1
Total Hepta-Dioxins	**87.0**		0.0726	2.69	1.07		1
Total Tetra-Furans	**0.171**	J	0.101	1.08	0.75		1
Total Penta-Furans	**0.511**	J	0.0567	2.69	1.71		1
Total Hexa-Furans	**2.42**	J	0.0521	2.69	1.08		1
Total Hepta-Furans	**4.92**		0.0588	2.69	1.16		1

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1500
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP280001 SS	**Units:**	Percent
Lab Code:	E1001043-001	**Basis:**	Dry
		Percent Solids:	91.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2317
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.199g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110879	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	629.560	63		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	606.345	61		40-135	1.60	1.184
13C-1,2,3,6,7,8-HxCDD	2500	1555.288	62		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1419.828	57		40-135	1.05	1.069
13C-OCDD	5000	2352.597	47		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	525.290	53		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	669.350	67		40-135	1.60	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1572.159	63		40-135	0.54	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1332.935	53		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	583.172	73		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1500
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66SP280001	**Units:**	ng/Kg
Lab Code:	E1001043-001	**Basis:**	Dry

SS

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0746	1	1	
1,2,3,7,8-PeCDD	**0.124**	0.0680	1	1	0.124
1,2,3,4,7,8-HxCDD	**0.429**	0.104	1	0.1	0.0429
1,2,3,6,7,8-HxCDD	**0.703**	0.0813	1	0.1	0.0703
1,2,3,7,8,9-HxCDD	**0.787**	0.109	1	0.1	0.0787
1,2,3,4,6,7,8-HpCDD	**37.7**	0.0726	1	0.01	0.377
OCDD	**3530**	0.132	1	0.0003	1.06
2,3,7,8-TCDF	ND	0.257	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0640	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0567	1	0.3	
1,2,3,4,7,8-HxCDF	**0.430**	0.0600	1	0.1	0.0430
1,2,3,6,7,8-HxCDF	**0.155**	0.0521	1	0.1	0.0155
1,2,3,7,8,9-HxCDF	ND	0.0856	1	0.1	
2,3,4,6,7,8-HxCDF	**0.133**	0.0662	1	0.1	0.0133
1,2,3,4,6,7,8-HpCDF	**1.85**	0.0588	1	0.01	0.0185
1,2,3,4,7,8,9-HpCDF	**0.208**	0.0850	1	0.01	0.00208
OCDF	**4.60**	0.120	1	0.0003	0.00138
		Total TEQ			1.85

2005 WHO TEFs, ND = 0

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1500
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP280001 SS	**Units:**	ng/Kg
Lab Code:	E1001043-001	**Basis:**	Dry
		Percent Solids:	91.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1041
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.199g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137878	**Blank File Name:**	U137874
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137873

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.257	1.08			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	493.100	49		40-135	0.81	1.061
37Cl-2,3,7,8-TCDD	800	548.481	69		40-135	NA	0.989

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1530
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66~~DP~~SB280607	**Units:**	ng/Kg
Lab Code:	E1001043-002	**Basis:**	Dry
		Percent Solids:	89.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2229
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.809g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110878	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0670	1.03			1
1,2,3,7,8-PeCDD	ND	U	0.0843	2.57			1
1,2,3,4,7,8-HxCDD	**0.163**	JK-EMPC	0.105	2.57	1.64	0.998	1
1,2,3,6,7,8-HxCDD	**0.229**	JK-EMPC	0.0821	2.57	1.00	1.000	1
1,2,3,7,8,9-HxCDD	**0.414**	J	0.110	2.57	1.12	1.008	1
1,2,3,4,6,7,8-HpCDD	**18.3**	B	0.0658	2.57	1.07	1.000	1
OCDD	**2630**	B~~J~~	0.138	5.15	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.0755	1.03			1
1,2,3,7,8-PeCDF	ND	U	0.0556	2.57			1
2,3,4,7,8-PeCDF	ND	U	0.0492	2.57			1
1,2,3,4,7,8-HxCDF	**0.0983**	J	0.0521	2.57	1.18	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0454	2.57			1
1,2,3,7,8,9-HxCDF	ND	U	0.0745	2.57			1
2,3,4,6,7,8-HxCDF	ND	U	0.0577	2.57			1
1,2,3,4,6,7,8-HpCDF	**0.232**	J	0.0729	2.57	0.88	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.106	2.57			1
OCDF	**0.606**	B~~J~~ B-MBL	0.135	5.15	0.94	1.004	1
Total Tetra-Dioxins	**0.165**	J	0.0670	1.03	0.76		1
Total Penta-Dioxins	**0.297**	J	0.0843	2.57	1.43		1
Total Hexa-Dioxins	**8.24**		0.0821	2.57	1.28		1
Total Hepta-Dioxins	**50.6**		0.0658	2.57	1.07		1
Total Tetra-Furans	ND	U	0.0755	1.03			1
Total Penta-Furans	ND	U	0.0492	2.57			1
Total Hexa-Furans	**0.252**	J	0.0454	2.57	1.18		1
Total Hepta-Furans	**0.312**	J	0.0729	2.57	1.09		1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1530
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP280607 SB	**Units:**	Percent
Lab Code:	E1001043-002	**Basis:**	Dry
		Percent Solids:	89.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2229
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.809g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110878	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	644.254	64		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	632.102	63		40-135	1.62	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1800.001	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1579.269	63		40-135	1.07	1.069
13C-OCDD	5000	2597.848	52		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	530.714	53		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	690.033	69		40-135	1.60	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1831.303	73		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1536.669	61		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	595.183	74		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1530
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	SB IS66DF280607	**Units:**	ng/Kg
Lab Code:	E1001043-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0670	1	1	
1,2,3,7,8-PeCDD	ND	0.0843	1	1	
1,2,3,4,7,8-HxCDD	**0.163**	0.105	1	0.1	0.0163
1,2,3,6,7,8-HxCDD	**0.229**	0.0821	1	0.1	0.0229
1,2,3,7,8,9-HxCDD	**0.414**	0.110	1	0.1	0.0414
1,2,3,4,6,7,8-HpCDD	**18.3**	0.0658	1	0.01	0.183
OCDD	**2630**	0.138	1	0.0003	0.789
2,3,7,8-TCDF	ND	0.0755	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0556	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0492	1	0.3	
1,2,3,4,7,8-HxCDF	**0.0983**	0.0521	1	0.1	0.00983
1,2,3,6,7,8-HxCDF	ND	0.0454	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0745	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0577	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.232**	0.0729	1	0.01	0.00232
1,2,3,4,7,8,9-HpCDF	ND	0.106	1	0.01	
OCDF	**0.606**	0.135	1	0.0003	0.000182
		Total TEQ			1.06

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1715
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66~~DP~~SS310001	**Units:**	ng/Kg
Lab Code:	E1001043-003	**Basis:**	Dry
		Percent Solids:	91.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2054
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.141g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110876	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0636	1.08			1
1,2,3,7,8-PeCDD	**0.220**	~~JK~~	0.0684	2.70	2.00	1.001	1
1,2,3,4,7,8-HxCDD	**0.367**	J	0.119	2.70	1.16	0.998	1
1,2,3,6,7,8-HxCDD	**0.640**	J	0.0934	2.70	1.29	1.000	1
1,2,3,7,8,9-HxCDD	**0.987**	J	0.125	2.70	1.36	1.009	1
1,2,3,4,6,7,8-HpCDD	**21.5**	~~B~~	0.148	2.70	1.05	1.000	1
OCDD	**1170**	~~BJ~~	0.143	5.41	0.90	1.000	1
2,3,7,8-TCDF	**1.25**	C	0.0765	1.08	0.74	1.000	1
1,2,3,7,8-PeCDF	**0.419**	J	0.0591	2.70	1.67	1.000	1
2,3,4,7,8-PeCDF	**0.459**	J	0.0524	2.70	1.47	1.025	1
1,2,3,4,7,8-HxCDF	**1.01**	J	0.0483	2.70	1.19	1.000	1
1,2,3,6,7,8-HxCDF	**0.386**	J	0.0420	2.70	1.09	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0689	2.70			1
2,3,4,6,7,8-HxCDF	**0.390**	~~JK~~	0.0534	2.70	1.49	1.018	1
1,2,3,4,6,7,8-HpCDF	**2.17**	J	0.0718	2.70	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.149**	~~JK~~	0.104	2.70	0.79	1.034	1
OCDF	**3.98**	~~BJ~~	0.119	5.41	0.94	1.004	1
Total Tetra-Dioxins	**0.425**	J	0.0636	1.08	0.87		1
Total Penta-Dioxins	**3.30**		0.0684	2.70	1.52		1
Total Hexa-Dioxins	**10.2**		0.0934	2.70	1.31		1
Total Hepta-Dioxins	**55.2**		0.148	2.70	1.07		1
Total Tetra-Furans	**5.27**		0.0765	1.08	0.75		1
Total Penta-Furans	**5.66**		0.0524	2.70	1.67		1
Total Hexa-Furans	**3.73**		0.0420	2.70	1.36		1
Total Hepta-Furans	**3.62**		0.0718	2.70	1.01		1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1715
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66SS310001	**Units:**	Percent
Lab Code:	E1001043-003	**Basis:**	Dry
		Percent Solids:	91.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2054
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.141g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110876	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	669.888	67		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	650.183	65		40-135	1.60	1.184
13C-1,2,3,6,7,8-HxCDD	2500	1655.035	66		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1523.927	61		40-135	1.08	1.069
13C-OCDD	5000	2370.241	47		40-135	0.89	1.148
13C-2,3,7,8-TCDF	1000	562.295	56		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	723.286	72		40-135	1.60	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1666.617	67		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1457.013	58		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	648.925	81		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1715
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66~~DP~~SS310001	**Units:**	ng/Kg
Lab Code:	E1001043-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0636	1	1	
1,2,3,7,8-PeCDD	**0.220**	0.0684	1	1	0.220
1,2,3,4,7,8-HxCDD	**0.367**	0.119	1	0.1	0.0367
1,2,3,6,7,8-HxCDD	**0.640**	0.0934	1	0.1	0.0640
1,2,3,7,8,9-HxCDD	**0.987**	0.125	1	0.1	0.0987
1,2,3,4,6,7,8-HpCDD	**21.5**	0.148	1	0.01	0.215
OCDD	**1170**	0.143	1	0.0003	0.351
2,3,7,8-TCDF	**0.834**	0.186	1	0.1	0.0834
1,2,3,7,8-PeCDF	**0.419**	0.0591	1	0.03	0.0126
2,3,4,7,8-PeCDF	**0.459**	0.0524	1	0.3	0.138
1,2,3,4,7,8-HxCDF	**1.01**	0.0483	1	0.1	0.101
1,2,3,6,7,8-HxCDF	**0.386**	0.0420	1	0.1	0.0386
1,2,3,7,8,9-HxCDF	ND	0.0689	1	0.1	
2,3,4,6,7,8-HxCDF	**0.390**	0.0534	1	0.1	0.0390
1,2,3,4,6,7,8-HpCDF	**2.17**	0.0718	1	0.01	0.0217
1,2,3,4,7,8,9-HpCDF	**0.149**	0.104	1	0.01	0.00149
OCDF	**3.98**	0.119	1	0.0003	0.00119
		Total TEQ			1.42

2005 WHO TEFs, ND = 0

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1715
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	SS 1S66SP310001	**Units:**	ng/Kg
Lab Code:	E1001043-003	**Basis:**	Dry
		Percent Solids:	91.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1118
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.141g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137879	**Blank File Name:**	U137874
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137873

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.834**	J	0.186	1.08	0.81	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	523.837	52		40-135	0.79	1.060
37Cl-2,3,7,8-TCDD	800	593.829	74		40-135	NA	0.988

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1730
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP311415 SB	**Units:**	ng/Kg
Lab Code:	E1001043-004	**Basis:**	Dry
		Percent Solids:	76.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2142
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.456g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110877	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.118	1.14			1
1,2,3,7,8-PeCDD	ND	U	0.104	2.85			1
1,2,3,4,7,8-HxCDD	ND	U	0.116	2.85			1
1,2,3,6,7,8-HxCDD	ND	U	0.0906	2.85			1
1,2,3,7,8,9-HxCDD	**1.95**	J	0.121	2.85	1.20	1.007	1
1,2,3,4,6,7,8-HpCDD	**12.0**	~~B~~	0.176	2.85	1.09	1.000	1
OCDD	**616**	~~B~~ K-BSH	0.173	5.70	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.104	1.14			1
1,2,3,7,8-PeCDF	ND	U	0.0829	2.85			1
2,3,4,7,8-PeCDF	ND	U	0.0734	2.85			1
1,2,3,4,7,8-HxCDF	ND	U	0.0721	2.85			1
1,2,3,6,7,8-HxCDF	ND	U	0.0627	2.85			1
1,2,3,7,8,9-HxCDF	ND	U	0.103	2.85			1
2,3,4,6,7,8-HxCDF	ND	U	0.0797	2.85			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0889	2.85			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.129	2.85			1
OCDF	ND	U	0.207	5.70			1
Total Tetra-Dioxins	**3.97**		0.118	1.14	0.75		1
Total Penta-Dioxins	**2.69**	J	0.104	2.85	1.61		1
Total Hexa-Dioxins	**28.9**		0.0906	2.85	1.25		1
Total Hepta-Dioxins	**58.5**		0.176	2.85	1.10		1
Total Tetra-Furans	ND	U	0.104	1.14			1
Total Penta-Furans	ND	U	0.0734	2.85			1
Total Hexa-Furans	**0.166**	J	0.0627	2.85	1.31		1
Total Hepta-Furans	ND	U	0.0889	2.85			1

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1730
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66DP311415 SB	**Units:**	Percent
Lab Code:	E1001043-004	**Basis:**	Dry
		Percent Solids:	76.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/6/10 2142
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.456g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110877	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110872

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	561.523	56		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	551.878	55		40-135	1.61	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1823.732	73		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1569.591	63		40-135	1.05	1.069
13C-OCDD	5000	2571.337	51		40-135	0.91	1.148
13C-2,3,7,8-TCDF	1000	469.229	47		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	602.535	60		40-135	1.62	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1805.793	72		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1552.972	62		40-135	0.45	1.046
37Cl-2,3,7,8-TCDD	800	505.529	63		40-135	NA	1.010

TWD 12/20/2010

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1730
Sample Matrix:	Soil	**Date Received:**	9/27/10
Sample Name:	IS66SB311415	**Units:**	ng/Kg
Lab Code:	E1001043-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.118	1	1	
1,2,3,7,8-PeCDD	ND	0.104	1	1	
1,2,3,4,7,8-HxCDD	ND	0.116	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0906	1	0.1	
1,2,3,7,8,9-HxCDD	**1.95**	0.121	1	0.1	0.195
1,2,3,4,6,7,8-HpCDD	**12.0**	0.176	1	0.01	0.120
OCDD	**616**	0.173	1	0.0003	0.185
2,3,7,8-TCDF	ND	0.104	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0829	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0734	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0721	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0627	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.103	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0797	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0889	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.129	1	0.01	
OCDF	ND	0.207	1	0.0003	
		Total TEQ			0.500

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1130
Sample Matrix:	Water	**Date Received:**	9/27/10
Sample Name:	IS66EB092310	**Units:**	pg/L
Lab Code:	E1001043-005	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 2017
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	970mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209723	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.337	10.3			1
1,2,3,7,8-PeCDD	ND	U	0.299	25.8			1
1,2,3,4,7,8-HxCDD	ND	U	0.437	25.8			1
1,2,3,6,7,8-HxCDD	ND	U	0.383	25.8			1
1,2,3,7,8,9-HxCDD	ND	U	0.418	25.8			1
1,2,3,4,6,7,8-HpCDD	**3.34**	BJK	0.328	25.8	0.87	1.000	1
OCDD	**37.9**	BJ	0.702	51.5	0.89	1.001	1
2,3,7,8-TCDF	ND	U	0.248	10.3			1
1,2,3,7,8-PeCDF	ND	U	0.271	25.8			1
2,3,4,7,8-PeCDF	ND	U	0.268	25.8			1
1,2,3,4,7,8-HxCDF	ND	U	0.142	25.8			1
1,2,3,6,7,8-HxCDF	ND	U	0.135	25.8			1
1,2,3,7,8,9-HxCDF	ND	U	0.176	25.8			1
2,3,4,6,7,8-HxCDF	ND	U	0.151	25.8			1
1,2,3,4,6,7,8-HpCDF	**0.671**	JK	0.199	25.8	0.81	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.271	25.8			1
OCDF	**5.96**	J	0.466	51.5	0.77	1.004	1
Total Tetra-Dioxins	ND	U	0.337	10.3			1
Total Penta-Dioxins	ND	U	0.299	25.8			1
Total Hexa-Dioxins	ND	U	0.383	25.8			1
Total Hepta-Dioxins	ND	U	0.328	25.8			1
Total Tetra-Furans	ND	U	0.248	10.3			1
Total Penta-Furans	ND	U	0.268	25.8			1
Total Hexa-Furans	ND	U	0.135	25.8			1
Total Hepta-Furans	**2.34**	J	0.199	25.8	1.17		1

TWD 12/20/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001043
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1130
Sample Matrix:	Water	**Date Received:**	9/27/10
Sample Name:	IS66EB092310	**Units:**	Percent
Lab Code:	E1001043-005	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 2017
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	970mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209723	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209720

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	619.258	62		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	753.641	75		40-135	1.62	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1633.483	65		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1540.581	62		40-135	1.06	1.068
13C-OCDD	5000	2081.503	42		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	686.254	69		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	748.498	75		40-135	1.56	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1580.487	63		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1378.993	55		40-135	0.42	1.045
37Cl-2,3,7,8-TCDD	800	661.121	83		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001045
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/23/10 1130
Sample Matrix:	Water	**Date Received:**	9/27/10
Sample Name:	IS66EB092310	**Units:**	pg/L
Lab Code:	E1001043-005	**Basis:**	NA

EB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.337	1	1	
1,2,3,7,8-PeCDD	ND	0.299	1	1	
1,2,3,4,7,8-HxCDD	ND	0.437	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.383	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.418	1	0.1	
1,2,3,4,6,7,8-HpCDD	**3.34**	0.328	1	0.01	0.0334
OCDD	**37.9**	0.702	1	0.0003	0.0114
2,3,7,8-TCDF	ND	0.248	1	0.1	
1,2,3,7,8-PeCDF	ND	0.271	1	0.03	
2,3,4,7,8-PeCDF	ND	0.268	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.142	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.135	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.176	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.151	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.671**	0.199	1	0.01	0.00671
1,2,3,4,7,8,9-HpCDF	ND	0.271	1	0.01	
OCDF	**5.96**	0.466	1	0.0003	0.00179
		Total TEQ			0.0533

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

FB

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	F-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.715	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.539	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.438	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.391	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.459	25.5			1
1,2,3,4,6,7,8-HpCDD	1.17	BJ	0.393	25.5	1.07	1.000	1
OCDD	8.02	BJ	1.21	51.0	1.11	1.000	1
2,3,7,8-TCDF	ND	U	0.690	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.588	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.545	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.193	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.191	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.274	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.215	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.476	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.626	25.5			1
OCDF	ND	U	0.687	51.0			1
Total Tetra-Dioxins	ND	U	0.715	10.2			1
Total Penta-Dioxins	ND	U	0.539	25.5			1
Total Hexa-Dioxins	ND	U	0.391	25.5			1
Total Hepta-Dioxins	2.35	J	0.393	25.5	1.04		1
Total Tetra-Furans	ND	U	0.690	10.2			1
Total Penta-Furans	ND	U	0.545	25.5			1
Total Hexa-Furans	ND	U	0.191	25.5			1
Total Hepta-Furans	ND	U	0.476	25.5			1

B-MBL

B-MBL

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	Percent
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/4/10 2049
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209699	**Blank File Name:**	P209714
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209695

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	681.605	68		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	600.424	60		40-135	1.56	1.179
13C-1,2,3,6,7,8-HxCDD	2500	1810.870	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1605.222	64		40-135	1.03	1.068
13C-OCDD	5000	2762.208	55		40-135	0.92	1.146
13C-2,3,7,8-TCDF	1000	594.302	59		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	616.696	62		40-135	1.56	1.138
13C-1,2,3,4,7,8-HxCDF	2500	1678.519	67		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1447.825	58		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	672.757	84		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001027
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/22/10 1130
Sample Matrix:	Water	**Date Received:**	9/23/10
Sample Name:	IS66FB092210	**Units:**	pg/L
Lab Code:	E1001027-007	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.715	1	1	
1,2,3,7,8-PeCDD	ND	0.539	1	1	
1,2,3,4,7,8-HxCDD	ND	0.438	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.391	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.459	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.17**	0.393	1	0.01	0.0117
OCDD	**8.02**	1.21	1	0.0003	0.00241
2,3,7,8-TCDF	ND	0.690	1	0.1	
1,2,3,7,8-PeCDF	ND	0.588	1	0.03	
2,3,4,7,8-PeCDF	ND	0.545	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.193	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.191	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.274	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.215	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.476	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.626	1	0.01	
OCDF	ND	0.687	1	0.0003	
		Total TEQ			0.0141

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1010
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	GW IS66MW040910	**Units:**	pg/L
Lab Code:	E1001044-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1306
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110841	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.648	10.6			1
1,2,3,7,8-PeCDD	ND	U	0.558	26.6			1
1,2,3,4,7,8-HxCDD	ND	U	0.616	26.6			1
1,2,3,6,7,8-HxCDD	ND	U	0.554	26.6			1
1,2,3,7,8,9-HxCDD	ND	U	0.586	26.6			1
1,2,3,4,6,7,8-HpCDD	1.32	B	0.625	26.6	0.93	1.000	1
OCDD	19.8	B	1.50	53.2	0.96	1.000	1
2,3,7,8-TCDF	ND	U	0.487	10.6			1
1,2,3,7,8-PeCDF	ND	U	0.412	26.6			1
2,3,4,7,8-PeCDF	ND	U	0.409	26.6			1
1,2,3,4,7,8-HxCDF	ND	U	0.330	26.6			1
1,2,3,6,7,8-HxCDF	ND	U	0.312	26.6			1
1,2,3,7,8,9-HxCDF	ND	U	0.420	26.6			1
2,3,4,6,7,8-HxCDF	ND	U	0.358	26.6			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.544	26.6			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.755	26.6			1
OCDF	ND	U	1.54	53.2			1
Total Tetra-Dioxins	ND	U	0.648	10.6			1
Total Penta-Dioxins	ND	U	0.558	26.6			1
Total Hexa-Dioxins	ND	U	0.554	26.6			1
Total Hepta-Dioxins	4.37	J	0.625	26.6	1.09		1
Total Tetra-Furans	ND	U	0.487	10.6			1
Total Penta-Furans	ND	U	0.409	26.6			1
Total Hexa-Furans	ND	U	0.312	26.6			1
Total Hepta-Furans	ND	U	0.544	26.6			1

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1010
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66MW040910 GW	**Units:**	Percent
Lab Code:	E1001044-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1306
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110841	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	563.177	56		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	663.146	66		40-135	1.59	1.183
13C-1,2,3,6,7,8-HxCDD	2500	2113.233	85		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1655.800	66		40-135	1.06	1.069
13C-OCDD	5000	2063.251	41		40-135	0.91	1.148
13C-2,3,7,8-TCDF	1000	617.861	62		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	677.867	68		40-135	1.59	1.142
13C-1,2,3,4,7,8-HxCDF	2500	2099.919	84		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1937.703	78		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	591.219	74		40-135	NA	1.009

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1010
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	GW IS66MW040910	**Units:**	pg/L
Lab Code:	E1001044-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.648	1	1	
1,2,3,7,8-PeCDD	ND	0.558	1	1	
1,2,3,4,7,8-HxCDD	ND	0.616	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.554	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.586	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.32**	0.625	1	0.01	0.0132
OCDD	**19.8**	1.50	1	0.0003	0.00594
2,3,7,8-TCDF	ND	0.487	1	0.1	
1,2,3,7,8-PeCDF	ND	0.412	1	0.03	
2,3,4,7,8-PeCDF	ND	0.409	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.330	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.312	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.420	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.358	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.544	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.755	1	0.01	
OCDF	ND	1.54	1	0.0003	
		Total TEQ			0.0191

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0945
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66EB01-092810	**Units:**	pg/L
Lab Code:	E1001044-002	**Basis:**	NA

EB-1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1354
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110842	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.744	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.625	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.604	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.542	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.573	26.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.831	26.0			1
OCDD	ND	U J-IS	1.67	52.1			1
2,3,7,8-TCDF	ND	U	0.628	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.453	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.448	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.382	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.361	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.485	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.414	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.507	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.703	26.0			1
OCDF	ND	U	1.65	52.1			1
Total Tetra-Dioxins	ND	U	0.744	10.4			1
Total Penta-Dioxins	ND	U	0.625	26.0			1
Total Hexa-Dioxins	ND	U	0.542	26.0			1
Total Hepta-Dioxins	ND	U	0.831	26.0			1
Total Tetra-Furans	ND	U	0.628	10.4			1
Total Penta-Furans	ND	U	0.448	26.0			1
Total Hexa-Furans	ND	U	0.361	26.0			1
Total Hepta-Furans	ND	U	0.507	26.0			1

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0945
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66EB01-092810	**Units:**	Percent
Lab Code:	E1001044-002	**Basis:**	NA

EB-1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1354
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110842	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	514.148	51		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	563.678	56		40-135	1.60	1.184
13C-1,2,3,6,7,8-HxCDD	2500	1929.140	77		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1532.376	61		40-135	1.07	1.069
13C-OCDD	5000	1824.277	36	Y	40-135	0.91	1.148
13C-2,3,7,8-TCDF	1000	571.769	57		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	571.613	57		40-135	1.60	1.142
13C-1,2,3,4,7,8-HxCDF	2500	1867.346	75		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1727.089	69		40-135	0.45	1.046
37Cl-2,3,7,8-TCDD	800	578.883	72		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-1

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0945
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66EB01-092810	**Units:**	pg/L
Lab Code:	E1001044-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.744	1	1	
1,2,3,7,8-PeCDD	ND	0.625	1	1	
1,2,3,4,7,8-HxCDD	ND	0.604	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.542	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.573	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.831	1	0.01	
OCDD	ND	1.67	1	0.0003	
2,3,7,8-TCDF	ND	0.628	1	0.1	
1,2,3,7,8-PeCDF	ND	0.453	1	0.03	
2,3,4,7,8-PeCDF	ND	0.448	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.382	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.361	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.485	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.414	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.507	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.703	1	0.01	
OCDF	ND	1.65	1	0.0003	
		Total TEQ			0.00

2005 WHO TEFs, ND = 0

EB-02

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1100
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	1S66EB02-092810	**Units:**	pg/L
Lab Code:	E1001044-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1441
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110843	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.636	10.6			1
1,2,3,7,8-PeCDD	ND	U	0.579	26.6			1
1,2,3,4,7,8-HxCDD	ND	U	0.575	26.6			1
1,2,3,6,7,8-HxCDD	ND	U	0.516	26.6			1
1,2,3,7,8,9-HxCDD	ND	U	0.546	26.6			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.658	26.6			1
OCDD	2.55	BJ	1.19	53.2	1.16	1.000	1
2,3,7,8-TCDF	ND	U	0.513	10.6			1
1,2,3,7,8-PeCDF	ND	U	0.449	26.6			1
2,3,4,7,8-PeCDF	ND	U	0.445	26.6			1
1,2,3,4,7,8-HxCDF	ND	U	0.353	26.6			1
1,2,3,6,7,8-HxCDF	ND	U	0.333	26.6			1
1,2,3,7,8,9-HxCDF	ND	U	0.447	26.6			1
2,3,4,6,7,8-HxCDF	ND	U	0.382	26.6			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.536	26.6			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.744	26.6			1
OCDF	ND	U	1.18	53.2			1
Total Tetra-Dioxins	ND	U	0.636	10.6			1
Total Penta-Dioxins	ND	U	0.579	26.6			1
Total Hexa-Dioxins	ND	U	0.516	26.6			1
Total Hepta-Dioxins	ND	U	0.658	26.6			1
Total Tetra-Furans	ND	U	0.513	10.6			1
Total Penta-Furans	ND	U	0.445	26.6			1
Total Hexa-Furans	ND	U	0.333	26.6			1
Total Hepta-Furans	ND	U	0.536	26.6			1

EB-02

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1100
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66EB02-092810	**Units:**	Percent
Lab Code:	E1001044-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1441
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110843	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	485.928	49		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	564.371	56		40-135	1.62	1.184
13C-1,2,3,6,7,8-HxCDD	2500	1757.768	70		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1456.542	58		40-135	1.07	1.069
13C-OCDD	5000	1941.221	39	Y	40-135	0.90	1.148
13C-2,3,7,8-TCDF	1000	549.567	55		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	562.009	56		40-135	1.59	1.142
13C-1,2,3,4,7,8-HxCDF	2500	1731.532	69		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1623.814	65		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	536.718	67		40-135	NA	1.009

EB-02

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1100
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66EB02-092810	**Units:**	pg/L
Lab Code:	E1001044-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.636	1	1	
1,2,3,7,8-PeCDD	ND	0.579	1	1	
1,2,3,4,7,8-HxCDD	ND	0.575	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.516	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.546	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.658	1	0.01	
OCDD	**2.55**	1.19	1	0.0003	0.000765
2,3,7,8-TCDF	ND	0.513	1	0.1	
1,2,3,7,8-PeCDF	ND	0.449	1	0.03	
2,3,4,7,8-PeCDF	ND	0.445	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.353	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.333	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.447	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.382	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.536	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.744	1	0.01	
OCDF	ND	1.18	1	0.0003	
		Total TEQ			0.000765

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1450
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66~~MW~~GW030910	**Units:**	pg/L
Lab Code:	E1001044-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1529
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110844	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.847	10.6			1
1,2,3,7,8-PeCDD	ND	U	0.616	26.6			1
1,2,3,4,7,8-HxCDD	ND	U	0.557	26.6			1
1,2,3,6,7,8-HxCDD	ND	U	0.499	26.6			1
1,2,3,7,8,9-HxCDD	ND	U	0.528	26.6			1
1,2,3,4,6,7,8-HpCDD	**2.28**	BJ	0.708	26.6	1.00	1.000	1
OCDD	**142**	B	1.36	53.2	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.614	10.6			1
1,2,3,7,8-PeCDF	ND	U	0.470	26.6			1
2,3,4,7,8-PeCDF	ND	U	0.465	26.6			1
1,2,3,4,7,8-HxCDF	ND	U	0.385	26.6			1
1,2,3,6,7,8-HxCDF	ND	U	0.364	26.6			1
1,2,3,7,8,9-HxCDF	ND	U	0.489	26.6			1
2,3,4,6,7,8-HxCDF	ND	U	0.418	26.6			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.597	26.6			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.829	26.6			1
OCDF	ND	U	1.34	53.2			1
Total Tetra-Dioxins	ND	U	0.847	10.6			1
Total Penta-Dioxins	ND	U	0.616	26.6			1
Total Hexa-Dioxins	ND	U	0.499	26.6			1
Total Hepta-Dioxins	**6.14**	J	0.708	26.6	0.91		1
Total Tetra-Furans	ND	U	0.614	10.6			1
Total Penta-Furans	ND	U	0.465	26.6			1
Total Hexa-Furans	ND	U	0.364	26.6			1
Total Hepta-Furans	ND	U	0.597	26.6			1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1450
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66MW030910 GW	**Units:**	Percent
Lab Code:	E1001044-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1529
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110844	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	589.445	59		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	682.304	68		40-135	1.59	1.184
13C-1,2,3,6,7,8-HxCDD	2500	2086.512	83		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1649.234	66		40-135	1.07	1.069
13C-OCDD	5000	2101.507	42		40-135	0.92	1.148
13C-2,3,7,8-TCDF	1000	648.879	65		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	690.064	69		40-135	1.63	1.142
13C-1,2,3,4,7,8-HxCDF	2500	2085.288	83		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1856.530	74		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.217	81		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1450
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	GW IS66MW030910	**Units:**	pg/L
Lab Code:	E1001044-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.847	1	1	
1,2,3,7,8-PeCDD	ND	0.616	1	1	
1,2,3,4,7,8-HxCDD	ND	0.557	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.499	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.528	1	0.1	
1,2,3,4,6,7,8-HpCDD	**2.28**	0.708	1	0.01	0.0228
OCDD	**142**	1.36	1	0.0003	0.0426
2,3,7,8-TCDF	ND	0.614	1	0.1	
1,2,3,7,8-PeCDF	ND	0.470	1	0.03	
2,3,4,7,8-PeCDF	ND	0.465	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.385	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.364	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.489	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.418	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.597	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.829	1	0.01	
OCDF	ND	1.34	1	0.0003	
		Total TEQ			0.0654

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1455
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	GW IS66MW03P0910	**Units:**	pg/L
Lab Code:	E1001044-005	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1617
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110845	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.490	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.622	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.617	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.554	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.586	25.5			1
1,2,3,4,6,7,8-HpCDD	1.84	BJK	0.676	25.5	0.69	1.000	1
OCDD	142	B	1.36	51.0	0.88	1.000	1
2,3,7,8-TCDF	ND	U	0.545	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.469	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.465	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.381	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.360	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.484	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.413	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.454	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.629	25.5			1
OCDF	ND	U	1.20	51.0			1
Total Tetra-Dioxins	ND	U	0.490	10.2			1
Total Penta-Dioxins	ND	U	0.622	25.5			1
Total Hexa-Dioxins	ND	U	0.554	25.5			1
Total Hepta-Dioxins	ND	U	0.676	25.5			1
Total Tetra-Furans	ND	U	0.545	10.2			1
Total Penta-Furans	ND	U	0.465	25.5			1
Total Hexa-Furans	ND	U	0.360	25.5			1
Total Hepta-Furans	ND	U	0.454	25.5			1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

FD

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1455
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66~~MW~~GW03P0910	**Units:**	Percent
Lab Code:	E1001044-005	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/5/10 1617
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110845	**Blank File Name:**	P209714
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110838

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	600.725	60		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	663.118	66		40-135	1.59	1.184
13C-1,2,3,6,7,8-HxCDD	2500	2064.477	83		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1733.007	69		40-135	1.05	1.069
13C-OCDD	5000	2363.187	47		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	667.359	67		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	686.479	69		40-135	1.59	1.143
13C-1,2,3,4,7,8-HxCDF	2500	2019.146	81		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1887.931	76		40-135	0.46	1.045
37Cl-2,3,7,8-TCDD	800	659.690	82		40-135	NA	1.009

FD

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1455
Sample Matrix:	Water	**Date Received:**	9/29/10
Sample Name:	IS66~~MW~~GW03P0910	**Units:**	pg/L
Lab Code:	E1001044-005	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.490	1	1	
1,2,3,7,8-PeCDD	ND	0.622	1	1	
1,2,3,4,7,8-HxCDD	ND	0.617	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.554	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.586	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.84**	0.676	1	0.01	0.0184
OCDD	**142**	1.36	1	0.0003	0.0426
2,3,7,8-TCDF	ND	0.545	1	0.1	
1,2,3,7,8-PeCDF	ND	0.469	1	0.03	
2,3,4,7,8-PeCDF	ND	0.465	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.381	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.360	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.484	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.413	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.454	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.629	1	0.01	
OCDF	ND	1.20	1	0.0003	
	Total TEQ				0.0610

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0850
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS360001	**Units:**	ng/Kg
Lab Code:	E1001044-006	**Basis:**	Dry
		Percent Solids:	91.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1943
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.077g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110900	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0755	1.08			1
1,2,3,7,8-PeCDD	**0.390**	J	0.0939	2.71	1.50	1.001	1
1,2,3,4,7,8-HxCDD	**0.827**	J	0.193	2.71	1.29	0.998	1
1,2,3,6,7,8-HxCDD	**1.63**	J	0.173	2.71	1.16	1.000	1
1,2,3,7,8,9-HxCDD	**1.61**	J	0.183	2.71	1.35	1.009	1
1,2,3,4,6,7,8-HpCDD	**66.7**	~~B~~	0.0822	2.71	1.05	1.000	1
OCDD	**4410**	~~BJ~~	0.143	5.42	0.90	1.000	1
2,3,7,8-TCDF	**0.921**	~~J~~	0.0967	1.08	0.81	1.001	1
1,2,3,7,8-PeCDF	**0.402**	J	0.0631	2.71	1.43	1.001	1
2,3,4,7,8-PeCDF	**0.439**	J	0.0626	2.71	1.46	1.025	1
1,2,3,4,7,8-HxCDF	**1.17**	J	0.0963	2.71	1.23	1.000	1
1,2,3,6,7,8-HxCDF	**0.499**	J	0.0911	2.71	1.18	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.123	2.71			1
2,3,4,6,7,8-HxCDF	**0.460**	J	0.105	2.71	1.28	1.018	1
1,2,3,4,6,7,8-HpCDF	**4.57**		0.0748	2.71	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.332**	J	0.104	2.71	0.98	1.035	1
OCDF	**10.2**	~~B~~	0.160	5.42	0.90	1.004	1
Total Tetra-Dioxins	**0.549**	J	0.0755	1.08	0.67		1
Total Penta-Dioxins	**3.24**		0.0939	2.71	1.47		1
Total Hexa-Dioxins	**17.5**		0.173	2.71	1.30		1
Total Hepta-Dioxins	**153**		0.0822	2.71	1.05		1
Total Tetra-Furans	**3.30**		0.0967	1.08	0.67		1
Total Penta-Furans	**7.06**		0.0626	2.71	1.41		1
Total Hexa-Furans	**7.87**		0.0911	2.71	1.31		1
Total Hepta-Furans	**10.3**		0.0748	2.71	1.01		1

K-BSH ~~BJ~~ ~~J-ISL~~ Exclude-OT

K-BSH > ISL so flag K-BSH

TWD 12/21/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0850
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP360001 SS	**Units:**	Percent
Lab Code:	E1001044-006	**Basis:**	Dry
		Percent Solids:	91.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1943
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.077g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110900	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	540.454	54		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	599.108	60		40-135	1.61	1.184
13C-1,2,3,6,7,8-HxCDD	2500	1639.624	66		40-135	1.27	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1318.507	53		40-135	1.07	1.069
13C-OCDD	5000	1619.331	32	Y	40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	546.004	55		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	628.244	63		40-135	1.61	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1636.931	65		40-135	0.53	0.969
13C-1,2,3,4,6,7,8-HpCDF	2500	1436.329	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	520.591	65		40-135	NA	1.010

#6

Client:	CH2M Hill		**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329		**Date Collected:**	9/28/10 0850
Sample Matrix:	Soil		**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS360001		**Units:**	ng/Kg
Lab Code:	E1001044-006		**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0755	1	1	
1,2,3,7,8-PeCDD	**0.390**	0.0939	1	1	0.390
1,2,3,4,7,8-HxCDD	**0.827**	0.193	1	0.1	0.0827
1,2,3,6,7,8-HxCDD	**1.63**	0.173	1	0.1	0.163
1,2,3,7,8,9-HxCDD	**1.61**	0.183	1	0.1	0.161
1,2,3,4,6,7,8-HpCDD	**66.7**	0.0822	1	0.01	0.667
OCDD	**4410**	0.143	1	0.0003	1.32
2,3,7,8-TCDF	**0.661**	0.228	1	0.1	0.0661
1,2,3,7,8-PeCDF	**0.402**	0.0631	1	0.03	0.0121
2,3,4,7,8-PeCDF	**0.439**	0.0626	1	0.3	0.132
1,2,3,4,7,8-HxCDF	**1.17**	0.0963	1	0.1	0.117
1,2,3,6,7,8-HxCDF	**0.499**	0.0911	1	0.1	0.0499
1,2,3,7,8,9-HxCDF	ND	0.123	1	0.1	
2,3,4,6,7,8-HxCDF	**0.460**	0.105	1	0.1	0.0460
1,2,3,4,6,7,8-HpCDF	**4.57**	0.0748	1	0.01	0.0457
1,2,3,4,7,8,9-HpCDF	**0.332**	0.104	1	0.01	0.00332
OCDF	**10.2**	0.160	1	0.0003	0.00306
		Total TEQ			3.26

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0850
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP360001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001044-006	**Basis:**	Dry
		Percent Solids:	91.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0928
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.077g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137889	**Blank File Name:**	U137888
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137887

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.661**	JK	0.228	1.08	1.07	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	479.635	48		40-135	0.80	1.060
37Cl-2,3,7,8-TCDD	800	538.959	67		40-135	NA	0.988

TWD 12/21/2010

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0900
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB360809	**Units:**	ng/Kg
Lab Code:	E1001044-007	**Basis:**	Dry
		Percent Solids:	79.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2031
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.340g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110901	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.129	1.21			1
1,2,3,7,8-PeCDD	ND	U	0.0791	3.03			1
1,2,3,4,7,8-HxCDD	ND	U	0.120	3.03			1
1,2,3,6,7,8-HxCDD	**0.366**	J	0.108	3.03	1.06	1.000	1
1,2,3,7,8,9-HxCDD	**1.27**	J	0.114	3.03	1.27	1.009	1
1,2,3,4,6,7,8-HpCDD	**17.2**	~~B~~	0.302	3.03	1.05	1.000	1
OCDD	K-BSH **471**	~~B~~ ~~J-ISL~~	0.267	6.05	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.102	1.21			1
1,2,3,7,8-PeCDF	ND	U	0.0647	3.03			1
2,3,4,7,8-PeCDF	ND	U	0.0642	3.03			1
1,2,3,4,7,8-HxCDF	ND	U	0.0597	3.03			1
1,2,3,6,7,8-HxCDF	ND	U	0.0566	3.03			1
1,2,3,7,8,9-HxCDF	ND	U	0.0759	3.03			1
2,3,4,6,7,8-HxCDF	ND	U	0.0649	3.03			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0793	3.03			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.111	3.03			1
OCDF	ND	U	0.233	6.05			1
Total Tetra-Dioxins	**4.32**		0.129	1.21	0.80		1
Total Penta-Dioxins	**4.54**		0.0791	3.03	1.63		1
Total Hexa-Dioxins	**27.8**		0.108	3.03	1.30		1
Total Hepta-Dioxins	**79.4**		0.302	3.03	1.08		1
Total Tetra-Furans	ND	U	0.102	1.21			1
Total Penta-Furans	ND	U	0.0642	3.03			1
Total Hexa-Furans	ND	U	0.0566	3.03			1
Total Hepta-Furans	ND	U	0.0793	3.03			1

K-BSH > J: ISL so flag ~~J~~ K-BSH

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0900
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP360809 SB	**Units:**	Percent
Lab Code:	E1001044-007	**Basis:**	Dry
		Percent Solids:	79.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2031
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.340g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110901	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	571.202	57		40-135	0.81	1.010
13C-1,2,3,7,8-PeCDD	1000	638.415	64		40-135	1.60	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1800.365	72		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1351.230	54		40-135	1.06	1.069
13C-OCDD	5000	1481.085	30	Y	40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	601.241	60		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	666.624	67		40-135	1.61	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1777.061	71		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1515.846	61		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	552.557	69		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0900
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP360809 SB	**Units:**	ng/Kg
Lab Code:	E1001044-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.129	1	1	
1,2,3,7,8-PeCDD	ND	0.0791	1	1	
1,2,3,4,7,8-HxCDD	ND	0.120	1	0.1	
1,2,3,6,7,8-HxCDD	**0.366**	0.108	1	0.1	0.0366
1,2,3,7,8,9-HxCDD	**1.27**	0.114	1	0.1	0.127
1,2,3,4,6,7,8-HpCDD	**17.2**	0.302	1	0.01	0.172
OCDD	**471**	0.267	1	0.0003	0.141
2,3,7,8-TCDF	ND	0.102	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0647	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0642	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0597	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0566	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0759	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0649	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0793	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.111	1	0.01	
OCDF	ND	0.233	1	0.0003	
		Total TEQ			0.477

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0950
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP370001 SS	**Units:**	ng/Kg
Lab Code:	E1001044-008	**Basis:**	Dry
		Percent Solids:	89.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2119
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.677g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110902	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.143	0.962			1
1,2,3,7,8-PeCDD	ND	U	0.0916	2.41			1
1,2,3,4,7,8-HxCDD	ND	U	0.0892	2.41			1
1,2,3,6,7,8-HxCDD	**0.180**	J	0.0801	2.41	0.95	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	0.0847	2.41			1
1,2,3,4,6,7,8-HpCDD	**35.5**	B	0.0729	2.41	0.99	1.000	1
OCDD	**12400**	B	0.177	4.81	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.138	0.962			1
1,2,3,7,8-PeCDF	ND	U	0.0950	2.41			1
2,3,4,7,8-PeCDF	ND	U	0.0943	2.41			1
1,2,3,4,7,8-HxCDF	ND	U	0.0551	2.41			1
1,2,3,6,7,8-HxCDF	ND	U	0.0521	2.41			1
1,2,3,7,8,9-HxCDF	ND	U	0.0700	2.41			1
2,3,4,6,7,8-HxCDF	ND	U	0.0598	2.41			1
1,2,3,4,6,7,8-HpCDF	**0.142**	J	0.0549	2.41	1.16	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0763	2.41			1
OCDF	ND	U	0.157	4.81			1
Total Tetra-Dioxins	ND	U	0.143	0.962			1
Total Penta-Dioxins	ND	U	0.0916	2.41			1
Total Hexa-Dioxins	**0.487**	J	0.0801	2.41	1.30		1
Total Hepta-Dioxins	**68.2**		0.0729	2.41	1.08		1
Total Tetra-Furans	ND	U	0.138	0.962			1
Total Penta-Furans	ND	U	0.0943	2.41			1
Total Hexa-Furans	ND	U	0.0521	2.41			1
Total Hepta-Furans	**0.142**	J	0.0549	2.41	1.16		1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0950
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66SS370001	**Units:**	Percent
Lab Code:	E1001044-008	**Basis:**	Dry
		Percent Solids:	89.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2119
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.677g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110902	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	403.610	40		40-135	0.82	1.009
13C-1,2,3,7,8-PeCDD	1000	571.226	57		40-135	1.63	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1517.479	61		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1161.474	46		40-135	1.08	1.069
13C-OCDD	5000	1553.691	31	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	391.303	39	Y	40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	528.754	53		40-135	1.66	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1466.250	59		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1337.077	53		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	392.348	49		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0950
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	SS IS66~~DP~~370001	**Units:**	ng/Kg
Lab Code:	E1001044-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.143	1	1	
1,2,3,7,8-PeCDD	ND	0.0916	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0892	1	0.1	
1,2,3,6,7,8-HxCDD	**0.180**	0.0801	1	0.1	0.0180
1,2,3,7,8,9-HxCDD	ND	0.0847	1	0.1	
1,2,3,4,6,7,8-HpCDD	**35.5**	0.0729	1	0.01	0.355
OCDD	**12400**	0.177	1	0.0003	3.72
2,3,7,8-TCDF	ND	0.138	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0950	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0943	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0551	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0521	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0700	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0598	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.142**	0.0549	1	0.01	0.00142
1,2,3,4,7,8,9-HpCDF	ND	0.0763	1	0.01	
OCDF	ND	0.157	1	0.0003	
		Total TEQ			4.09

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0955
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB371314	**Units:**	ng/Kg
Lab Code:	E1001044-009	**Basis:**	Dry
		Percent Solids:	82.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2207
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.428g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110903	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.111	1.07			1
1,2,3,7,8-PeCDD	ND	U	0.102	2.67			1
1,2,3,4,7,8-HxCDD	ND	U	0.106	2.67			1
1,2,3,6,7,8-HxCDD	ND	U	0.0947	2.67			1
1,2,3,7,8,9-HxCDD	ND	U	0.101	2.67			1
1,2,3,4,6,7,8-HpCDD	**4.85**	~~B~~	0.211	2.67	0.93	1.000	1
OCDD	K-BSN **275**	~~J~~ B-FSL	0.219	5.34	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.117	1.07			1
1,2,3,7,8-PeCDF	ND	U	0.0925	2.67			1
2,3,4,7,8-PeCDF	ND	U	0.0917	2.67			1
1,2,3,4,7,8-HxCDF	ND	U	0.0547	2.67			1
1,2,3,6,7,8-HxCDF	ND	U	0.0517	2.67			1
1,2,3,7,8,9-HxCDF	ND	U	0.0695	2.67			1
2,3,4,6,7,8-HxCDF	ND	U	0.0594	2.67			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0649	2.67			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0901	2.67			1
OCDF	ND	U	0.171	5.34			1
Total Tetra-Dioxins	**8.82**		0.111	1.07	0.76		1
Total Penta-Dioxins	**4.16**		0.102	2.67	1.62		1
Total Hexa-Dioxins	**15.2**		0.0947	2.67	1.33		1
Total Hepta-Dioxins	**31.3**		0.211	2.67	1.07		1
Total Tetra-Furans	**0.505**	J	0.117	1.07	0.74		1
Total Penta-Furans	ND	U	0.0917	2.67			1
Total Hexa-Furans	ND	U	0.0517	2.67			1
Total Hepta-Furans	ND	U	0.0649	2.67			1

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0955
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB371314	**Units:**	Percent
Lab Code:	E1001044-009	**Basis:**	Dry
		Percent Solids:	82.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2207
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	11.428g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110903	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	444.348	44		40-135	0.77	1.009
13C-1,2,3,7,8-PeCDD	1000	590.040	59		40-135	1.59	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1627.487	65		40-135	1.28	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1339.931	54		40-135	1.07	1.069
13C-OCDD	5000	1797.420	36	Y	40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	451.177	45		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	580.988	58		40-135	1.65	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1521.513	61		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1423.863	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	423.225	53		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 0955
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP371314 SB	**Units:**	ng/Kg
Lab Code:	E1001044-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.111	1	1	
1,2,3,7,8-PeCDD	ND	0.102	1	1	
1,2,3,4,7,8-HxCDD	ND	0.106	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0947	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.101	1	0.1	
1,2,3,4,6,7,8-HpCDD	**4.85**	0.211	1	0.01	0.0485
OCDD	**275**	0.219	1	0.0003	0.0825
2,3,7,8-TCDF	ND	0.117	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0925	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0917	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0547	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0517	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0695	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0594	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0649	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0901	1	0.01	
OCDF	ND	0.171	1	0.0003	
		Total TEQ			0.131

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1110
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS390001	**Units:**	ng/Kg
Lab Code:	E1001044-010	**Basis:**	Dry
		Percent Solids:	88.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2255
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.567g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110904	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0956	1.07			1
1,2,3,7,8-PeCDD	ND	U	0.0920	2.68			1
1,2,3,4,7,8-HxCDD	**0.406**	J	0.121	2.68	1.31	0.999	1
1,2,3,6,7,8-HxCDD	**0.694**	J	0.109	2.68	1.28	1.000	1
1,2,3,7,8,9-HxCDD	**1.40**	J	0.115	2.68	1.32	1.008	1
1,2,3,4,6,7,8-HpCDD	**76.8**	~~B~~	0.0679	2.68	1.04	1.000	1
OCDD	**16900**	BEK-BSH	0.108	5.35	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.0591	1.07			1
1,2,3,7,8-PeCDF	ND	U	0.0783	2.68			1
2,3,4,7,8-PeCDF	ND	U	0.0777	2.68			1
1,2,3,4,7,8-HxCDF	ND	U	0.0616	2.68			1
1,2,3,6,7,8-HxCDF	ND	U	0.0582	2.68			1
1,2,3,7,8,9-HxCDF	ND	U	0.0783	2.68			1
2,3,4,6,7,8-HxCDF	ND	U	0.0669	2.68			1
1,2,3,4,6,7,8-HpCDF	**0.159**	JK-EMC	0.0489	2.68	1.32	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0678	2.68			1
OCDF	**0.532**	BJ-MBL	0.117	5.35	0.76	1.003	1
Total Tetra-Dioxins	**0.230**	J	0.0956	1.07	0.77		1
Total Penta-Dioxins	**0.814**	J	0.0920	2.68	1.70		1
Total Hexa-Dioxins	**17.6**		0.109	2.68	1.27		1
Total Hepta-Dioxins	**198**		0.0679	2.68	1.07		1
Total Tetra-Furans	ND	U	0.0591	1.07			1
Total Penta-Furans	ND	U	0.0777	2.68			1
Total Hexa-Furans	ND	U	0.0582	2.68			1
Total Hepta-Furans	ND	U	0.0489	2.68			1

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1110
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS390001	**Units:**	Percent
Lab Code:	E1001044-010	**Basis:**	Dry
		Percent Solids:	88.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2255
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.567g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110904	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	590.914	59		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	649.505	65		40-135	1.61	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1746.766	70		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1571.287	63		40-135	1.05	1.069
13C-OCDD	5000	2509.267	50		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	588.138	59		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	684.634	68		40-135	1.64	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1687.741	68		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1635.668	65		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	580.113	73		40-135	NA	1.009

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1110
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS390001	**Units:**	ng/Kg
Lab Code:	E1001044-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0956	1	1	
1,2,3,7,8-PeCDD	ND	0.0920	1	1	
1,2,3,4,7,8-HxCDD	**0.406**	0.121	1	0.1	0.0406
1,2,3,6,7,8-HxCDD	**0.694**	0.109	1	0.1	0.0694
1,2,3,7,8,9-HxCDD	**1.40**	0.115	1	0.1	0.140
1,2,3,4,6,7,8-HpCDD	**76.8**	0.0679	1	0.01	0.768
OCDD	**16900**	0.108	1	0.0003	5.07
2,3,7,8-TCDF	ND	0.0591	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0783	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0777	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0616	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0582	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0783	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0669	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.159**	0.0489	1	0.01	0.00159
1,2,3,4,7,8,9-HpCDF	ND	0.0678	1	0.01	
OCDF	**0.532**	0.117	1	0.0003	0.000160
		Total TEQ			6.09

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1120
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66SB391213	**Units:**	ng/Kg
Lab Code:	E1001044-011	**Basis:**	Dry
		Percent Solids:	85.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2342
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.722g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110905	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.116	1.09			1
1,2,3,7,8-PeCDD	ND	U	0.0856	2.72			1
1,2,3,4,7,8-HxCDD	ND	U	0.110	2.72			1
1,2,3,6,7,8-HxCDD	ND	U	0.0986	2.72			1
1,2,3,7,8,9-HxCDD	ND	U	0.105	2.72			1
1,2,3,4,6,7,8-HpCDD	4.58	~~B~~	0.198	2.72	1.11	1.000	1
OCDD	286	~~B~~	0.286	5.44	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.0919	1.09			1
1,2,3,7,8-PeCDF	ND	U	0.0572	2.72			1
2,3,4,7,8-PeCDF	ND	U	0.0567	2.72			1
1,2,3,4,7,8-HxCDF	ND	U	0.0701	2.72			1
1,2,3,6,7,8-HxCDF	ND	U	0.0663	2.72			1
1,2,3,7,8,9-HxCDF	ND	U	0.0892	2.72			1
2,3,4,6,7,8-HxCDF	ND	U	0.0761	2.72			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0639	2.72			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0887	2.72			1
OCDF	ND	U	0.194	5.44			1
Total Tetra-Dioxins	ND	U	0.116	1.09			1
Total Penta-Dioxins	ND	U	0.0856	2.72			1
Total Hexa-Dioxins	5.34		0.0986	2.72	1.13		1
Total Hepta-Dioxins	20.0		0.198	2.72	1.02		1
Total Tetra-Furans	ND	U	0.0919	1.09			1
Total Penta-Furans	ND	U	0.0567	2.72			1
Total Hexa-Furans	ND	U	0.0663	2.72			1
Total Hepta-Furans	ND	U	0.0639	2.72			1

K-BSH

TWD 12/21/2010

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1120
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB391213	**Units:**	Percent
Lab Code:	E1001044-011	**Basis:**	Dry
		Percent Solids:	85.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2342
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.722g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110905	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	616.158	62		40-135	0.80	1.010
13C-1,2,3,7,8-PeCDD	1000	657.200	66		40-135	1.61	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1612.562	65		40-135	1.28	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1291.620	52		40-135	1.06	1.069
13C-OCDD	5000	1651.477	33	Y	40-135	0.92	1.147
13C-2,3,7,8-TCDF	1000	659.427	66		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	705.965	71		40-135	1.63	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1617.458	65		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1397.837	56		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	606.492	76		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1120
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	SB IS66DP391213	**Units:**	ng/Kg
Lab Code:	E1001044-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.116	1	1	
1,2,3,7,8-PeCDD	ND	0.0856	1	1	
1,2,3,4,7,8-HxCDD	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0986	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.105	1	0.1	
1,2,3,4,6,7,8-HpCDD	**4.58**	0.198	1	0.01	0.0458
OCDD	**286**	0.286	1	0.0003	0.0858
2,3,7,8-TCDF	ND	0.0919	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0572	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0567	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0701	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0663	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0892	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0761	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0639	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0887	1	0.01	
OCDF	ND	0.194	1	0.0003	
		Total TEQ			0.132

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1515
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS330001	**Units:**	ng/Kg
Lab Code:	E1001044-012	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0030
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	12.404g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110906	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0764	0.861			1
1,2,3,7,8-PeCDD	**0.171**	J	0.0617	2.15	1.78	1.001	1
1,2,3,4,7,8-HxCDD	**0.265**	JK	0.0915	2.15	1.68	0.998	1
1,2,3,6,7,8-HxCDD	**0.489**	J	0.0821	2.15	1.29	1.000	1
1,2,3,7,8,9-HxCDD	**0.631**	J	0.0869	2.15	1.25	1.008	1
1,2,3,4,6,7,8-HpCDD	**24.8**	~~B~~	0.0584	2.15	1.08	1.000	1
OCDD	**4310**	BE	0.0795	4.31	0.90	1.000	1
2,3,7,8-TCDF	**0.771**	CJ	0.0698	0.861	0.83	1.001	1
1,2,3,7,8-PeCDF	**0.147**	JK	0.0429	2.15	2.08	1.001	1
2,3,4,7,8-PeCDF	**0.266**	J	0.0425	2.15	1.33	1.026	1
1,2,3,4,7,8-HxCDF	**0.436**	J	0.0624	2.15	1.28	1.000	1
1,2,3,6,7,8-HxCDF	**0.216**	J	0.0591	2.15	1.23	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0794	2.15			1
2,3,4,6,7,8-HxCDF	**0.191**	JK	0.0678	2.15	1.49	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.16**	J	0.0519	2.15	0.96	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0721	2.15			1
OCDF	**2.07**	~~BJ~~ J	0.0766	4.31	0.87	1.004	1
Total Tetra-Dioxins	**0.295**	J	0.0764	0.861	0.85		1
Total Penta-Dioxins	**1.16**	J	0.0617	2.15	1.40		1
Total Hexa-Dioxins	**5.54**		0.0821	2.15	1.32		1
Total Hepta-Dioxins	**53.4**		0.0584	2.15	1.09		1
Total Tetra-Furans	**2.12**		0.0698	0.861	0.75		1
Total Penta-Furans	**2.62**		0.0425	2.15	1.39		1
Total Hexa-Furans	**1.83**	J	0.0591	2.15	1.06		1
Total Hepta-Furans	**2.05**	J	0.0519	2.15	0.96		1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1515
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS330001	**Units:**	Percent
Lab Code:	E1001044-012	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0030
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	12.404g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110906	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	576.763	58		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	660.341	66		40-135	1.61	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1494.817	60		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1382.563	55		40-135	1.07	1.069
13C-OCDD	5000	2189.575	44		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	599.201	60		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	718.913	72		40-135	1.61	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1471.813	59		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1439.611	58		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	566.564	71		40-135	NA	1.010

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1515
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS330001	**Units:**	ng/Kg
Lab Code:	E1001044-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0764	1	1	
1,2,3,7,8-PeCDD	**0.171**	0.0617	1	1	0.171
1,2,3,4,7,8-HxCDD	**0.265**	0.0915	1	0.1	0.0265
1,2,3,6,7,8-HxCDD	**0.489**	0.0821	1	0.1	0.0489
1,2,3,7,8,9-HxCDD	**0.631**	0.0869	1	0.1	0.0631
1,2,3,4,6,7,8-HpCDD	**24.8**	0.0584	1	0.01	0.248
OCDD	**4310**	0.0795	1	0.0003	1.29
2,3,7,8-TCDF	**0.518**	0.136	1	0.1	0.0518
1,2,3,7,8-PeCDF	**0.147**	0.0429	1	0.03	0.00441
2,3,4,7,8-PeCDF	**0.266**	0.0425	1	0.3	0.0798
1,2,3,4,7,8-HxCDF	**0.436**	0.0624	1	0.1	0.0436
1,2,3,6,7,8-HxCDF	**0.216**	0.0591	1	0.1	0.0216
1,2,3,7,8,9-HxCDF	ND	0.0794	1	0.1	
2,3,4,6,7,8-HxCDF	**0.191**	0.0678	1	0.1	0.0191
1,2,3,4,6,7,8-HpCDF	**1.16**	0.0519	1	0.01	0.0116
1,2,3,4,7,8,9-HpCDF	ND	0.0721	1	0.01	
OCDF	**2.07**	0.0766	1	0.0003	0.000621
		Total TEQ			2.08

2005 WHO TEFs, ND = 0

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1515
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP330001 SS	**Units:**	ng/Kg
Lab Code:	E1001044-012	**Basis:**	Dry
		Percent Solids:	93.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0954
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	12.404g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137890	**Blank File Name:**	U137888
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137887

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.518**	J	0.136	0.861	0.66	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	497.831	50		40-135	0.82	1.061
37Cl-2,3,7,8-TCDD	800	539.271	67		40-135	NA	0.989

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1525
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP331415 SB	**Units:**	ng/Kg
Lab Code:	E1001044-013	**Basis:**	Dry
		Percent Solids:	76.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0118
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.234g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110907	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.187	1.29			1
1,2,3,7,8-PeCDD	ND	U	0.152	3.21			1
1,2,3,4,7,8-HxCDD	ND	U	0.232	3.21			1
1,2,3,6,7,8-HxCDD	ND	U	0.209	3.21			1
1,2,3,7,8,9-HxCDD	ND	U	0.221	3.21			1
1,2,3,4,6,7,8-HpCDD	7.44	B	0.268	3.21	1.09	1.000	1
OCDD	543	B	0.249	6.43	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.133	1.29			1
1,2,3,7,8-PeCDF	ND	U	0.123	3.21			1
2,3,4,7,8-PeCDF	ND	U	0.122	3.21			1
1,2,3,4,7,8-HxCDF	ND	U	0.0758	3.21			1
1,2,3,6,7,8-HxCDF	ND	U	0.0717	3.21			1
1,2,3,7,8,9-HxCDF	ND	U	0.0963	3.21			1
2,3,4,6,7,8-HxCDF	ND	U	0.0822	3.21			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0940	3.21			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.131	3.21			1
OCDF	ND	U	0.242	6.43			1
Total Tetra-Dioxins	3.53		0.187	1.29	0.86		1
Total Penta-Dioxins	2.48	J	0.152	3.21	1.65		1
Total Hexa-Dioxins	14.8		0.209	3.21	1.19		1
Total Hepta-Dioxins	41.2		0.268	3.21	1.07		1
Total Tetra-Furans	ND	U	0.133	1.29			1
Total Penta-Furans	ND	U	0.122	3.21			1
Total Hexa-Furans	ND	U	0.0717	3.21			1
Total Hepta-Furans	ND	U	0.0940	3.21			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1525
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP331415 SB	**Units:**	Percent
Lab Code:	E1001044-013	**Basis:**	Dry
		Percent Solids:	76.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0118
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.234g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110907	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	524.386	52		40-135	0.80	1.010
13C-1,2,3,7,8-PeCDD	1000	568.322	57		40-135	1.60	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1375.983	55		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1195.903	48		40-135	1.07	1.069
13C-OCDD	5000	1737.979	35	Y	40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	550.545	55		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	618.428	62		40-135	1.64	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1336.050	53		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1311.049	52		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	504.451	63		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1525
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB331415	**Units:**	ng/Kg
Lab Code:	E1001044-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.187	1	1	
1,2,3,7,8-PeCDD	ND	0.152	1	1	
1,2,3,4,7,8-HxCDD	ND	0.232	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.209	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.221	1	0.1	
1,2,3,4,6,7,8-HpCDD	**7.44**	0.268	1	0.01	0.0744
OCDD	**543**	0.249	1	0.0003	0.163
2,3,7,8-TCDF	ND	0.133	1	0.1	
1,2,3,7,8-PeCDF	ND	0.123	1	0.03	
2,3,4,7,8-PeCDF	ND	0.122	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0758	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0717	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0963	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0822	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0940	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.131	1	0.01	
OCDF	ND	0.242	1	0.0003	
		Total TEQ			0.237

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1600
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS340001	**Units:**	ng/Kg
Lab Code:	E1001044-014	**Basis:**	Dry
		Percent Solids:	88.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0206
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.836g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110908	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0916	1.05			1
1,2,3,7,8-PeCDD	**0.462**	J	0.0876	2.62	1.40	1.001	1
1,2,3,4,7,8-HxCDD	**0.813**	J	0.0971	2.62	1.25	0.998	1
1,2,3,6,7,8-HxCDD	**1.78**	J	0.0871	2.62	1.13	1.000	1
1,2,3,7,8,9-HxCDD	**1.84**	J	0.0921	2.62	1.40	1.009	1
1,2,3,4,6,7,8-HpCDD	**56.0**	~~B~~	0.0830	2.62	1.06	1.000	1
OCDD	**2350**	~~DE J- ISL~~ K-BSH	0.178	5.24	0.90	1.000	1
2,3,7,8-TCDF	**0.851**	~~C~~	0.0758	1.05	0.83	1.001	1
1,2,3,7,8-PeCDF	**0.286**	J	0.0661	2.62	1.59	1.001	1
2,3,4,7,8-PeCDF	**0.393**	~~JK~~ J-SRG	0.0655	2.62	1.29	1.025	1
1,2,3,4,7,8-HxCDF	**1.02**	J	0.242	2.62	1.23	1.000	1
1,2,3,6,7,8-HxCDF	**0.751**	J	0.229	2.62	1.34	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.307	2.62			1
2,3,4,6,7,8-HxCDF	**0.917**	J	0.263	2.62	1.39	1.017	1
1,2,3,4,6,7,8-HpCDF	**11.3**		0.110	2.62	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.759**	J	0.153	2.62	1.11	1.035	1
OCDF	**41.0**	~~B~~	0.144	5.24	0.88	1.004	1
Total Tetra-Dioxins	**0.362**	J	0.0916	1.05	0.85		1
Total Penta-Dioxins	**1.30**	J	0.0876	2.62	1.62		1
Total Hexa-Dioxins	**17.3**		0.0871	2.62	1.33		1
Total Hepta-Dioxins	**123**		0.0830	2.62	1.07		1
Total Tetra-Furans	**6.20**		0.0758	1.05	0.71		1
Total Penta-Furans	**15.4**		0.0655	2.62	1.61		1
Total Hexa-Furans	**20.6**		0.229	2.62	1.23		1
Total Hepta-Furans	**36.2**		0.110	2.62	1.05		1

K-BSH ~~J- ISL~~ Exclude-OT

J-SRG

TWD 12/21/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1600
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP340001 SS	**Units:**	Percent
Lab Code:	E1001044-014	**Basis:**	Dry
		Percent Solids:	88.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0206
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.836g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110908	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110897

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	689.687	69		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	766.135	77		40-135	1.61	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1466.200	59		40-135	1.26	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1291.505	52		40-135	1.06	1.069
13C-OCDD	5000	1713.988	34	Y	40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	629.734	63		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	850.942	85		40-135	1.59	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1485.450	59		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1350.978	54		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	694.523	87		40-135	NA	1.010

Client:	CH2M Hill		**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329		**Date Collected:**	9/28/10 1600
Sample Matrix:	Soil		**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SS340001		**Units:**	ng/Kg
Lab Code:	E1001044-014		**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0916	1	1	
1,2,3,7,8-PeCDD	**0.462**	0.0876	1	1	0.462
1,2,3,4,7,8-HxCDD	**0.813**	0.0971	1	0.1	0.0813
1,2,3,6,7,8-HxCDD	**1.78**	0.0871	1	0.1	0.178
1,2,3,7,8,9-HxCDD	**1.84**	0.0921	1	0.1	0.184
1,2,3,4,6,7,8-HpCDD	**56.0**	0.0830	1	0.01	0.560
OCDD	**2350**	0.178	1	0.0003	0.705
2,3,7,8-TCDF	ND	0.182	1	0.1	
1,2,3,7,8-PeCDF	**0.286**	0.0661	1	0.03	0.00858
2,3,4,7,8-PeCDF	**0.393**	0.0655	1	0.3	0.118
1,2,3,4,7,8-HxCDF	**1.02**	0.242	1	0.1	0.102
1,2,3,6,7,8-HxCDF	**0.751**	0.229	1	0.1	0.0751
1,2,3,7,8,9-HxCDF	ND	0.307	1	0.1	
2,3,4,6,7,8-HxCDF	**0.917**	0.263	1	0.1	0.0917
1,2,3,4,6,7,8-HpCDF	**11.3**	0.110	1	0.01	0.113
1,2,3,4,7,8,9-HpCDF	**0.759**	0.153	1	0.01	0.00759
OCDF	**41.0**	0.144	1	0.0003	0.0123
		Total TEQ			2.70

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1600
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP340001 SS	**Units:**	ng/Kg
Lab Code:	E1001044-014	**Basis:**	Dry
		Percent Solids:	88.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 1031
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.836g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137891	**Blank File Name:**	U137888
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137887

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.182	1.05			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	538.996	54		40-135	0.82	1.061
37Cl-2,3,7,8-TCDD	800	603.017	75		40-135	NA	0.989

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1615
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66~~DP~~SB340809	**Units:**	ng/Kg
Lab Code:	E1001044-015	**Basis:**	Dry
		Percent Solids:	79.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0800
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.190g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110914	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110911

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.114	1.24			1
1,2,3,7,8-PeCDD	**0.328**	J	0.113	3.11	1.51	1.001	1
1,2,3,4,7,8-HxCDD	**0.503**	J	0.111	3.11	1.32	0.999	1
1,2,3,6,7,8-HxCDD	**0.888**	J	0.0991	3.11	1.35	1.000	1
1,2,3,7,8,9-HxCDD	**0.938**	~~JK~~ J	0.105	3.11	1.04	1.009	1
1,2,3,4,6,7,8-HpCDD	**65.0**	~~B~~	0.262	3.11	1.05	1.000	1
OCDD	**13300**	~~BE~~ K-BSH	0.151	6.21	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.124	1.24			1
1,2,3,7,8-PeCDF	ND	U	0.0957	3.11			1
2,3,4,7,8-PeCDF	ND	U	0.0950	3.11			1
1,2,3,4,7,8-HxCDF	ND	U	0.0782	3.11			1
1,2,3,6,7,8-HxCDF	ND	U	0.0740	3.11			1
1,2,3,7,8,9-HxCDF	ND	U	0.0994	3.11			1
2,3,4,6,7,8-HxCDF	ND	U	0.0849	3.11			1
1,2,3,4,6,7,8-HpCDF	**0.188**	J	0.0837	3.11	1.18	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.117	3.11			1
OCDF	B-MBL **0.371**	~~BJK~~	0.188	6.21	0.51	1.004	1
Total Tetra-Dioxins	ND	U	0.114	1.24			1
Total Penta-Dioxins	**0.558**	J	0.113	3.11	1.38		1
Total Hexa-Dioxins	**16.0**		0.0991	3.11	1.25		1
Total Hepta-Dioxins	**142**		0.262	3.11	1.07		1
Total Tetra-Furans	ND	U	0.124	1.24			1
Total Penta-Furans	ND	U	0.0950	3.11			1
Total Hexa-Furans	ND	U	0.0740	3.11			1
Total Hepta-Furans	**0.188**	J	0.0837	3.11	1.18		1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1615
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP340809 SB	**Units:**	Percent
Lab Code:	E1001044-015	**Basis:**	Dry
		Percent Solids:	79.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0800
Prep Method:	Method	**Date Extracted:**	9/30/10
Sample Amount:	10.190g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P110914	**Blank File Name:**	P110874
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110911

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	540.442	54		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	555.904	56		40-135	1.62	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1461.682	58		40-135	1.27	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1257.060	50		40-135	1.04	1.069
13C-OCDD	5000	1794.679	36	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	520.544	52		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	589.775	59		40-135	1.63	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1403.255	56		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1373.123	55		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	520.720	65		40-135	NA	1.010

TWD 12/21/2010

Client:	CH2M Hill	**Service Request:**	E1001044
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/28/10 1615
Sample Matrix:	Soil	**Date Received:**	9/29/10
Sample Name:	IS66DP340809 SB	**Units:**	ng/Kg
Lab Code:	E1001044-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.114	1	1	
1,2,3,7,8-PeCDD	**0.328**	0.113	1	1	0.328
1,2,3,4,7,8-HxCDD	**0.503**	0.111	1	0.1	0.0503
1,2,3,6,7,8-HxCDD	**0.888**	0.0991	1	0.1	0.0888
1,2,3,7,8,9-HxCDD	**0.938**	0.105	1	0.1	0.0938
1,2,3,4,6,7,8-HpCDD	**65.0**	0.262	1	0.01	0.650
OCDD	**13300**	0.151	1	0.0003	3.99
2,3,7,8-TCDF	ND	0.124	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0957	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0950	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0782	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0740	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0994	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0849	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.188**	0.0837	1	0.01	0.00188
1,2,3,4,7,8,9-HpCDF	ND	0.117	1	0.01	
OCDF	**0.371**	0.188	1	0.0003	0.000111
		Total TEQ			5.20

2005 WHO TEFs, ND = 0

TWD 12/21/2010

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 66/386329	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	IS66FB092710	Units:	pg/L
Lab Code:	E1001042-009	Basis:	NA

FB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	Date Analyzed:	10/5/10 1256
Prep Method:	Method	Date Extracted:	9/30/10
Sample Amount:	1020mL	Instrument Name:	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	Blank File Name:	P209714
ICAL Date:	08/01/08	Cal Ver. File Name:	P209713

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.271	9.80			1
1,2,3,7,8-PeCDD	ND	U	0.301	24.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.288	24.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.252	24.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.275	24.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.295	24.5			1
OCDD	3.54	BJ	0.421	49.0	0.98	1.000	1
2,3,7,8-TCDF	ND	U	0.411	9.80			1
1,2,3,7,8-PeCDF	ND	U	0.381	24.5			1
2,3,4,7,8-PeCDF	ND	U	0.377	24.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.110	24.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.105	24.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.137	24.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.117	24.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.228	24.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.309	24.5			1
OCDF	ND	U	0.568	49.0			1
Total Tetra-Dioxins	ND	U	0.271	9.80			1
Total Penta-Dioxins	ND	U	0.301	24.5			1
Total Hexa-Dioxins	ND	U	0.252	24.5			1
Total Hepta-Dioxins	ND	U	0.295	24.5			1
Total Tetra-Furans	ND	U	0.411	9.80			1
Total Penta-Furans	ND	U	0.377	24.5			1
Total Hexa-Furans	ND	U	0.105	24.5			1
Total Hepta-Furans	ND	U	0.228	24.5			1

TWD 12/21/2010

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 66/386329	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	IS66FB092710	Units:	Percent
Lab Code:	E1001042-009	Basis:	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	Date Analyzed:	10/5/10 1256
Prep Method:	Method	Date Extracted:	9/30/10
Sample Amount:	1020mL	Instrument Name:	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	Blank File Name:	P209714
ICAL Date:	08/01/08	Cal Ver. File Name:	P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	641.773	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	747.011	75		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1812.083	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1602.195	64		40-135	1.06	1.068
13C-OCDD	5000	2165.257	43		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	607.162	61		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	697.334	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1658.315	66		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1484.918	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.137	81		40-135	NA	1.010

TWD 12/21/2010

Client:	CH2M Hill	**Service Request:**	E1001042
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/27/10 1445
Sample Matrix:	Water	**Date Received:**	9/28/10
Sample Name:	IS66FB092710	**Units:**	pg/L
Lab Code:	E1001042-009	**Basis:**	NA

FB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.271	1	1	
1,2,3,7,8-PeCDD	ND	0.301	1	1	
1,2,3,4,7,8-HxCDD	ND	0.288	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.252	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.275	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.295	1	0.01	
OCDD	3.54	0.421	1	0.0003	0.00106
2,3,7,8-TCDF	ND	0.411	1	0.1	
1,2,3,7,8-PeCDF	ND	0.381	1	0.03	
2,3,4,7,8-PeCDF	ND	0.377	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.117	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.228	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.309	1	0.01	
OCDF	ND	0.568	1	0.0003	
		Total TEQ			0.00106

2005 WHO TEFs, ND = 0

TWD 12/21/2010

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 28th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services SDG JU04-4.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW6010/6020 Metals
- SW7470A/7471A Mercury
- SW8081A Pesticides
- SW8082 PCBs
- SW8260C Volatiles
- SW8270C and 8270C SIM Semivolatiles
- SW8330 Explosives
- 9012 Cyanide

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66MW050910	SD5938-001
IS66MW050910	SD5938-002
IS66FB092710	SD5938-003
IS66EB092710	SD5938-005
IS66EB092710	SD5938-006
IS66MW050910	SD5938-1
IS66FB092710	SD5938-3
IS66EB092710	SD5938-5
IS66TB092710	SD5938-7
IS66MW040910	SD5964-001
IS66MW040910	SD5964-002
IS66EB02-092810	SD5964-004
IS66EB02-092810	SD5964-005
IS66MW030910	SD5964-006
IS66MW030910	SD5964-007
IS66MW03P0910	SD5964-008
IS66MW03P0910	SD5964-009
IS66MW040910	SD5964-1
IS66TB092810	SD5964-3
IS66EB02-092810	SD5964-4
IS66MW030910	SD5964-6
IS66MW03P0910	SD5964-8
IS66DP391213	SD5972-001
IS66DP330001	SD5972-002
IS66DP331415	SD5972-003
IS66DP340001	SD5972-004
IS66DP340809	SD5972-005
IS66DP391213	SD5972-1
IS66DP330001	SD5972-2
IS66DP331415	SD5972-3
IS66DP340001	SD5972-4
IS66DP340809	SD5972-5

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), National Functional Guidelines for Inorganic Methods Data Review (EPA 2004), Region III Modifications for Organic Data Review (EPA 1994), and Region III Modifications for Inorganic Data Review (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Serial Dilutions
- Dual Column Confirmation
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data that has been qualified are summarized in **Attachment 1.**

Attachment 2 lists the specific non-conformance issues, such as the %Difference, Relative Percent Differences (RPD) and recoveries for data in this SDG.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/27/10 and 9/28/10. Samples were received at the laboratory on 9/28/10 and 9/29/10. All sample preparation analysis was performed within holding time requirements with the exception of sample IS66DP391213 for method 8081A. All sample results were qualified for being outside of holding time. Data are summarized in **Attachment 1.**

Calibration

Initial, continuing calibration, and second source verification were outside of criteria for the compounds listed below in methods 8270C and 8270C SIM. Affected data are summarized in **Attachment 1**.

Sample ID	Compound	Calibration
IS66DP330001	Benzaldehyde	IC
IS66DP331415	Benzaldehyde	IC
IS66DP340001	Benzaldehyde	IC
IS66DP340809	Benzaldehyde	IC
IS66DP391213	Benzaldehyde	IC
IS66EB092710	Benzaldehyde	IC
IS66EB092710	Di-n-butylphthalate	CC
IS66EB092710	Di-n-octylphthalate	CC
IS66FB092710	Benzaldehyde	IC
IS66FB092710	Di-n-octylphthalate	CC
IS66MW030910	Benzaldehyde	IC
IS66MW030910	Di-n-octylphthalate	CC
IS66MW03P0910	Benzaldehyde	IC
IS66MW03P0910	Di-n-octylphthalate	CC
IS66MW040910	Benzaldehyde	IC
IS66MW040910	Di-n-octylphthalate	CC
IS66MW050910	Benzaldehyde	IC
IS66MW050910	Di-n-octylphthalate	CC
IS66DP330001	3,3'-Dichlorobenzidine	2nd source
IS66DP331415	3,3'-Dichlorobenzidine	2nd source
IS66DP340001	3,3'-Dichlorobenzidine	2nd source
IS66DP391213	3,3'-Dichlorobenzidine	2nd source

Sample ID	Compound	Calibration
IS66EB092710	2-Nitroaniline	2nd source
IS66EB092710	2,4-Dinitrophenol	IC
IS66EB092710	4-Nitroaniline	2nd source
IS66EB092710	3,3'-Dichlorobenzidine	2nd source
IS66FB092710	2,4-Dinitrophenol	IC
IS66FB092710	4-Nitroaniline	IC
IS66MW030910	2-Nitroaniline	2nd source
IS66MW030910	2,4-Dinitrophenol	IC
IS66MW030910	4-Nitroaniline	2nd source
IS66MW03P0910	2-Nitroaniline	2nd source
IS66MW03P0910	2,4-Dinitrophenol	IC
IS66MW03P0910	4-Nitroaniline	2nd source
IS66MW03P0910	3,3'-Dichlorobenzidine	2nd source
IS66MW040910	2-Nitroaniline	2nd source
IS66MW040910	2,4-Dinitrophenol	IC
IS66MW040910	4-Nitroaniline	2nd source
IS66MW040910	3,3'-Dichlorobenzidine	2nd source
IS66MW050910	2,4-Dinitrophenol	IC
IS66MW050910	4-Nitroaniline	IC

Blanks

Various compounds in methods 8260B, 8270C SIM, 6010B, 6020, and 9012 were detected in equipment blanks, field blanks, method blanks, and/or calibration blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Units	Action Level	Units
8260 - VOC					
IS66FB092710	Chloromethane	1.4	ug/L	7	ug/L or ug/Kg
IS66EB092710	Acetone	6.0	ug/L	60	ug/L
IS66EB02-092810	Acetone	6.4	ug/L	60	ug/L or ug/Kg
WG82812-2 – MB – 9/30	Carbon Disulfide	1.3	ug/L	6.5	ug/Kg
WG82949-2 – MB – 10/1	Carbon Disulfide	1.2	ug/L	6	ug/Kg
8270 SIM					

Blank ID	Compound	Conc.	Units	Action Level	Units
IS66FB092710	Naphthalene	0.16	ug/L	0.8	ug/L
WG82749-1RA – MB –9/30	BEHP	46	ug/Kg	460	ug/Kg
WG82758-1 – MB –9/30	BEHP	2.5	ug/L	25	ug/L
Cyanide					
IS66EB02-092810	Cyanide	5.2	ug/L	26	ug/L
Metals – 6010/6020 – Waters					
ISSFB01-092710	Arsenic - Total	2.4	ug/L	12	ug/L
	Zinc - Total	1.9	ug/L	9.5	ug/L
ISSEB01-092710	Arsenic - Total	1.9	ug/L	9.5	ug/L
	Zinc - Total	1.0	ug/L	5.0	ug/L
ISSEB01-092810	Aluminum - Total	15.5	ug/L	77.5	ug/L
	Arsenic – Total	2.2	ug/L	11	ug/L
	Zinc - Total	0.56	ug/L	2.8	ug/L
ISSEB01-092710	Arsenic – Dissolved	2.2	ug/L	11	ug/L
	Calcium - Dissolved	173	ug/L	865	ug/L
	Zinc – Dissolved	1.1	ug/L	5.5	ug/L
ISSEB01-092810	Arsenic – Dissolved	3.3	ug/L	16.5	ug/L
	Calcium - Dissolved	116	ug/L	580	ug/L
	Zinc – Dissolved	0.95	ug/L	4.75	ug/L
PBWAJ04ICW1 - PB	Calcium	9.97	ug/L	49.85	ug/L
	Copper	1.142	ug/L	5.71	ug/L
	Lead	1.007	ug/L	5.035	ug/L
	Magnesium	12.15	ug/L	60.75	ug/L
	Manganese	0.565	ug/L	2.825	ug/L
	Nickel	0.353	ug/L	1.765	ug/L
	Potassium	172.6	ug/L	863	ug/L
	Sodium	447.7	ug/L	2239	ug/L
PBWAJ04ICMW0 - PB	Chromium	1.615	ug/L	8.075	ug/L
	Vanadium	0.773	ug/L	3.865	ug/L
CCB 100710 1213	Magnesium	7.39	ug/L	36.95	ug/L
	Manganese	0.84	ug/L	4.2	ug/L
CCB 100710 1309	Copper	2.54	ug/L	12.7	ug/L
CCB 100710 1404	Lead	1.38	ug/L	6.9	ug/L
	Sodium	58.86	ug/L	294.3	ug/L
CCB 101210 1253	Antimony	0.01	ug/L	0.05	ug/L
Metals – 6010/6020 – Soils					
ISSEB01-092810 (soil)	Calcium	24	ug/L	12	mg/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
	Copper	0.17	ug/L	0.085	mg/Kg
ISSFB01-092710 (soil)	Arsenic	2.4	ug/L	1.2	mg/Kg
	Zinc	1.9	ug/L	0.95	mg/Kg
PBSAJ11ICS1	Cadmium	0.017	mg/Kg	0.085	mg/Kg
	Calcium	5.317	mg/Kg	26.585	mg/Kg
	Copper	0.132	mg/Kg	0.66	mg/Kg
	Iron	2.835	mg/Kg	14.175	mg/Kg
	Magnesium	2.256	mg/Kg	11.28	mg/Kg
	Sodium	29.36	mg/Kg	146.8	mg/Kg
	Zinc	0.305	mg/Kg	1.525	mg/Kg
PBSAJ11IMS1	Chromium	0.159	mg/Kg	0.795	mg/Kg
CCB 101410 1826	Barium	0.32	ug/L	0.160	mg/Kg
	Sodium	38.17	ug/L	19.085	mg/Kg
CCB 101410 1921	Iron	18.92	ug/L	9.46	mg/Kg
CCB 101410 2016	Beryllium	0.27	ug/L	0.135	mg/Kg
	Cadmium	0.34	ug/L	0.17	mg/Kg
	Manganese	1.58	ug/L	0.790	mg/Kg
	Nickel	0.65	ug/L	0.325	mg/Kg
CCB 101510 1751	Cadmium	0.16	ug/L	0.08	mg/Kg
	Magnesium	10.05	ug/L	5.025	mg/Kg
	Manganese	1.35	ug/L	0.675	mg/Kg

Lab Control Sample/Lab Control Duplicate

Acetone and bis(2-Ethylhexyl)phthalate exhibited high recoveries in the LCS/LCSD. Multiple compounds in methods 8270C and 8270C SIM exhibited low recoveries. Affected data are summarized in **Attachment 1.**

Matrix Spike/Spike Duplicate

Various other compounds for 8270C SIM were qualified due to low recoveries in the MS/MSD. 2,4,6-Trichlorphenol was rejected for lab sample SD5938-1 due to MS 9% and MSD 10% recoveries. 3,3-Dichlorobenzidine was also rejected for the same sample due to MS 0% and MSD 8% recoveries.

Affected data are summarized in **Attachment 1.**

Surrogates

Surrogates for the samples listed below exhibited recoveries below the lower control limits for methods 8081A, 8082, 8270C, 8270C SIM, and 8260B. Method 8260B had surrogates for

several samples that exhibited high recoveries. Affected data are summarized in **Attachment 1.**

Sample ID
IS66DP330001
IS66DP331415
IS66DP340001
IS66DP340809
IS66DP391213
IS66EB02-092810
IS66MW050910

Internal Standards
Internal standards were out low for sample IS66TB092810. The compounds affected by the low internal standard are summarized in **Attachment 1.**

Other Quality Control Issues
From the Case Narrative – "All of the soil samples had concentrations of Tetrachloroethene above the MDL. Upon investigation, Katahdin found that the freezer blank stored in the freezer at the same time as these samples had a Tetrachloroethene concentration of 15 ug/kg. Upon further investigation, Katahdin discovered that another client's sample which was also stored in the same freezer had an extremely high concentration of Tetrachloroethene. It is believed that this sample is the source of contamination. The sample was removed from the storage freezer and the subsequent freezer storage blank had no detection of Tetrachloroethene above the MDL." Therefore, qualify all detected Tetrachloroethene results as "J-OT".

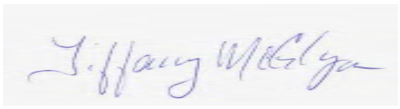
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5999-1
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66MW020910	AQ	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	12. mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:51:00	N/A	N/A	
Total Cyanide	J6.0 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:47:57	SW846 M9012	08-OCT-10	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5999-3
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66EB02-092910	AQ	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	110. mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:55:00	N/A	N/A	
Total Cyanide	35.8 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:47:58	SW846 M9012	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD5999-5
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66MW010910	AQ	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Hardness	J8.1 mg/L	10.	4	EPA 130.2	WG83244	07-OCT-10 15:59:00	N/A	N/A	
Total Cyanide	J5.7 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:47:59	SW846 M9012	08-OCT-10	

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-1
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66EB01-092910	AQ	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:48:00	SW846 M9012	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-2
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP320001	SL	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83042	05-OCT-10 16:15:27	SW846 M9012	05-OCT-10	
Total Solids	90. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:38:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-3
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66SS32P0001	SL	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83334	08-OCT-10 15:48:03	SW846 M9012	08-OCT-10	
Total Solids	89. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:39:00	ASTM D2216	06-OCT-10	

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Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-4
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP320809 SB	SL	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83334	08-OCT-10 15:48:04	SW846 M9012	08-OCT-10	
Total Solids	85. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:40:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-5
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP32P0809	SL	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83334	08-OCT-10 15:53:35	SW846 M9012	08-OCT-10	
Total Solids	86. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:41:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-6
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP350001	SL	29-SEP-10	30-SEP-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83334	08-OCT-10 15:53:36	SW846 M9012	08-OCT-10	
Total Solids	90. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:42:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6000-7
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP351415 SB	SL	29-SEP-10	30-SEP-10

Parameter		Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	UL-MSL	0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83334	08-OCT-10 15:53:41	SW846 M9012	08-OCT-10	
Total Solids		82. %	1	N/A	SM2540G	WG83144	07-OCT-10 10:43:00	ASTM D2216	06-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-1
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66SD15	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	56000 ug/gdrywt	730	540	LLOYDKAHN	WG83110	04-OCT-10 12:10:56	N/A	N/A	
Total Cyanide	U0.72 mg/Kgdrywt	0.90	0.72	SW846 M9012A	WG83334	08-OCT-10 15:53:44	SW846 M9012	08-OCT-10	
Total Solids	55. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:02:00	ASTM D2216	07-OCT-10	
pH(Soil)	6.8 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 14:06:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-2
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
1S66SD14	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	130000 ug/gdrywt	1300	950	LLOYDKAHN	WG83110	04-OCT-10 15:02:01	N/A	N/A	
Total Cyanide	U1.2 mg/Kgdrywt	1.5	1.2	SW846 M9012A	WG83334	08-OCT-10 15:59:18	SW846 M9012	08-OCT-10	
Total Solids	32. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:04:00	ASTM D2216	07-OCT-10	
pH(Soil)	6.6 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 14:08:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-3
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP400001	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83334	08-OCT-10 15:59:19	SW846 M9012	08-OCT-10	
Total Solids	82. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:05:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-4
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP400910	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG83334	08-OCT-10 15:59:20	SW846 M9012	08-OCT-10	
Total Solids	75. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:06:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly, VA 20151

Lab Sample ID: SD6045-6
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66EB01-093010	AQ	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:48:01	SW846 M9012	08-OCT-10	
Total Organic Carbon	J0.43 mg/L	1.0	N/A	EPA 415.1	WG83035	05-OCT-10 08:38:40	N/A	N/A	
pH(Laboratory)	5.6 pH	0.10	N/A	EPA 150.1	WG82978	01-OCT-10 14:17:00	N/A	N/A	H1

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-7
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66EB02-093010	AQ	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	110 ug/L	10.	8.0	SW846 M9012A	WG83333	08-OCT-10 15:48:02	SW846 M9012	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6045-8
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP410001	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.64 mg/Kgdrywt	0.80	0.64	SW846 M9012A	WG83334	08-OCT-10 15:59:21	SW846 M9012	08-OCT-10	
Total Solids	58. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:07:00	ASTM D2216	07-OCT-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
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Lab Sample ID: SD6045-9
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
1S66DP410607	SL	30-SEP-10	01-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG83334	08-OCT-10 15:59:24	SW846 M9012	08-OCT-10	
Total Solids	76. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:08:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-1
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
1S66DP230001	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83334	08-OCT-10 15:59:25	SW846 M9012	08-OCT-10	
Total Solids	86. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:10:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-2
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP231516 SB	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83334	08-OCT-10 15:59:26	SW846 M9012	08-OCT-10	
Total Solids	81.%	1	N/A	SM2540G	WG83213	08-OCT-10 09:11:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-3
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP220001	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83334	08-OCT-10 15:59:27	SW846 M9012	08-OCT-10	
Total Solids	86. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:12:00	ASTM D2216	07-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-4
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP22P0001	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83521	14-OCT-10 12:48:50	SW846 M9012	14-OCT-10	
Total Solids	85. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:13:00	ASTM D2216	07-OCT-10	

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Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-5
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP221112	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83521	14-OCT-10 12:48:51	SW846 M9012	14-OCT-10	
Total Solids	78. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:15:00	ASTM D2216	07-OCT-10	

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6082-6
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-4

Sample Description	Matrix	Date Sampled	Date Received
IS66DP22P1112	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG83521	14-OCT-10 12:48:52	SW846 M9012	14-OCT-10	
Total Solids	79. %	1	N/A	SM2540G	WG83213	08-OCT-10 09:16:00	ASTM D2216	07-OCT-10	

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ANALYTICAL SERVICES

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nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		94.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: IS66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	144.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910 (GW)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX		3.6	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		92.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	152.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	46.	ug/Kgdrywt	1	100	93.	8.0	46.
RDX	U	46.	ug/Kgdrywt	1	100	93.	6.3	46.
1,3,5-Trinitrobenzene	U	46.	ug/Kgdrywt	1	100	93.	6.2	46.
1,3-Dinitrobenzene	U	46.	ug/Kgdrywt	1	100	93.	5.8	46.
Tetryl	U	46.	ug/Kgdrywt	1	100	93.	5.0	46.
Nitrobenzene	EXCLUDE-RE ~~U~~	46.	ug/Kgdrywt	1	100	93.	20.	46.
Nitroglycerin	U	370	ug/Kgdrywt	1	800	740	120	370
2,4,6-Trinitrotoluene	U	46.	ug/Kgdrywt	1	100	93.	6.2	46.
4-Am-DNT	U	46.	ug/Kgdrywt	1	100	93.	16.	46.
2-Am-DNT	U	46.	ug/Kgdrywt	1	100	93.	20.	46.
2,6-Dinitrotoluene	U	46.	ug/Kgdrywt	1	100	93.	25.	46.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	46.	ug/Kgdrywt	1	100	93.	14.	46.
2-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	93.	11.	46.
4-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	93.	25.	46.
3-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	93.	7.3	46.
1,2-Dinitrobenzene		94.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	41.	ug/Kgdrywt	1	100	82.	7.0	41.
RDX	U	41.	ug/Kgdrywt	1	100	82.	5.6	41.
1,3,5-Trinitrobenzene	U	41.	ug/Kgdrywt	1	100	82.	5.5	41.
1,3-Dinitrobenzene	U	41.	ug/Kgdrywt	1	100	82.	5.1	41.
Tetryl	U	41.	ug/Kgdrywt	1	100	82.	4.4	41.
Nitrobenzene	EXCLUDE-RE ~~U~~	41.	ug/Kgdrywt	1	100	82.	18.	41.
Nitroglycerin	U	330	ug/Kgdrywt	1	800	660	100	330
2,4,6-Trinitrotoluene	U	41.	ug/Kgdrywt	1	100	82.	5.5	41.
4-Am-DNT	U	41.	ug/Kgdrywt	1	100	82.	14.	41.
2-Am-DNT	U	41.	ug/Kgdrywt	1	100	82.	17.	41.
2,6-Dinitrotoluene	U	41.	ug/Kgdrywt	1	100	82.	22.	41.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	41.	ug/Kgdrywt	1	100	82.	12.	41.
2-Nitrotoluene	U	41.	ug/Kgdrywt	1	100	82.	9.8	41.
4-Nitrotoluene	U	41.	ug/Kgdrywt	1	100	82.	22.	41.
3-Nitrotoluene	U	41.	ug/Kgdrywt	1	100	82.	6.5	41.
1,2-Dinitrobenzene		95.4	%					

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ANALYTICAL SERVICES

Cert No E8760-I

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	46.	ug/Kgdrywt	1	100	92.	8.0	46.
RDX	U	46.	ug/Kgdrywt	1	100	92.	6.3	46.
1,3,5-Trinitrobenzene	U	46.	ug/Kgdrywt	1	100	92.	6.2	46.
1,3-Dinitrobenzene	U	46.	ug/Kgdrywt	1	100	92.	5.7	46.
Tetryl	U	46.	ug/Kgdrywt	1	100	92.	5.0	46.
Nitrobenzene	EXCLUDE-RE ~~U~~	46.	ug/Kgdrywt	1	100	92.	20.	46.
Nitroglycerin	U	370	ug/Kgdrywt	1	800	740	110	370
2,4,6-Trinitrotoluene	U	46.	ug/Kgdrywt	1	100	92.	6.2	46.
4-Am-DNT	U	46.	ug/Kgdrywt	1	100	92.	16.	46.
2-Am-DNT	U	46.	ug/Kgdrywt	1	100	92.	19.	46.
2,6-Dinitrotoluene	U	46.	ug/Kgdrywt	1	100	92.	25.	46.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	46.	ug/Kgdrywt	1	100	92.	14.	46.
2-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	92.	11.	46.
4-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	92.	25.	46.
3-Nitrotoluene	U	46.	ug/Kgdrywt	1	100	92.	7.3	46.
1,2-Dinitrobenzene		89.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66DP32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	42.	ug/Kgdrywt	1	100	85.	7.3	42.
RDX	U	42.	ug/Kgdrywt	1	100	85.	5.8	42.
1,3,5-Trinitrobenzene	U	42.	ug/Kgdrywt	1	100	85.	5.7	42.
1,3-Dinitrobenzene	U	42.	ug/Kgdrywt	1	100	85.	5.3	42.
Tetryl	U	42.	ug/Kgdrywt	1	100	85.	4.6	42.
Nitrobenzene	EXCLUDE-RE ~~U~~	42.	ug/Kgdrywt	1	100	85.	19.	42.
Nitroglycerin	U	340	ug/Kgdrywt	1	800	680	100	340
2,4,6-Trinitrotoluene	U	42.	ug/Kgdrywt	1	100	85.	5.7	42.
4-Am-DNT	U	42.	ug/Kgdrywt	1	100	85.	14.	42.
2-Am-DNT	U	42.	ug/Kgdrywt	1	100	85.	18.	42.
2,6-Dinitrotoluene	U	42.	ug/Kgdrywt	1	100	85.	23.	42.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	42.	ug/Kgdrywt	1	100	85.	13.	42.
2-Nitrotoluene	U	42.	ug/Kgdrywt	1	100	85.	10.	42.
4-Nitrotoluene	U	42.	ug/Kgdrywt	1	100	85.	23.	42.
3-Nitrotoluene	U	42.	ug/Kgdrywt	1	100	85.	6.7	42.
1,2-Dinitrobenzene		86.8	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	44.	ug/Kgdrywt	1	100	88.	7.6	44.
RDX	U	44.	ug/Kgdrywt	1	100	88.	6.0	44.
1,3,5-Trinitrobenzene	U	44.	ug/Kgdrywt	1	100	88.	5.9	44.
1,3-Dinitrobenzene	U	44.	ug/Kgdrywt	1	100	88.	5.5	44.
Tetryl	U	44.	ug/Kgdrywt	1	100	88.	4.8	44.
Nitrobenzene	EXCLUDE-RE ~~U~~	44.	ug/Kgdrywt	1	100	88.	19.	44.
Nitroglycerin	U	350	ug/Kgdrywt	1	800	700	110	350
2,4,6-Trinitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	5.9	44.
4-Am-DNT	U	44.	ug/Kgdrywt	1	100	88.	15.	44.
2-Am-DNT	U	44.	ug/Kgdrywt	1	100	88.	18.	44.
2,6-Dinitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	24.	44.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	44.	ug/Kgdrywt	1	100	88.	13.	44.
2-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	10.	44.
4-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	24.	44.
3-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	7.0	44.
1,2-Dinitrobenzene		91.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	50.	ug/Kgdrywt	1	100	99.	8.5	50.
RDX	U	50.	ug/Kgdrywt	1	100	99.	6.7	50.
1,3,5-Trinitrobenzene	U	50.	ug/Kgdrywt	1	100	99.	6.6	50.
1,3-Dinitrobenzene	U	50.	ug/Kgdrywt	1	100	99.	6.1	50.
Tetryl	U	50.	ug/Kgdrywt	1	100	99.	5.4	50.
Nitrobenzene	EXCLUDE-RE ~~U~~	50.	ug/Kgdrywt	1	100	99.	22.	50.
Nitroglycerin	U	400	ug/Kgdrywt	1	800	790	120	400
2,4,6-Trinitrotoluene	U	50.	ug/Kgdrywt	1	100	99.	6.6	50.
4-Am-DNT	U UL-MSL	50.	ug/Kgdrywt	1	100	99.	17.	50.
2-Am-DNT	U	50.	ug/Kgdrywt	1	100	99.	21.	50.
2,6-Dinitrotoluene	U	50.	ug/Kgdrywt	1	100	99.	27.	50.
2,4-Dinitrotoluene	EXCLUDE-RE U	50.	ug/Kgdrywt	1	100	99.	15.	50.
2-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	99.	12.	50.
4-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	99.	27.	50.
3-Nitrotoluene	U	50.	ug/Kgdrywt	1	100	99.	7.8	50.
1,2-Dinitrobenzene		91.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	70.	ug/Kgdrywt	1	100	140	12.	70.
RDX	U	70.	ug/Kgdrywt	1	100	140	9.6	70.
1,3,5-Trinitrobenzene	U	70.	ug/Kgdrywt	1	100	140	9.4	70.
1,3-Dinitrobenzene	U	70.	ug/Kgdrywt	1	100	140	8.7	70.
Tetryl	U	70.	ug/Kgdrywt	1	100	140	7.6	70.
Nitrobenzene	EXCLUDE-RE ~~U~~	70.	ug/Kgdrywt	1	100	140	31.	70.
Nitroglycerin	U	560	ug/Kgdrywt	1	800	1100	170	560
2,4,6-Trinitrotoluene	U	70.	ug/Kgdrywt	1	100	140	9.4	70.
4-Am-DNT	U	70.	ug/Kgdrywt	1	100	140	24.	70.
2-Am-DNT	U	70.	ug/Kgdrywt	1	100	140	30.	70.
2,6-Dinitrotoluene	U	70.	ug/Kgdrywt	1	100	140	38.	70.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	70.	ug/Kgdrywt	1	100	140	21.	70.
2-Nitrotoluene	U	70.	ug/Kgdrywt	1	100	140	17.	70.
4-Nitrotoluene	U	70.	ug/Kgdrywt	1	100	140	38.	70.
3-Nitrotoluene	U	70.	ug/Kgdrywt	1	100	140	11.	70.
1,2-Dinitrobenzene		74.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2RE
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	120	ug/Kgdrywt	1	100	250	22.	120
RDX	U	120	ug/Kgdrywt	1	100	250	17.	120
1,3,5-Trinitrobenzene	U	120	ug/Kgdrywt	1	100	250	17.	120
1,3-Dinitrobenzene	U	120	ug/Kgdrywt	1	100	250	16.	120
Tetryl	U	120	ug/Kgdrywt	1	100	250	14.	120
Nitrobenzene	EXCLUDE-RE ~~U~~	120	ug/Kgdrywt	1	100	250	55.	120
Nitroglycerin	U	1000	ug/Kgdrywt	1	800	2000	310	1000
2,4,6-Trinitrotoluene	U	120	ug/Kgdrywt	1	100	250	17.	120
4-Am-DNT	U	120	ug/Kgdrywt	1	100	250	42.	120
2-Am-DNT	U	120	ug/Kgdrywt	1	100	250	52.	120
2,6-Dinitrotoluene	U	120	ug/Kgdrywt	1	100	250	68.	120
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	120	ug/Kgdrywt	1	100	250	38.	120
2-Nitrotoluene	U	120	ug/Kgdrywt	1	100	250	30.	120
4-Nitrotoluene	U	120	ug/Kgdrywt	1	100	250	68.	120
3-Nitrotoluene	U	120	ug/Kgdrywt	1	100	250	20.	120
1,2-Dinitrobenzene		112.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-33
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	51.	ug/Kgdrywt	1	100	100	8.8	51.
RDX	U	51.	ug/Kgdrywt	1	100	100	7.0	51.
1,3,5-Trinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
1,3-Dinitrobenzene	U	51.	ug/Kgdrywt	1	100	100	6.4	51.
Tetryl	U	51.	ug/Kgdrywt	1	100	100	5.6	51.
Nitrobenzene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	23.	51.
Nitroglycerin	U	410	ug/Kgdrywt	1	800	820	130	410
2,4,6-Trinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	6.9	51.
4-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	17.	51.
2-Am-DNT	U	51.	ug/Kgdrywt	1	100	100	22.	51.
2,6-Dinitrotoluene	U	51.	ug/Kgdrywt	1	100	100	28.	51.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	51.	ug/Kgdrywt	1	100	100	15.	51.
2-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	12.	51.
4-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	28.	51.
3-Nitrotoluene	U	51.	ug/Kgdrywt	1	100	100	8.1	51.
1,2-Dinitrobenzene		91.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	54.	ug/Kgdrywt	1	100	110	9.2	54.
RDX	U	54.	ug/Kgdrywt	1	100	110	7.3	54.
1,3,5-Trinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
1,3-Dinitrobenzene	U	54.	ug/Kgdrywt	1	100	110	6.7	54.
Tetryl	U	54.	ug/Kgdrywt	1	100	110	5.8	54.
Nitrobenzene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	24.	54.
Nitroglycerin	U	430	ug/Kgdrywt	1	800	860	130	430
2,4,6-Trinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	7.2	54.
4-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	18.	54.
2-Am-DNT	U	54.	ug/Kgdrywt	1	100	110	23.	54.
2,6-Dinitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	54.	ug/Kgdrywt	1	100	110	16.	54.
2-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	13.	54.
4-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	29.	54.
3-Nitrotoluene	U	54.	ug/Kgdrywt	1	100	110	8.5	54.
1,2-Dinitrobenzene		86.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene		101.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 07-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	141.	%					

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REISSUE

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Katahdin Analytical Services A0000847

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	80.	ug/Kgdrywt	1	100	160	14.	80.
RDX	U	80.	ug/Kgdrywt	1	100	160	11.	80.
1,3,5-Trinitrobenzene	U	80.	ug/Kgdrywt	1	100	160	11.	80.
1,3-Dinitrobenzene	U	80.	ug/Kgdrywt	1	100	160	10.	80.
Tetryl	U	80.	ug/Kgdrywt	1	100	160	8.7	80.
Nitrobenzene	EXCLUDE-RE ~~U~~	80.	ug/Kgdrywt	1	100	160	35.	80.
Nitroglycerin	U	640	ug/Kgdrywt	1	800	1300	200	640
2,4,6-Trinitrotoluene	U	80.	ug/Kgdrywt	1	100	160	11.	80.
4-Am-DNT	U	80.	ug/Kgdrywt	1	100	160	27.	80.
2-Am-DNT	U	80.	ug/Kgdrywt	1	100	160	34.	80.
2,6-Dinitrotoluene	U	80.	ug/Kgdrywt	1	100	160	43.	80.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	80.	ug/Kgdrywt	1	100	160	24.	80.
2-Nitrotoluene	U	80.	ug/Kgdrywt	1	100	160	19.	80.
4-Nitrotoluene	U	80.	ug/Kgdrywt	1	100	160	43.	80.
3-Nitrotoluene	U	80.	ug/Kgdrywt	1	100	160	13.	80.
1,2-Dinitrobenzene		95.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9RE
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	62.	ug/Kgdrywt	1	100	120	10.	62.
RDX	U	62.	ug/Kgdrywt	1	100	120	8.4	62.
1,3,5-Trinitrobenzene	U	62.	ug/Kgdrywt	1	100	120	8.2	62.
1,3-Dinitrobenzene	U	62.	ug/Kgdrywt	1	100	120	7.6	62.
Tetryl	U	62.	ug/Kgdrywt	1	100	120	6.7	62.
Nitrobenzene	EXCLUDE-RE ~~U~~	62.	ug/Kgdrywt	1	100	120	27.	62.
Nitroglycerin	U	490	ug/Kgdrywt	1	800	980	150	490
2,4,6-Trinitrotoluene	U	62.	ug/Kgdrywt	1	100	120	8.2	62.
4-Am-DNT	U	62.	ug/Kgdrywt	1	100	120	21.	62.
2-Am-DNT	U	62.	ug/Kgdrywt	1	100	120	26.	62.
2,6-Dinitrotoluene	U	62.	ug/Kgdrywt	1	100	120	33.	62.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	62.	ug/Kgdrywt	1	100	120	18.	62.
2-Nitrotoluene	U	62.	ug/Kgdrywt	1	100	120	15.	62.
4-Nitrotoluene	U	62.	ug/Kgdrywt	1	100	120	33.	62.
3-Nitrotoluene	U	62.	ug/Kgdrywt	1	100	120	9.7	62.
1,2-Dinitrobenzene		112.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	52.	ug/Kgdrywt	1	100	100	8.9	52.
RDX	U	52.	ug/Kgdrywt	1	100	100	7.0	52.
1,3,5-Trinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	6.9	52.
1,3-Dinitrobenzene	U	52.	ug/Kgdrywt	1	100	100	6.4	52.
Tetryl	U	52.	ug/Kgdrywt	1	100	100	5.6	52.
Nitrobenzene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	23.	52.
Nitroglycerin	U	410	ug/Kgdrywt	1	800	830	130	410
2,4,6-Trinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	6.9	52.
4-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	18.	52.
2-Am-DNT	U	52.	ug/Kgdrywt	1	100	100	22.	52.
2,6-Dinitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	52.	ug/Kgdrywt	1	100	100	16.	52.
2-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	12.	52.
4-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	28.	52.
3-Nitrotoluene	U	52.	ug/Kgdrywt	1	100	100	8.2	52.
1,2-Dinitrobenzene		93.2	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66DP231516
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60.	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60.	ug/Kgdrywt	1	100	120	8.2	60.
1,3,5-Trinitrobenzene	U	60.	ug/Kgdrywt	1	100	120	8.1	60.
1,3-Dinitrobenzene	U	60.	ug/Kgdrywt	1	100	120	7.5	60.
Tetryl	U	60.	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	EXCLUDE-RE ~~U~~	60.	ug/Kgdrywt	1	100	120	27.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	970	150	480
2,4,6-Trinitrotoluene	U	60.	ug/Kgdrywt	1	100	120	8.1	60.
4-Am-DNT	U	60.	ug/Kgdrywt	1	100	120	20.	60.
2-Am-DNT	U	60.	ug/Kgdrywt	1	100	120	25.	60.
2,6-Dinitrotoluene	U	60.	ug/Kgdrywt	1	100	120	33.	60.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	60.	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	14.	60.
4-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	33.	60.
3-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	9.6	60.
1,2-Dinitrobenzene		94.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	43.	ug/Kgdrywt	1	100	86.	7.4	43.
RDX	U	43.	ug/Kgdrywt	1	100	86.	5.8	43.
1,3,5-Trinitrobenzene	U	43.	ug/Kgdrywt	1	100	86.	5.7	43.
1,3-Dinitrobenzene	U	43.	ug/Kgdrywt	1	100	86.	5.3	43.
Tetryl	U	43.	ug/Kgdrywt	1	100	86.	4.6	43.
Nitrobenzene	EXCLUDE-RE ~~U~~	43.	ug/Kgdrywt	1	100	86.	19.	43.
Nitroglycerin	U	340	ug/Kgdrywt	1	800	690	110	340
2,4,6-Trinitrotoluene	U	43.	ug/Kgdrywt	1	100	86.	5.7	43.
4-Am-DNT	U	43.	ug/Kgdrywt	1	100	86.	14.	43.
2-Am-DNT	U	43.	ug/Kgdrywt	1	100	86.	18.	43.
2,6-Dinitrotoluene	U	43.	ug/Kgdrywt	1	100	86.	23.	43.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	43.	ug/Kgdrywt	1	100	86.	13.	43.
2-Nitrotoluene	U	43.	ug/Kgdrywt	1	100	86.	10.	43.
4-Nitrotoluene	U	43.	ug/Kgdrywt	1	100	86.	23.	43.
3-Nitrotoluene	U	43.	ug/Kgdrywt	1	100	86.	6.8	43.
1,2-Dinitrobenzene		95.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4SS
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site E
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	44.	ug/Kgdrywt	1	100	88.	7.6	44.
RDX	U	44.	ug/Kgdrywt	1	100	88.	6.0	44.
1,3,5-Trinitrobenzene	U	44.	ug/Kgdrywt	1	100	88.	5.9	44.
1,3-Dinitrobenzene	U	44.	ug/Kgdrywt	1	100	88.	5.5	44.
Tetryl	U	44.	ug/Kgdrywt	1	100	88.	4.8	44.
Nitrobenzene	EXCLUDE-RE ~~U~~	44.	ug/Kgdrywt	1	100	88.	19.	44.
Nitroglycerin	U	350	ug/Kgdrywt	1	800	710	110	350
2,4,6-Trinitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	5.9	44.
4-Am-DNT	U	44.	ug/Kgdrywt	1	100	88.	15.	44.
2-Am-DNT	U	44.	ug/Kgdrywt	1	100	88.	18.	44.
2,6-Dinitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	24.	44.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	44.	ug/Kgdrywt	1	100	88.	13.	44.
2-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	10.	44.
4-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	24.	44.
3-Nitrotoluene	U	44.	ug/Kgdrywt	1	100	88.	7.0	44.
1,2-Dinitrobenzene		91.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	56.	ug/Kgdrywt	1	100	110	9.7	56.
RDX	U	56.	ug/Kgdrywt	1	100	110	7.6	56.
1,3,5-Trinitrobenzene	U	56.	ug/Kgdrywt	1	100	110	7.5	56.
1,3-Dinitrobenzene	U	56.	ug/Kgdrywt	1	100	110	7.0	56.
Tetryl	U	56.	ug/Kgdrywt	1	100	110	6.1	56.
Nitrobenzene	EXCLUDE-RE ~~U~~	56.	ug/Kgdrywt	1	100	110	25.	56.
Nitroglycerin	U	450	ug/Kgdrywt	1	800	900	140	450
2,4,6-Trinitrotoluene	U	56.	ug/Kgdrywt	1	100	110	7.5	56.
4-Am-DNT	U	56.	ug/Kgdrywt	1	100	110	19.	56.
2-Am-DNT	U	56.	ug/Kgdrywt	1	100	110	24.	56.
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	56.	ug/Kgdrywt	1	100	110	30.	56.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	56.	ug/Kgdrywt	1	100	110	17.	56.
2-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	14.	56.
4-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	30.	56.
3-Nitrotoluene	U	56.	ug/Kgdrywt	1	100	110	8.9	56.
1,2-Dinitrobenzene		92.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83166

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58.	ug/Kgdrywt	1	100	120	10.	58.
RDX	U	58.	ug/Kgdrywt	1	100	120	7.9	58.
1,3,5-Trinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
1,3-Dinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58.	ug/Kgdrywt	1	100	120	6.3	58.
Nitrobenzene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	26.	58.
Nitroglycerin	U	460	ug/Kgdrywt	1	800	930	140	460
2,4,6-Trinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
4-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	20.	58.
2-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	24.	58.
2,6-Dinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	17.	58.
2-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	14.	58.
4-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	31.	58.
3-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
1,2-Dinitrobenzene		89.8	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66MW020910 GW

Matrix: WATER **SDG Name:** JU04-4

Percent Solids: 0.00 **Lab Sample ID:** SD5999-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	99.8	J	B-FBL	P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.11	J		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.7	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	60.3			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.07	J	B-CCBL	MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.05	J	B-CCBL	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	2520			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.7	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.33	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	14400			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	1360			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	289			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	544	J		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	11700			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.3	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	1.1	J	B-FBL	P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66MW020910

Matrix: WATER **SDG Name:** JU04-4

Percent Solids: 0.00 **Lab Sample ID:** SD5999-002

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	1.8	J	B-FBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	59.1			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	2490			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	2.8	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.21	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	10	U		P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	14400			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	1.2	J		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	1370			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	287			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	513	J		P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	11700			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	1.6	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	2.1	J	B-FBL	P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-092910

Matrix: WATER | SDG Name: JU04-4

Percent Solids: 0.00 | Lab Sample ID: SD5999-003

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.6	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	48.2	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.0	J+B-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.76	J+B-CCBL		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	8.8	J+B-MBL		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	14.3	J+B-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	0.79	J+B-CCBL		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.3	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66EB02-092910

Matrix: WATER
SDG Name: JU04-4

Percent Solids: 0.00
Lab Sample ID: SD5999-004

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, DISSOLVED	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	1.1	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	100			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	3.0	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	0.54	JB-CCBL		P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	80	U		P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	27.7	J-B-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	0.88	JB-CCBL		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	143	J		P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	1.8	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	10	U		P	1	25	0.50	10

Bottle ID: A

Comments:

REISSUE

Katahdin Analytical Services A0000418

HK 12/21/2010

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** GW IS66MW010910

Matrix: WATER **SDG Name:** JU04-4

Percent Solids: 0.00 **Lab Sample ID:** SD5999-005

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	54.9	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.5	J	B-FBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	72.2			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.45	J	B-CCBL	MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.09	J	B-CCBL	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	1120			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.3	J	B-WBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	14.9			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.94	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, TOTAL	472			P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	2000			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	118			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	11.1	J		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	1040			P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	21100			P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.3	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	23.4	J		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** GW IS66MW010910

Matrix: WATER **SDG Name:** JU04-4

Percent Solids: 0.00 **Lab Sample ID:** SD5999-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, DISSOLVED	41.8	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, DISSOLVED	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, DISSOLVED	2.8	J	B-FBL	MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, DISSOLVED	72.4			P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, DISSOLVED	0.44	J	B-CCBL	MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, DISSOLVED	0.08	J	B-CCBL	MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, DISSOLVED	1350			P	1	100	5.79	80
7440-47-3	CHROMIUM, DISSOLVED	3.4	J	B-MBL	MS	5	5.0	0.30	2.0
7440-48-4	COBALT, DISSOLVED	15.0			MS	5	1.0	0.04	0.30
7440-50-8	COPPER, DISSOLVED	1.8	J	B-CCBL	P	1	25	0.48	10
7439-89-6	IRON, DISSOLVED	382			P	1	100	6.27	80
7439-92-1	LEAD, DISSOLVED	1.3	J		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, DISSOLVED	2030			P	1	100	4.83	80
7439-96-5	MANGANESE, DISSOLVED	119			P	1	5.0	0.37	4.0
7439-97-6	MERCURY, DISSOLVED	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, DISSOLVED	11.2	J		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, DISSOLVED	1070			P	1	1000	105.00	500
7782-49-2	SELENIUM, DISSOLVED	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, DISSOLVED	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, DISSOLVED	21300			P	1	1000	34.40	500
7440-28-0	THALLIUM, DISSOLVED	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, DISSOLVED	1.4	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, DISSOLVED	24.8	J		P	1	25	0.50	10

Bottle ID: A

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB01-092910

Matrix: WATER | SDG Name: JU04-4

Percent Solids: 0.00 | Lab Sample ID: SD6000-001

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.5	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	26.2	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.4	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	0.69	JB-CCBL		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	10.6	JB-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	1.4	JB-CCBL		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	2.9	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SS 1S66DP320001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 90.5 **Lab Sample ID:** SD6000-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	14300			P	1	19	0.98	6.4
7440-36-0	ANTIMONY, TOTAL	0.32	U	N	P	1	0.51	0.07	0.32
7440-38-2	ARSENIC, TOTAL	2.7			MS	5	0.32	0.07	0.25
7440-39-3	BARIUM, TOTAL	51.2			P	1	0.32	0.02	0.19
7440-41-7	BERYLLIUM, TOTAL	0.51			P	1	0.32	0.006	0.032
7440-43-9	CADMIUM, TOTAL	0.19	U		P	1	0.64	0.005	0.19
7440-70-2	CALCIUM, TOTAL	102			P	1	6.4	0.67	5.1
7440-47-3	CHROMIUM, TOTAL	17.0			MS	5	0.32	0.04	0.13
7440-48-4	COBALT, TOTAL	6.9			MS	5	0.064	0.003	0.019
7440-50-8	COPPER, TOTAL	8.4			P	1	1.6	0.05	0.64
7439-89-6	IRON, TOTAL	14800			P	1	6.4	0.20	5.1
7439-92-1	LEAD, TOTAL	8.3			P	1	0.32	0.07	0.25
7439-95-4	MAGNESIUM, TOTAL	817		N	P	1	6.4	0.23	5.1
7439-96-5	MANGANESE, TOTAL	54.8		N	P	1	0.32	0.04	0.25
7439-97-6	MERCURY, TOTAL	0.02	J	*	CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	10.8			P	1	2.5	0.03	0.25
7440-09-7	POTASSIUM, TOTAL	1100		N	P	1	64	6.54	32
7782-49-2	SELENIUM, TOTAL	0.35			MS	5	0.32	0.02	0.19
7440-22-4	SILVER, TOTAL	0.01	J		MS	5	0.064	0.006	0.025
7440-23-5	SODIUM, TOTAL	36.2	J		P	1	64	1.06	32
7440-28-0	THALLIUM, TOTAL	0.17			MS	5	0.13	0.003	0.025
7440-62-2	VANADIUM, TOTAL	26.8			MS	5	0.32	0.05	0.25
7440-66-6	ZINC, TOTAL	31.0			P	1	1.6	0.04	0.64

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SS IS66DP32P0001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 89.0 **Lab Sample ID:** SD6000-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	11200			P	1	17	0.90	5.8
7440-36-0	ANTIMONY, TOTAL	0.29	U	~~N~~	P	1	0.46	0.06	0.29
7440-38-2	ARSENIC, TOTAL	2.4			MS	5	0.29	0.07	0.23
7440-39-3	BARIUM, TOTAL	49.8			P	1	0.29	0.02	0.17
7440-41-7	BERYLLIUM, TOTAL	0.48			P	1	0.29	0.005	0.029
7440-43-9	CADMIUM, TOTAL	0.17	U		P	1	0.58	0.005	0.17
7440-70-2	CALCIUM, TOTAL	88.1			P	1	5.8	0.61	4.6
7440-47-3	CHROMIUM, TOTAL	14.4			MS	5	0.29	0.03	0.12
7440-48-4	COBALT, TOTAL	6.3			MS	5	0.058	0.002	0.017
7440-50-8	COPPER, TOTAL	7.2			P	1	1.4	0.04	0.58
7439-89-6	IRON, TOTAL	13300			P	1	5.8	0.19	4.6
7439-92-1	LEAD, TOTAL	8.1			P	1	0.29	0.06	0.23
7439-95-4	MAGNESIUM, TOTAL	641		~~N~~	P	1	5.8	0.21	4.6
7439-96-5	MANGANESE, TOTAL	49.4		~~N~~	P	1	0.29	0.03	0.23
7439-97-6	MERCURY, TOTAL	0.02	J	~~*~~	CV	1	0.026	0.0009	0.013
7440-02-0	NICKEL, TOTAL	8.5			P	1	2.3	0.03	0.23
7440-09-7	POTASSIUM, TOTAL	789		~~N~~	P	1	58	5.97	29
7782-49-2	SELENIUM, TOTAL	0.32			MS	5	0.29	0.02	0.17
7440-22-4	SILVER, TOTAL	0.01	J		MS	5	0.058	0.006	0.023
7440-23-5	SODIUM, TOTAL	22.2	J	B mBL	P	1	58	0.97	29
7440-28-0	THALLIUM, TOTAL	0.12			MS	5	0.12	0.003	0.023
7440-62-2	VANADIUM, TOTAL	21.4			MS	5	0.29	0.04	0.23
7440-66-6	ZINC, TOTAL	26.3			P	1	1.4	0.04	0.58

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB320809

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 85.1 **Lab Sample ID:** SD6000-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9360			P	1	25	1.28	8.3
7440-36-0	ANTIMONY, TOTAL	2.1	U	~~N~~	P	5	3.3	0.46	2.1
7440-38-2	ARSENIC, TOTAL	14.0			MS	5	0.41	0.10	0.33
7440-39-3	BARIUM, TOTAL	34.9			P	1	0.41	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	1.2			P	1	0.41	0.007	0.041
7440-43-9	CADMIUM, TOTAL	1.2	U		P	5	4.1	0.03	1.2
7440-70-2	CALCIUM, TOTAL	36.6			P	1	8.3	0.88	6.6
7440-47-3	CHROMIUM, TOTAL	56.0 J-FD			MS	5	0.41	0.05	0.16
7440-48-4	COBALT, TOTAL	4.2			MS	5	0.083	0.003	0.025
7440-50-8	COPPER, TOTAL	25.8			P	5	10	0.30	4.1
7439-89-6	IRON, TOTAL	73400 J-FD			P	5	41	1.33	33
7439-92-1	LEAD, TOTAL	18.8 J-FD			P	5	2.1	0.43	1.6
7439-95-4	MAGNESIUM, TOTAL	867		~~N~~	P	5	41	1.50	33
7439-96-5	MANGANESE, TOTAL	41.4		~~N~~	P	5	2.1	0.24	1.6
7439-97-6	MERCURY, TOTAL	0.018	U	*	CV	1	0.035	0.001	0.018
7440-02-0	NICKEL, TOTAL	6.0	J		P	5	16	0.22	1.6
7440-09-7	POTASSIUM, TOTAL	764		~~N~~	P	1	83	8.52	41
7782-49-2	SELENIUM, TOTAL	1.3			MS	5	0.41	0.03	0.25
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.083	0.008	0.033
7440-23-5	SODIUM, TOTAL	55.2	J		P	1	83	1.38	41
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.16	0.004	0.033
7440-62-2	VANADIUM, TOTAL	46.9			MS	5	0.41	0.06	0.33
7440-66-6	ZINC, TOTAL	31.3			P	1	2.1	0.05	0.83

Bottle ID: F

Comments:

I

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SBP32P0809

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 86.5 **Lab Sample ID:** SD6000-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9270			P	1	23	1.20	7.8
7440-36-0	ANTIMONY, TOTAL	0.39	U	N	P	1	0.62	0.09	0.39
7440-38-2	ARSENIC, TOTAL	9.2			MS	5	0.39	0.09	0.31
7440-39-3	BARIUM, TOTAL	36.1			P	1	0.39	0.02	0.23
7440-41-7	BERYLLIUM, TOTAL	0.66			P	1	0.39	0.007	0.039
7440-43-9	CADMIUM, TOTAL	0.23	U		P	1	0.78	0.006	0.23
7440-70-2	CALCIUM, TOTAL	39.8			P	1	7.8	0.82	6.2
7440-47-3	CHROMIUM, TOTAL	21.6	J-FD		MS	5	0.39	0.05	0.16
7440-48-4	COBALT, TOTAL	4.8			MS	5	0.078	0.003	0.023
7440-50-8	COPPER, TOTAL	11.6			P	1	1.9	0.06	0.78
7439-89-6	IRON, TOTAL	19200	J-FD		P	1	7.8	0.25	6.2
7439-92-1	LEAD, TOTAL	10.0	J-FD		P	1	0.39	0.08	0.31
7439-95-4	MAGNESIUM, TOTAL	971		N	P	1	7.8	0.28	6.2
7439-96-5	MANGANESE, TOTAL	64.3		N	P	1	0.39	0.04	0.31
7439-97-6	MERCURY, TOTAL	0.017	U	*	CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	7.2			P	1	3.1	0.04	0.31
7440-09-7	POTASSIUM, TOTAL	827		N	P	1	78	7.99	39
7782-49-2	SELENIUM, TOTAL	0.54			MS	5	0.39	0.03	0.23
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.078	0.008	0.031
7440-23-5	SODIUM, TOTAL	45.8	J		P	1	78	1.29	39
7440-28-0	THALLIUM, TOTAL	0.10	J		MS	5	0.16	0.004	0.031
7440-62-2	VANADIUM, TOTAL	37.0			MS	5	0.39	0.06	0.31
7440-66-6	ZINC, TOTAL	23.8			P	1	1.9	0.05	0.78

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: SS IS66DP350001
Matrix: SOIL
SDG Name: JU04-4
Percent Solids: 90.1
Lab Sample ID: SD6000-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte		Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL		6290			P	1	21	1.10	7.1
7440-36-0	ANTIMONY, TOTAL	UJ-MSL	0.36	U	~~N~~	P	1	0.57	0.08	0.36
7440-38-2	ARSENIC, TOTAL		1.2			MS	5	0.36	0.08	0.28
7440-39-3	BARIUM, TOTAL		36.0			P	1	0.36	0.02	0.21
7440-41-7	BERYLLIUM, TOTAL		0.26	J		P	1	0.36	0.006	0.036
7440-43-9	CADMIUM, TOTAL		0.02	~~J~~ B-CCBL		P	1	0.71	0.006	0.21
7440-70-2	CALCIUM, TOTAL		220			P	1	7.1	0.75	5.7
7440-47-3	CHROMIUM, TOTAL		7.5			MS	5	0.36	0.04	0.14
7440-48-4	COBALT, TOTAL		5.0			MS	5	0.071	0.003	0.021
7440-50-8	COPPER, TOTAL		7.8			P	1	1.8	0.05	0.71
7439-89-6	IRON, TOTAL		4960			P	1	7.1	0.23	5.7
7439-92-1	LEAD, TOTAL		12.9			P	1	0.36	0.07	0.28
7439-95-4	MAGNESIUM, TOTAL	J-MSH	477		~~N~~	P	1	7.1	0.26	5.7
7439-96-5	MANGANESE, TOTAL		209		~~N~~	P	1	0.36	0.04	0.28
7439-97-6	MERCURY, TOTAL		0.04		~~*~~	CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL		5.9			P	1	2.8	0.04	0.28
7440-09-7	POTASSIUM, TOTAL	J-MSH	468		~~N~~	P	1	71	7.33	36
7782-49-2	SELENIUM, TOTAL		0.26	J		MS	5	0.36	0.02	0.21
7440-22-4	SILVER, TOTAL		0.04	J		MS	5	0.071	0.007	0.028
7440-23-5	SODIUM, TOTAL		34.9	J		P	1	71	1.19	36
7440-28-0	THALLIUM, TOTAL		0.1	J		MS	5	0.14	0.004	0.028
7440-62-2	VANADIUM, TOTAL		15.8			MS	5	0.36	0.05	0.28
7440-66-6	ZINC, TOTAL		18.7			P	1	1.8	0.04	0.71

Bottle ID: N

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SB IS66DP351415

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 82.1 **Lab Sample ID:** SD6000-007

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	14600			P	1	31	1.61	10
7440-36-0	ANTIMONY, TOTAL R-MSL	0.52	~~U~~	~~N~~	P	1	0.83	0.12	0.52
7440-38-2	ARSENIC, TOTAL	1.8			MS	5	0.52	0.12	0.42
7440-39-3	BARIUM, TOTAL	130			P	1	0.52	0.03	0.31
7440-41-7	BERYLLIUM, TOTAL	1.1			P	1	0.52	0.009	0.052
7440-43-9	CADMIUM, TOTAL	0.31	U		P	1	1.0	0.008	0.31
7440-70-2	CALCIUM, TOTAL	438			P	1	10	1.10	8.3
7440-47-3	CHROMIUM, TOTAL	21.3			MS	5	0.52	0.06	0.21
7440-48-4	COBALT, TOTAL	8.5			MS	5	0.10	0.004	0.031
7440-50-8	COPPER, TOTAL	12.8			P	1	2.6	0.07	1.0
7439-89-6	IRON, TOTAL	23800			P	1	10	0.34	8.3
7439-92-1	LEAD, TOTAL	11.0			P	1	0.52	0.11	0.42
7439-95-4	MAGNESIUM, TOTAL J-MSH	1510		~~N~~	P	1	10	0.38	8.3
7439-96-5	MANGANESE, TOTAL	43.7		~~N~~	P	1	0.52	0.06	0.42
7439-97-6	MERCURY, TOTAL	0.019	U	~~*~~	CV	1	0.038	0.001	0.019
7440-02-0	NICKEL, TOTAL	17.0			P	1	4.2	0.06	0.42
7440-09-7	POTASSIUM, TOTAL J-MSH	934		~~N~~	P	1	100	10.72	52
7782-49-2	SELENIUM, TOTAL	0.50	J		MS	5	0.52	0.04	0.31
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.10	0.01	0.042
7440-23-5	SODIUM, TOTAL	114			P	1	100	1.74	52
7440-28-0	THALLIUM, TOTAL	0.19	J		MS	5	0.21	0.005	0.042
7440-62-2	VANADIUM, TOTAL	29.0			MS	5	0.52	0.08	0.42
7440-66-6	ZINC, TOTAL	51.3			P	1	2.6	0.07	1.0

Bottle ID: M

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD15

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 55.0 **Lab Sample ID:** SD6045-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	10100			P	1	29	1.50	9.7
7440-36-0	ANTIMONY, TOTAL	4.7		N	P	1	0.77	0.11	0.48
7440-38-2	ARSENIC, TOTAL	6.4			MS	5	0.48	0.11	0.39
7440-39-3	BARIUM, TOTAL	103			P	1	0.48	0.03	0.29
7440-41-7	BERYLLIUM, TOTAL	0.68			P	1	0.48	0.009	0.048
7440-43-9	CADMIUM, TOTAL	0.32	J		P	1	0.97	0.008	0.29
7440-70-2	CALCIUM, TOTAL	1470			P	1	9.7	1.02	7.7
7440-47-3	CHROMIUM, TOTAL	16.8			MS	5	0.48	0.06	0.19
7440-48-4	COBALT, TOTAL	9.2			MS	5	0.097	0.004	0.029
7440-50-8	COPPER, TOTAL	28.2			P	1	2.4	0.07	0.97
7439-89-6	IRON, TOTAL	15200			P	1	9.7	0.31	7.7
7439-92-1	LEAD, TOTAL	57.2			P	1	0.48	0.10	0.39
7439-95-4	MAGNESIUM, TOTAL	1090		N	P	1	9.7	0.35	7.7
7439-96-5	MANGANESE, TOTAL	233		N	P	1	0.48	0.06	0.39
7439-97-6	MERCURY, TOTAL	1.8		*	CV	1	0.057	0.002	0.029
7440-02-0	NICKEL, TOTAL	12.0			P	1	3.9	0.05	0.39
7440-09-7	POTASSIUM, TOTAL	780		N	P	1	97	9.95	48
7782-49-2	SELENIUM, TOTAL	0.56			MS	5	0.48	0.03	0.29
7440-22-4	SILVER, TOTAL	0.33			MS	5	0.097	0.010	0.039
7440-23-5	SODIUM, TOTAL	331			P	1	97	1.61	48
7440-28-0	THALLIUM, TOTAL	0.19			MS	5	0.19	0.005	0.039
7440-62-2	VANADIUM, TOTAL	28.8			MS	5	0.48	0.07	0.39
7440-66-6	ZINC, TOTAL	131			P	1	2.4	0.06	0.97

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD14

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 31.7 **Lab Sample ID:** SD6045-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	12000			P	1	55	2.83	18
7440-36-0	ANTIMONY, TOTAL	1.8		N	P	1	1.4	0.20	0.91
7440-38-2	ARSENIC, TOTAL	8.4			MS	5	0.91	0.21	0.73
7440-39-3	BARIUM, TOTAL	138			P	1	0.91	0.05	0.55
7440-41-7	BERYLLIUM, TOTAL	0.63	J		P	1	0.91	0.02	0.091
7440-43-9	CADMIUM, TOTAL	4.7			P	1	1.8	0.01	0.55
7440-70-2	CALCIUM, TOTAL	4530			P	1	18	1.93	14
7440-47-3	CHROMIUM, TOTAL	26.7			MS	5	0.91	0.11	0.36
7440-48-4	COBALT, TOTAL	10.4			MS	5	0.18	0.007	0.055
7440-50-8	COPPER, TOTAL	134			P	1	4.6	0.13	1.8
7439-89-6	IRON, TOTAL	21100			P	1	18	0.59	14
7439-92-1	LEAD, TOTAL	262			P	1	0.91	0.19	0.73
7439-95-4	MAGNESIUM, TOTAL	1690		N	P	1	18	0.66	14
7439-96-5	MANGANESE, TOTAL	593		N	P	1	0.91	0.11	0.73
7439-97-6	MERCURY, TOTAL	0.35		*	CV	1	0.085	0.003	0.043
7440-02-0	NICKEL, TOTAL	26.3			P	1	7.3	0.10	0.73
7440-09-7	POTASSIUM, TOTAL	839		N	P	1	180	18.79	91
7782-49-2	SELENIUM, TOTAL	0.77	J		MS	5	0.91	0.06	0.55
7440-22-4	SILVER, TOTAL	17.0			MS	5	0.18	0.02	0.073
7440-23-5	SODIUM, TOTAL	789			P	1	180	3.04	91
7440-28-0	THALLIUM, TOTAL	0.20	J		MS	5	0.36	0.009	0.073
7440-62-2	VANADIUM, TOTAL	34.6			MS	5	0.91	0.14	0.73
7440-66-6	ZINC, TOTAL	414			P	1	4.6	0.11	1.8

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SS IS66DP400001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 82.4 **Lab Sample ID:** SD6045-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	12400			P	1	25	1.29	8.3
7440-36-0	ANTIMONY, TOTAL	0.42	U	N	P	1	0.66	0.09	0.42
7440-38-2	ARSENIC, TOTAL	3.0			MS	5	0.42	0.10	0.33
7440-39-3	BARIUM, TOTAL	44.1			P	1	0.42	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.48			P	1	0.42	0.007	0.042
7440-43-9	CADMIUM, TOTAL	0.25	U		P	1	0.83	0.007	0.25
7440-70-2	CALCIUM, TOTAL	298			P	1	8.3	0.88	6.6
7440-47-3	CHROMIUM, TOTAL	16.8			MS	5	0.42	0.05	0.17
7440-48-4	COBALT, TOTAL	9.6			MS	5	0.083	0.003	0.025
7440-50-8	COPPER, TOTAL	7.4			P	1	2.1	0.06	0.83
7439-89-6	IRON, TOTAL	11100			P	1	8.3	0.27	6.6
7439-92-1	LEAD, TOTAL	18.3			P	1	0.42	0.09	0.33
7439-95-4	MAGNESIUM, TOTAL	877		N	P	1	8.3	0.30	6.6
7439-96-5	MANGANESE, TOTAL	174		N	P	1	0.42	0.05	0.33
7439-97-6	MERCURY, TOTAL	0.06		*	CV	1	0.040	0.001	0.020
7440-02-0	NICKEL, TOTAL	9.4			P	1	3.3	0.04	0.33
7440-09-7	POTASSIUM, TOTAL	736		N	P	1	83	8.56	42
7782-49-2	SELENIUM, TOTAL	1.1			MS	5	0.42	0.03	0.25
7440-22-4	SILVER, TOTAL	0.07	J		MS	5	0.083	0.008	0.033
7440-23-5	SODIUM, TOTAL	59.5	J		P	1	83	1.39	42
7440-28-0	THALLIUM, TOTAL	0.18			MS	5	0.17	0.004	0.033
7440-62-2	VANADIUM, TOTAL	32.7			MS	5	0.42	0.06	0.33
7440-66-6	ZINC, TOTAL	28.9			P	1	2.1	0.05	0.83

Bottle ID: F

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66DP400910 SB

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 74.9 **Lab Sample ID:** SD6045-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10100			P	1	23	1.21	7.8
7440-36-0	ANTIMONY, TOTAL	0.39	U	~~N~~	P	1	0.62	0.09	0.39
7440-38-2	ARSENIC, TOTAL	0.52	B-FBL		MS	5	0.39	0.09	0.31
7440-39-3	BARIUM, TOTAL	35.2			P	1	0.39	0.02	0.23
7440-41-7	BERYLLIUM, TOTAL	0.41			P	1	0.39	0.007	0.039
7440-43-9	CADMIUM, TOTAL	0.23	U		P	1	0.78	0.006	0.23
7440-70-2	CALCIUM, TOTAL	118			P	1	7.8	0.83	6.2
7440-47-3	CHROMIUM, TOTAL	14.0			MS	5	0.39	0.05	0.16
7440-48-4	COBALT, TOTAL	5.1			MS	5	0.078	0.003	0.023
7440-50-8	COPPER, TOTAL	5.8			P	1	2.0	0.06	0.78
7439-89-6	IRON, TOTAL	14000			P	1	7.8	0.25	6.2
7439-92-1	LEAD, TOTAL	5.6			P	1	0.39	0.08	0.31
7439-95-4	MAGNESIUM, TOTAL	1200		~~N~~	P	1	7.8	0.28	6.2
7439-96-5	MANGANESE, TOTAL	28.6		~~N~~	P	1	0.39	0.05	0.31
7439-97-6	MERCURY, TOTAL	0.023	U	~~*~~	CV	1	0.044	0.002	0.023
7440-02-0	NICKEL, TOTAL	10.6			P	1	3.1	0.04	0.31
7440-09-7	POTASSIUM, TOTAL	895		~~N~~	P	1	78	8.04	39
7782-49-2	SELENIUM, TOTAL	0.27	J		MS	5	0.39	0.03	0.23
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.078	0.008	0.031
7440-23-5	SODIUM, TOTAL	133			P	1	78	1.30	39
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.16	0.004	0.031
7440-62-2	VANADIUM, TOTAL	19.8			MS	5	0.39	0.06	0.31
7440-66-6	ZINC, TOTAL	24.9			P	1	2.0	0.05	0.78

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB01-093010

Matrix: WATER | SDG Name: JU04-4

Percent Solids: 0.00 | Lab Sample ID: SD6045-006

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	2.4	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	32.9	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	3.4	JB-MBL		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	8.2	JB-MBL		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	4.0	U		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	9.2	JB-MBL		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	4.0	U		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	0.36	JB-CCBL		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	1.9	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	2.2	JB-MBL		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-093010

Matrix: WATER | SDG Name: JU04-4

Percent Solids: 0.00 | Lab Sample ID: SD6045-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	0.80	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL	0.20	U		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	42.2	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL	2.6	J		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	7.8	J		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	0.80	J		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	13.8	J		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	1.0	J	PB-WCBL	P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	500	U		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	1.4	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	0.50	J		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66SSDP410001
Matrix: SOIL
SDG Name: JU04-4
Percent Solids: 58.1
Lab Sample ID: SD6045-008

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	17600			P	1	27	1.42	9.2
7440-36-0	ANTIMONY, TOTAL	0.46	U	N	P	1	0.73	0.10	0.46
7440-38-2	ARSENIC, TOTAL	4.2			MS	5	0.46	0.11	0.37
7440-39-3	BARIUM, TOTAL	82.3			P	1	0.46	0.02	0.27
7440-41-7	BERYLLIUM, TOTAL	0.66			P	1	0.46	0.008	0.046
7440-43-9	CADMIUM, TOTAL	0.05	J	B-LCBL	P	1	0.92	0.007	0.27
7440-70-2	CALCIUM, TOTAL	1380			P	1	9.2	0.97	7.3
7440-47-3	CHROMIUM, TOTAL	23.1			MS	5	0.46	0.05	0.18
7440-48-4	COBALT, TOTAL	10.6			MS	5	0.092	0.004	0.027
7440-50-8	COPPER, TOTAL	11.4			P	1	2.3	0.07	0.92
7439-89-6	IRON, TOTAL	16500			P	1	9.2	0.29	7.3
7439-92-1	LEAD, TOTAL	18.1			P	1	0.46	0.09	0.37
7439-95-4	MAGNESIUM, TOTAL	1350		N	P	1	9.2	0.33	7.3
7439-96-5	MANGANESE, TOTAL	322		N	P	1	0.46	0.05	0.37
7439-97-6	MERCURY, TOTAL	0.04		*	CV	1	0.041	0.001	0.021
7440-02-0	NICKEL, TOTAL	11.7			P	1	3.7	0.05	0.37
7440-09-7	POTASSIUM, TOTAL	1110		N	P	1	92	9.43	46
7782-49-2	SELENIUM, TOTAL	0.51			MS	5	0.46	0.03	0.27
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.092	0.009	0.037
7440-23-5	SODIUM, TOTAL	51.0	J		P	1	92	1.53	46
7440-28-0	THALLIUM, TOTAL	0.22			MS	5	0.18	0.005	0.037
7440-62-2	VANADIUM, TOTAL	34.2			MS	5	0.46	0.07	0.37
7440-66-6	ZINC, TOTAL	45.3			P	1	2.3	0.06	0.92

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66DP410607 SB

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 75.8 **Lab Sample ID:** SD6045-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10700			P	1	20	1.03	6.6
7440-36-0	ANTIMONY, TOTAL	0.33	U	N	P	1	0.53	0.07	0.33
7440-38-2	ARSENIC, TOTAL	5.0			MS	5	0.33	0.08	0.26
7440-39-3	BARIUM, TOTAL	98.3			P	1	0.33	0.02	0.20
7440-41-7	BERYLLIUM, TOTAL	0.66			P	1	0.33	0.006	0.033
7440-43-9	CADMIUM, TOTAL	0.23	J		P	1	0.66	0.005	0.20
7440-70-2	CALCIUM, TOTAL	2210			P	1	6.6	0.70	5.3
7440-47-3	CHROMIUM, TOTAL	13.6			MS	5	0.33	0.04	0.13
7440-48-4	COBALT, TOTAL	8.7			MS	5	0.066	0.003	0.020
7440-50-8	COPPER, TOTAL	22.4			P	1	1.6	0.05	0.66
7439-89-6	IRON, TOTAL	11000			P	1	6.6	0.21	5.3
7439-92-1	LEAD, TOTAL	38.2			P	1	0.33	0.07	0.26
7439-95-4	MAGNESIUM, TOTAL	766		N	P	1	6.6	0.24	5.3
7439-96-5	MANGANESE, TOTAL	171		N	P	1	0.33	0.04	0.26
7439-97-6	MERCURY, TOTAL	0.04	J	*	CV	1	0.039	0.001	0.020
7440-02-0	NICKEL, TOTAL	12.3			P	1	2.6	0.04	0.26
7440-09-7	POTASSIUM, TOTAL	657		N	P	1	66	6.82	33
7782-49-2	SELENIUM, TOTAL	0.58			MS	5	0.33	0.02	0.20
7440-22-4	SILVER, TOTAL	0.09			MS	5	0.066	0.007	0.026
7440-23-5	SODIUM, TOTAL	50.0	J		P	1	66	1.11	33
7440-28-0	THALLIUM, TOTAL	0.23			MS	5	0.13	0.003	0.026
7440-62-2	VANADIUM, TOTAL	30.3			MS	5	0.33	0.05	0.26
7440-66-6	ZINC, TOTAL	78.6			P	1	1.6	0.04	0.66

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SS230001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 86.2 **Lab Sample ID:** SD6082-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	2720			P	1	27	1.39	9.0
7440-36-0	ANTIMONY, TOTAL	0.45	U	~~N~~	P	1	0.72	0.10	0.45
7440-38-2	ARSENIC, TOTAL	1.1		B-FBL	MS	5	0.45	0.10	0.36
7440-39-3	BARIUM, TOTAL	11.6			P	1	0.45	0.02	0.27
7440-41-7	BERYLLIUM, TOTAL	0.08	J	B-CCBL	P	1	0.45	0.008	0.045
7440-43-9	CADMIUM, TOTAL	0.27	U		P	1	0.90	0.007	0.27
7440-70-2	CALCIUM, TOTAL	50.2			P	1	9.0	0.95	7.2
7440-47-3	CHROMIUM, TOTAL	4.4			MS	5	0.45	0.05	0.18
7440-48-4	COBALT, TOTAL	0.94			MS	5	0.090	0.004	0.027
7440-50-8	COPPER, TOTAL	9.9			P	1	2.2	0.06	0.90
7439-89-6	IRON, TOTAL	2540			P	1	9.0	0.29	7.2
7439-92-1	LEAD, TOTAL	15.6			P	1	0.45	0.09	0.36
7439-95-4	MAGNESIUM, TOTAL	179		~~N~~	P	1	9.0	0.33	7.2
7439-96-5	MANGANESE, TOTAL	11.3		~~N~~	P	1	0.45	0.05	0.36
7439-97-6	MERCURY, TOTAL	0.03		*	CV	1	0.033	0.001	0.017
7440-02-0	NICKEL, TOTAL	2.5	J		P	1	3.6	0.05	0.36
7440-09-7	POTASSIUM, TOTAL	316		~~N~~	P	1	90	9.26	45
7782-49-2	SELENIUM, TOTAL	0.17	J		MS	5	0.45	0.03	0.27
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.090	0.009	0.036
7440-23-5	SODIUM, TOTAL	39.0	J		P	1	90	1.50	45
7440-28-0	THALLIUM, TOTAL	0.06	J		MS	5	0.18	0.004	0.036
7440-62-2	VANADIUM, TOTAL	19.8			MS	5	0.45	0.07	0.36
7440-66-6	ZINC, TOTAL	6.0			P	1	2.2	0.06	0.90

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66~~DP~~SB231516

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 81.1 **Lab Sample ID:** SD6082-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	13700			P	1	25	1.31	8.4
7440-36-0	ANTIMONY, TOTAL	0.84	U	~~N~~	P	2	1.4	0.19	0.84
7440-38-2	ARSENIC, TOTAL	3.6			MS	5	0.42	0.10	0.34
7440-39-3	BARIUM, TOTAL	67.9			P	1	0.42	0.02	0.25
7440-41-7	BERYLLIUM, TOTAL	0.77			P	1	0.42	0.008	0.042
7440-43-9	CADMIUM, TOTAL	0.18	J	B CCBL	P	2	1.7	0.01	0.51
7440-70-2	CALCIUM, TOTAL	284			P	1	8.4	0.90	6.8
7440-47-3	CHROMIUM, TOTAL	19.3			MS	5	0.42	0.05	0.17
7440-48-4	COBALT, TOTAL	11.7			MS	5	0.084	0.003	0.025
7440-50-8	COPPER, TOTAL	10.3			P	2	4.2	0.12	1.7
7439-89-6	IRON, TOTAL	26100			P	1	8.4	0.27	6.8
7439-92-1	LEAD, TOTAL	17.2			P	2	0.84	0.17	0.68
7439-95-4	MAGNESIUM, TOTAL	824		~~N~~	P	2	17	0.61	14
7439-96-5	MANGANESE, TOTAL	105		~~N~~	P	2	0.84	0.10	0.68
7439-97-6	MERCURY, TOTAL	0.02	J	~~*~~	CV	1	0.031	0.001	0.016
7440-02-0	NICKEL, TOTAL	11.4			P	2	6.8	0.09	0.68
7440-09-7	POTASSIUM, TOTAL	818		~~N~~	P	1	84	8.70	42
7782-49-2	SELENIUM, TOTAL	0.50			MS	5	0.42	0.03	0.25
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.084	0.008	0.034
7440-23-5	SODIUM, TOTAL	68.0	J		P	1	84	1.41	42
7440-28-0	THALLIUM, TOTAL	0.20			MS	5	0.17	0.004	0.034
7440-62-2	VANADIUM, TOTAL	27.5			MS	5	0.42	0.06	0.34
7440-66-6	ZINC, TOTAL	44.8			P	1	2.1	0.05	0.84

Bottle ID: F

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services Client Field ID: SS IS66DP220001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 85.7 **Lab Sample ID:** SD6082-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	7280			P	1	22	1.13	7.3
7440-36-0	ANTIMONY, TOTAL	0.36	U	~~N~~	P	1	0.58	0.08	0.36
7440-38-2	ARSENIC, TOTAL	3.0	J-FD		MS	5	0.36	0.08	0.29
7440-39-3	BARIUM, TOTAL	36.5			P	1	0.36	0.02	0.22
7440-41-7	BERYLLIUM, TOTAL	0.63			P	1	0.36	0.007	0.036
7440-43-9	CADMIUM, TOTAL	0.22	U		P	1	0.73	0.006	0.22
7440-70-2	CALCIUM, TOTAL	94.3			P	1	7.3	0.77	5.8
7440-47-3	CHROMIUM, TOTAL	22.2	J-FD		MS	5	0.36	0.04	0.14
7440-48-4	COBALT, TOTAL	9.7	J-FD		MS	5	0.073	0.003	0.022
7440-50-8	COPPER, TOTAL	9.9			P	1	1.8	0.05	0.73
7439-89-6	IRON, TOTAL	16100	J-FD		P	1	7.3	0.23	5.8
7439-92-1	LEAD, TOTAL	24.3			P	1	0.36	0.08	0.29
7439-95-4	MAGNESIUM, TOTAL	466		~~N~~	P	1	7.3	0.26	5.8
7439-96-5	MANGANESE, TOTAL	232	J-FD	~~N~~	P	1	0.36	0.04	0.29
7439-97-6	MERCURY, TOTAL	0.05		~~*~~	CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	7.1			P	1	2.9	0.04	0.29
7440-09-7	POTASSIUM, TOTAL	400		~~N~~	P	1	73	7.51	36
7782-49-2	SELENIUM, TOTAL	0.42			MS	5	0.36	0.03	0.22
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.073	0.007	0.029
7440-23-5	SODIUM, TOTAL	38.5	J		P	1	73	1.22	36
7440-28-0	THALLIUM, TOTAL	0.09	J		MS	5	0.14	0.004	0.029
7440-62-2	VANADIUM, TOTAL	47.1			MS	5	0.36	0.05	0.29
7440-66-6	ZINC, TOTAL	19.2			P	1	1.8	0.05	0.73

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SS22P0001

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 85.2 **Lab Sample ID:** SD6082-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	5840			P	1	23	1.19	7.7
7440-36-0	ANTIMONY, TOTAL	0.38	U	N	P	1	0.61	0.09	0.38
7440-38-2	ARSENIC, TOTAL	1.7	J-FD		MS	5	0.38	0.09	0.31
7440-39-3	BARIUM, TOTAL	31.4			P	1	0.38	0.02	0.23
7440-41-7	BERYLLIUM, TOTAL	0.27	J		P	1	0.38	0.007	0.038
7440-43-9	CADMIUM, TOTAL	0.23	U		P	1	0.77	0.006	0.23
7440-70-2	CALCIUM, TOTAL	85.0			P	1	7.7	0.81	6.1
7440-47-3	CHROMIUM, TOTAL	7.6	J-FD		MS	5	0.38	0.05	0.15
7440-48-4	COBALT, TOTAL	4.8	J-FD		MS	5	0.077	0.003	0.023
7440-50-8	COPPER, TOTAL	8.0			P	1	1.9	0.06	0.77
7439-89-6	IRON, TOTAL	5800	J-FD		P	1	7.7	0.25	6.1
7439-92-1	LEAD, TOTAL	19.3			P	1	0.38	0.08	0.31
7439-95-4	MAGNESIUM, TOTAL	421		N	P	1	7.7	0.28	6.1
7439-96-5	MANGANESE, TOTAL	70.6	J-FD	N	P	1	0.38	0.04	0.31
7439-97-6	MERCURY, TOTAL	0.05		*	CV	1	0.038	0.001	0.020
7440-02-0	NICKEL, TOTAL	6.2			P	1	3.1	0.04	0.31
7440-09-7	POTASSIUM, TOTAL	347		N	P	1	77	7.91	38
7782-49-2	SELENIUM, TOTAL	0.30	J		MS	5	0.38	0.03	0.23
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.077	0.008	0.031
7440-23-5	SODIUM, TOTAL	21.3	J-B-MBL		P	1	77	1.28	38
7440-28-0	THALLIUM, TOTAL	0.09	J		MS	5	0.15	0.004	0.031
7440-62-2	VANADIUM, TOTAL	41.9			MS	5	0.38	0.06	0.31
7440-66-6	ZINC, TOTAL	16.9			P	1	1.9	0.05	0.77

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** ~~IS66DP~~SB221112

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 78.0 **Lab Sample ID:** SD6082-005

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	17600			P	1	24	1.27	8.2
7440-36-0	ANTIMONY, TOTAL	0.82	U	~~N~~	P	2	1.3	0.18	0.82
7440-38-2	ARSENIC, TOTAL	7.2	J-FD		MS	5	0.41	0.09	0.33
7440-39-3	BARIUM, TOTAL	63.9			P	1	0.41	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	1.3			P	1	0.41	0.007	0.041
7440-43-9	CADMIUM, TOTAL	0.48	J		P	2	1.6	0.01	0.49
7440-70-2	CALCIUM, TOTAL	205			P	1	8.2	0.87	6.5
7440-47-3	CHROMIUM, TOTAL	26.2			MS	5	0.41	0.05	0.16
7440-48-4	COBALT, TOTAL	9.6			MS	5	0.082	0.003	0.024
7440-50-8	COPPER, TOTAL	14.8			P	2	4.1	0.12	1.6
7439-89-6	IRON, TOTAL	30500	J-FD		P	1	8.2	0.26	6.5
7439-92-1	LEAD, TOTAL	15.4	J-FD		P	2	0.82	0.17	0.65
7439-95-4	MAGNESIUM, TOTAL	1420		~~N~~	P	2	16	0.59	13
7439-96-5	MANGANESE, TOTAL	50.5		~~N~~	P	2	0.82	0.09	0.65
7439-97-6	MERCURY, TOTAL	0.03	J	~~*~~	CV	1	0.034	0.001	0.017
7440-02-0	NICKEL, TOTAL	15.5			P	2	6.5	0.09	0.65
7440-09-7	POTASSIUM, TOTAL	1300		~~N~~	P	1	82	8.42	41
7782-49-2	SELENIUM, TOTAL	0.58			MS	5	0.41	0.03	0.24
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.082	0.008	0.033
7440-23-5	SODIUM, TOTAL	90.9			P	1	82	1.36	41
7440-28-0	THALLIUM, TOTAL	0.22			MS	5	0.16	0.004	0.033
7440-62-2	VANADIUM, TOTAL	40.2	J-FD		MS	5	0.41	0.06	0.33
7440-66-6	ZINC, TOTAL	52.4			P	1	2.0	0.05	0.82

Bottle ID: E

Comments:

1

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66DP22P1112 SB

Matrix: SOIL **SDG Name:** JU04-4

Percent Solids: 79.0 **Lab Sample ID:** SD6082-006

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	15400			P	1	22	1.12	7.2
7440-36-0	ANTIMONY, TOTAL	0.36	U	N	P	1	0.58	0.08	0.36
7440-38-2	ARSENIC, TOTAL	2.0	J-FD		MS	5	0.36	0.08	0.29
7440-39-3	BARIUM, TOTAL	72.7			P	1	0.36	0.02	0.22
7440-41-7	BERYLLIUM, TOTAL	0.98			P	1	0.36	0.006	0.036
7440-43-9	CADMIUM, TOTAL	0.22	U		P	1	0.72	0.006	0.22
7440-70-2	CALCIUM, TOTAL	246			P	1	7.2	0.76	5.8
7440-47-3	CHROMIUM, TOTAL	20.6			MS	5	0.36	0.04	0.14
7440-48-4	COBALT, TOTAL	9.3			MS	5	0.072	0.003	0.022
7440-50-8	COPPER, TOTAL	11.7			P	1	1.8	0.05	0.72
7439-89-6	IRON, TOTAL	18700	J-FD		P	1	7.2	0.23	5.8
7439-92-1	LEAD, TOTAL	9.5	J-FD		P	1	0.36	0.07	0.29
7439-95-4	MAGNESIUM, TOTAL	1180		N	P	1	7.2	0.26	5.8
7439-96-5	MANGANESE, TOTAL	57.3		N	P	1	0.36	0.04	0.29
7439-97-6	MERCURY, TOTAL	0.03	J	*	CV	1	0.040	0.001	0.020
7440-02-0	NICKEL, TOTAL	13.6			P	1	2.9	0.04	0.29
7440-09-7	POTASSIUM, TOTAL	1300		N	P	1	72	7.41	36
7782-49-2	SELENIUM, TOTAL	0.40			MS	5	0.36	0.03	0.22
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.072	0.007	0.029
7440-23-5	SODIUM, TOTAL	86.2			P	1	72	1.20	36
7440-28-0	THALLIUM, TOTAL	0.18			MS	5	0.14	0.004	0.029
7440-62-2	VANADIUM, TOTAL	22.8	J-FD		MS	5	0.36	0.05	0.29
7440-66-6	ZINC, TOTAL	46.5			P	1	1.8	0.05	0.72

Bottle ID: F

Comments:

Katahdin Analytical Services

Client Sample ID: IS66DP320001 SS

HPLC

Lot-Sample #...:	G0J010490-005	Work Order #...:	L7T401AD	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.99				
% Moisture.....:	10	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

HK 12/23/2010

Katahdin Analytical Services

Client Sample ID: IS66DP32P0001 SS

HPLC

Lot-Sample #...:	G0J010490-006	**Work Order #...:**	L7T411AD	**Matrix.....:**	SOLID
Date Sampled...:	09/29/10	**Date Received..:**	10/01/10		
Prep Date.....:	10/06/10	**Analysis Date..:**	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.95				
% Moisture.....:	9.2	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.038 U**	**0.24**	**mg/kg**	**0.019**

Katahdin Analytical Services

Client Sample ID: SB IS66DP320809

HPLC

Lot-Sample #...:	G0J010490-007	Work Order #...:	L7T441AD	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.91				
% Moisture.....:	15	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.036 U	0.23	mg/kg	0.018

Katahdin Analytical Services

Client Sample ID: IS66DP32P0809 SB

HPLC

Lot-Sample #...:	G0J010490-008	Work Order #...:	L7T451AD	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.98				
% Moisture.....:	23	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP350001 SS

HPLC

Lot-Sample #...:	G0J010490-009	Work Order #...:	L7T461AD	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	0.98				
% Moisture.....:	9.6	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP351415

HPLC

Lot-Sample #...:	G0J010490-010	Work Order #...:	L7T471AD	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/06/10	Analysis Date..:	10/19/10		
Prep Batch #...:	0279401				
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66MW020910

Dissolved HPLC

Lot-Sample #...:	G0J010490-001	**Work Order #...:**	L7T4P2AC	**Matrix.....:**	WATER
Date Sampled...:	09/29/10	**Date Received..:**	10/01/10		
Prep Date.....:	10/13/10	**Analysis Date..:**	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**6.0 U**	**20**	**ug/L**	**2.4**

Katahdin Analytical Services

Client Sample ID: IS66MW010910

Dissolved HPLC

Lot-Sample #...:	G0J010490-002	Work Order #...:	L7T4R2AC	Matrix.....:	WATER
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/13/10	Analysis Date..:	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66EB02-092910

Dissolved HPLC

Lot-Sample #...:	G0J010490-003	Work Order #...:	L7T4V2AC	Matrix.....:	WATER
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/13/10	Analysis Date..:	10/16/10		
Prep Batch #...:	0286457				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66EB01-092910

Dissolved HPLC

Lot-Sample #...: G0J010490-004 Work Order #...: L7T4W2AC Matrix.....: WATER
Date Sampled...: 09/29/10 Date Received..: 10/01/10
Prep Date.....: 10/13/10 Analysis Date..: 10/16/10
Prep Batch #...: 0286457
Dilution Factor: 1 Method.....: SW846 8330 (Modif

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66SD15

HPLC

Lot-Sample #...:	G0J050516-001	Work Order #...:	L71W01AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	70	Method.....:	SW846 8330 (Modif		

PARAMETER		RESULT	LOQ	UNITS	DL
Nitroguanidine	UL-MSL	0.040 B	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SD14

HPLC

Lot-Sample #...:	G0J050516-002	Work Order #...:	L71W21AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	36	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP400001 SS

HPLC

Lot-Sample #...:	G0J050516-003	Work Order #...:	L71W31AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	0.97				
% Moisture.....:	15	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.019

Katahdin Analytical Services

Client Sample ID: IS66DP400910 SB

HPLC

Lot-Sample #...:	G0J050516-004	Work Order #...:	L71W61AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	20	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP410001

HPLC

Lot-Sample #...:	G0J050516-005	Work Order #...:	L71W81AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	24	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP230001 SS

HPLC

Lot-Sample #...:	G0J050516-006	Work Order #...:	L71XA1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	11	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP231516 SB

HPLC

Lot-Sample #...:	G0J050516-007	Work Order #...:	L71XD1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	0.98				
% Moisture.....:	17	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP220001 SS

HPLC

Lot-Sample #...:	G0J050516-008	**Work Order #...:**	L71XF1AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	0.99				
% Moisture.....:	13	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP22P0001

HPLC

Lot-Sample #...:	G0J050516-009	Work Order #...:	L71XG1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP221112

HPLC

Lot-Sample #...:	G0J050516-010	Work Order #...:	L71XK1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	0.97				
% Moisture.....:	23	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.019

Katahdin Analytical Services

Client Sample ID: IS66DP22P1112 SB

HPLC

Lot-Sample #...:	G0J050516-011	Work Order #...:	L71XN1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	21	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP410607 SB

HPLC

Lot-Sample #...:	G0J050516-014	Work Order #...:	L71XX1AD	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281244				
Dilution Factor:	1				
% Moisture.....:	22	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66EB01-093010

Dissolved HPLC

Lot-Sample #...:	G0J050516-012	Work Order #...:	L71XP1AC	Matrix.....:	WATER
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280331				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66EB02-093010

Dissolved HPLC

Lot-Sample #...:	G0J050516-013	Work Order #...:	L71XR1AC	Matrix.....:	WATER
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280331				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82839

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.51	0.15	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.51	0.20	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.51	0.091	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.51	0.18	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.51	0.20	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.51	0.084	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.51	0.17	0.26
Tetrachloro-M-Xylene		104.	%					
Decachlorobiphenyl		90.1	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

HK 12/23/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: IS66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82839

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.15	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.092	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.084	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		104.	%					
Decachlorobiphenyl		82.1	%					

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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Katahdin
ANALYTICAL SERVICES

Accredited in accordance with NELAC
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82839

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.15	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.092	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.084	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		99.0	%					
Decachlorobiphenyl		71.6	%					

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P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029

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HK 12/23/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: 1S66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82839

Analysis Date: 06-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.25	ug/L	1	.5	0.50	0.15	0.25
Aroclor-1221	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1232	U	0.25	ug/L	1	.5	0.50	0.088	0.25
Aroclor-1242	U	0.25	ug/L	1	.5	0.50	0.18	0.25
Aroclor-1248	U	0.25	ug/L	1	.5	0.50	0.20	0.25
Aroclor-1254	U	0.25	ug/L	1	.5	0.50	0.081	0.25
Aroclor-1260	U	0.25	ug/L	1	.5	0.50	0.17	0.25
Tetrachloro-M-Xylene		88.2	%					
Decachlorobiphenyl		46.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.3	ug/Kgdrywt	1	17	18.	6.5	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	18.	8.6	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	18.	6.3	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	18.	6.6	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	18.	5.1	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	18.	6.5	9.3
Tetrachloro-M-Xylene		68.9	%					
Decachlorobiphenyl		66.4	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Aroclor-1221	U	9.0	ug/Kgdrywt	1	17	18.	8.4	9.0
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	9.9	11.
Aroclor-1242	U	9.0	ug/Kgdrywt	1	17	18.	6.2	9.0
Aroclor-1248	U	9.0	ug/Kgdrywt	1	17	18.	6.5	9.0
Aroclor-1254	U	9.0	ug/Kgdrywt	1	17	18.	5.0	9.0
Aroclor-1260	U	9.0	ug/Kgdrywt	1	17	18.	6.4	9.0
Tetrachloro-M-Xylene		63.7	%					
Decachlorobiphenyl		68.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Aroclor-1221	U	9.6	ug/Kgdrywt	1	17	19.	9.0	9.6
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.6	ug/Kgdrywt	1	17	19.	6.6	9.6
Aroclor-1248	U	9.6	ug/Kgdrywt	1	17	19.	6.9	9.6
Aroclor-1254	U	9.6	ug/Kgdrywt	1	17	19.	5.3	9.6
Aroclor-1260	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Tetrachloro-M-Xylene		70.6	%					
Decachlorobiphenyl		76.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66DP32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.4	ug/Kgdrywt	1	17	19.	6.7	9.4
Aroclor-1221	U	9.4	ug/Kgdrywt	1	17	19.	8.8	9.4
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.4	ug/Kgdrywt	1	17	19.	6.4	9.4
Aroclor-1248	U	9.4	ug/Kgdrywt	1	17	19.	6.8	9.4
Aroclor-1254	U	9.4	ug/Kgdrywt	1	17	19.	5.2	9.4
Aroclor-1260	U	9.4	ug/Kgdrywt	1	17	19.	6.7	9.4
Tetrachloro-M-Xylene		65.4	%					
Decachlorobiphenyl		66.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Aroclor-1221	U	9.3	ug/Kgdrywt	1	17	19.	8.6	9.3
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.3	ug/Kgdrywt	1	17	19.	6.4	9.3
Aroclor-1248	U	9.3	ug/Kgdrywt	1	17	19.	6.7	9.3
Aroclor-1254	U	9.3	ug/Kgdrywt	1	17	19.	5.1	9.3
Aroclor-1260	U	9.3	ug/Kgdrywt	1	17	19.	6.6	9.3
Tetrachloro-M-Xylene	*	55.6	%					
Decachlorobiphenyl	*	55.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6RE
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83888

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Aroclor-1221	U	9.1	ug/Kgdrywt	1	17	18.	8.4	9.1
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	9.9	11.
Aroclor-1242	U	9.1	ug/Kgdrywt	1	17	18.	6.2	9.1
Aroclor-1248	U	9.1	ug/Kgdrywt	1	17	18.	6.5	9.1
Aroclor-1254	U	9.1	ug/Kgdrywt	1	17	18.	5.0	9.1
Aroclor-1260	U	9.1	ug/Kgdrywt	1	17	18.	6.4	9.1
Tetrachloro-M-Xylene		66.3	%					
Decachlorobiphenyl		68.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82843

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.5	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.3	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene		73.7	%					
Decachlorobiphenyl		71.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-SSL	14.	ug/Kgdrywt	1	17	28.	10.	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	28.	13.	14.
Aroclor-1232	U	17.	ug/Kgdrywt	1	17	28.	16.	17.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	28.	9.8	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	28.	10.	14.
Aroclor-1254	U	14.	ug/Kgdrywt	1	17	28.	7.9	14.
Aroclor-1260	U	14.	ug/Kgdrywt	1	17	28.	10.	14.
Tetrachloro-M-Xylene	*	55.0	%					
Decachlorobiphenyl		73.6	%					

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Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1221	U	26.	ug/Kgdrywt	1	17	53.	25.	26.
Aroclor-1232	U	31.	ug/Kgdrywt	1	17	53.	29.	31.
Aroclor-1242	U	26.	ug/Kgdrywt	1	17	53.	18.	26.
Aroclor-1248	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Aroclor-1254		830	ug/Kgdrywt	1	17	53.	15.	26.
Aroclor-1260	U	26.	ug/Kgdrywt	1	17	53.	19.	26.
Tetrachloro-M-Xylene		68.4	%					
Decachlorobiphenyl		62.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.3	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.8	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Tetrachloro-M-Xylene		58.1	%					
Decachlorobiphenyl		62.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		73.3	%					
Decachlorobiphenyl		93.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6RA
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83000

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.53	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.53	0.095	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.53	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.53	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.53	0.087	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.53	0.18	0.26
Tetrachloro-M-Xylene		88.6	%					
Decachlorobiphenyl		52.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83000

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.28	ug/L	1	.5	0.56	0.17	0.28
Aroclor-1221	U	0.28	ug/L	1	.5	0.56	0.22	0.28
Aroclor-1232	U	0.28	ug/L	1	.5	0.56	0.099	0.28
Aroclor-1242	U	0.28	ug/L	1	.5	0.56	0.20	0.28
Aroclor-1248	U	0.28	ug/L	1	.5	0.56	0.22	0.28
Aroclor-1254	U	0.28	ug/L	1	.5	0.56	0.091	0.28
Aroclor-1260	U	0.28	ug/L	1	.5	0.56	0.19	0.28
Tetrachloro-M-Xylene		91.0	%					
Decachlorobiphenyl		51.9	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Aroclor-1221	U	14.	ug/Kgdrywt	1	17	29.	14.	14.
Aroclor-1232	U	17.	ug/Kgdrywt	1	17	29.	16.	17.
Aroclor-1242	U	14.	ug/Kgdrywt	1	17	29.	9.9	14.
Aroclor-1248	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Aroclor-1254	U	14.	ug/Kgdrywt	1	17	29.	8.0	14.
Aroclor-1260	U	14.	ug/Kgdrywt	1	17	29.	10.	14.
Tetrachloro-M-Xylene		70.3	%					
Decachlorobiphenyl		62.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83009

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.5	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.1	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Tetrachloro-M-Xylene	*	56.0	%					
Decachlorobiphenyl		73.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Aroclor-1221	U	9.8	ug/Kgdrywt	1	17	20.	9.2	9.8
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	9.8	ug/Kgdrywt	1	17	20.	6.7	9.8
Aroclor-1248	U	9.8	ug/Kgdrywt	1	17	20.	7.1	9.8
Aroclor-1254	U	9.8	ug/Kgdrywt	1	17	20.	5.4	9.8
Aroclor-1260	U	9.8	ug/Kgdrywt	1	17	20.	7.0	9.8
Tetrachloro-M-Xylene		62.2	%					
Decachlorobiphenyl		69.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66DP231516 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U EXCLUDE-RE	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.4	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	6.9	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.6	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.1	10.
Tetrachloro-M-Xylene		56.2	%					
Decachlorobiphenyl	*	59.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2RE
Client ID: IS66DP231516 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83888

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 81.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-HT	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		64.7	%					
Decachlorobiphenyl		67.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Aroclor-1221	U	9.6	ug/Kgdrywt	1	17	19.	8.9	9.6
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.6	ug/Kgdrywt	1	17	19.	6.5	9.6
Aroclor-1248	U	9.6	ug/Kgdrywt	1	17	19.	6.9	9.6
Aroclor-1254	U	9.6	ug/Kgdrywt	1	17	19.	5.3	9.6
Aroclor-1260	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Tetrachloro-M-Xylene		64.0	%					
Decachlorobiphenyl		79.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4
Client ID: 1S66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Aroclor-1221	U	9.6	ug/Kgdrywt	1	17	19.	8.9	9.6
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	19.	10.	11.
Aroclor-1242	U	9.6	ug/Kgdrywt	1	17	19.	6.5	9.6
Aroclor-1248	U	9.6	ug/Kgdrywt	1	17	19.	6.9	9.6
Aroclor-1254	U	9.6	ug/Kgdrywt	1	17	19.	5.3	9.6
Aroclor-1260	U	9.6	ug/Kgdrywt	1	17	19.	6.8	9.6
Tetrachloro-M-Xylene		68.6	%					
Decachlorobiphenyl		77.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	21.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	21.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	21.	7.3	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	21.	7.7	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	21.	5.9	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Tetrachloro-M-Xylene		61.4	%					
Decachlorobiphenyl		74.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	21.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	21.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	21.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	21.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	21.	7.3	10.
Tetrachloro-M-Xylene		68.3	%					
Decachlorobiphenyl		73.3	%					

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Katahdin Analytical Services

Client Sample ID: IS66DP320001 SS

HPLC

Lot-Sample #...:	G0J010490-005	Work Order #...:	L7T401AC	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/05/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0278436				
Dilution Factor:	0.98				
% Moisture.....:	10	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	4.3 J	5.5	ug/kg	0.28

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP32P0001

HPLC

Lot-Sample #...: G0J010490-006	Work Order #...: L7T411AC		Matrix.....: SOLID	
Date Sampled...: 09/29/10	Date Received..: 10/01/10			
Prep Date.....: 10/05/10	Analysis Date..: 10/07/10			
Prep Batch #...: 0278436				
Dilution Factor: 0.96				
% Moisture.....: 9.2	Method.....: SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	2.7 J	5.3	ug/kg	0.27

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP320809

HPLC

Lot-Sample #...:	G0J010490-007	Work Order #...:	L7T441AC	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/05/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0278436				
Dilution Factor:	1				
% Moisture.....:	15	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	2.6 J	5.9	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP32P0809 SB

HPLC

Lot-Sample #...:	G0J010490-008	Work Order #...:	L7T451AC	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/05/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0278436				
Dilution Factor:	0.98				
% Moisture.....:	23	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	5.7 J	6.4	ug/kg	0.33

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP350001 SS

HPLC

Lot-Sample #...:	G0J010490-009	**Work Order #...:**	L7T461AC	**Matrix.....:**	SOLID
Date Sampled...:	09/29/10	**Date Received..:**	10/01/10		
Prep Date.....:	10/05/10	**Analysis Date..:**	10/07/10		
Prep Batch #...:	0278436				
Dilution Factor:	0.98				
% Moisture.....:	9.6	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**3.2 J**	**5.4**	**ug/kg**	**0.28**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP351415 SB

HPLC

Lot-Sample #...:	G0J010490-010	Work Order #...:	L7T471AC	Matrix.....:	SOLID
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/05/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0278436				
Dilution Factor:	1				
% Moisture.....:	16	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.48 U	6.0	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66MW020910 GW

Dissolved HPLC

Lot-Sample #...:	G0J010490-001	Work Order #...:	L7T4P1AA	Matrix.....:	WATER
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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Katahdin Analytical Services

Client Sample ID: IS66MW010910 (GW)

Dissolved HPLC

Lot-Sample #...:	G0J010490-002	Work Order #...:	L7T4R1AA	Matrix.....:	WATER
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1000	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	3600	500	ug/L	82

Katahdin Analytical Services

Client Sample ID: IS66EB02-092910

Dissolved HPLC

Lot-Sample #...:	G0J010490-003	Work Order #...:	L7T4V1AA	Matrix.....:	WATER
Date Sampled...:	09/29/10	Date Received..:	10/01/10		
Prep Date.....:	10/04/10	Analysis Date..:	10/07/10		
Prep Batch #...:	0277365				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB01-092910

Dissolved HPLC

Lot-Sample #...: G0J010490-004	Work Order #...: L7T4W1AA	Matrix.....: WATER	
Date Sampled...: 09/29/10	Date Received..: 10/01/10		
Prep Date.....: 10/04/10	Analysis Date..: 10/07/10		
Prep Batch #...: 0277365			
Dilution Factor: 1	Method.....: SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66SD15

HPLC

Lot-Sample #...:	G0J050516-001	Work Order #...:	L71W01AC	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	1				
% Moisture.....:	70	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	1.3 U	17	ug/kg	0.87

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD14

HPLC

Lot-Sample #...:	G0J050516-002	**Work Order #...:**	L71W21AC	**Matrix.....:**	SOLID
Date Sampled...:	09/30/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/07/10	**Analysis Date..:**	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	1				
% Moisture.....:	36	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.62 U	7.8	ug/kg	0.40

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP400001 SS

HPLC

Lot-Sample #...:	G0J050516-003	Work Order #...:	L71W31AC	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	1				
% Moisture.....:	15	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.47 U	5.9	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP400910 SB

HPLC

Lot-Sample #...:	G0J050516-004	Work Order #...:	L71W61AC	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	0.98				
% Moisture.....:	20	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.49 U	6.1	ug/kg	0.32

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP410001 SS

HPLC

Lot-Sample #...: G0J050516-005	Work Order #...: L71W81AC		Matrix.....: SOLID	
Date Sampled...: 09/30/10	Date Received..: 10/05/10			
Prep Date.....: 10/07/10	Analysis Date..: 10/24/10			
Prep Batch #...: 0280286				
Dilution Factor: 0.99				
% Moisture.....: 24	Method.....: SW846 6850_DOD Ha			

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.52 U	6.5	ug/kg	0.34

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP230001

HPLC

Lot-Sample #...:	G0J050516-006	Work Order #...:	L71XA1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	0.99				
% Moisture.....:	11	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.86 J	5.6	ug/kg	0.29

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP231516 SB

HPLC

Lot-Sample #...:	G0J050516-007	Work Order #...:	L71XD1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	0.99				
% Moisture.....:	17	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.48 U	6.0	ug/kg	0.31

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP220001

HPLC

Lot-Sample #...:	G0J050516-008	Work Order #...:	L71XF1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.82 J	5.7	ug/kg	0.30

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP22P0001

HPLC

Lot-Sample #...:	G0J050516-009	Work Order #...:	L71XG1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/24/10		
Prep Batch #...:	0280286				
Dilution Factor:	1				
% Moisture.....:	13	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.71 J	5.7	ug/kg	0.30

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP221112

HPLC

Lot-Sample #...:	G0J050516-010	Work Order #...:	L71XK1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280286				
Dilution Factor:	1.01				
% Moisture.....:	23	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.53 U	6.6	ug/kg	0.34

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP22P1112 SB

HPLC

Lot-Sample #...:	G0J050516-011	**Work Order #...:**	L71XN1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/07/10	**Analysis Date..:**	10/25/10		
Prep Batch #...:	0280286				
Dilution Factor:	0.98				
% Moisture.....:	21	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.50 U	6.2	ug/kg	0.32

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP410607 SB

HPLC

Lot-Sample #...:	G0J050516-014	Work Order #...:	L71XX1AC	Matrix.....:	SOLID
Date Sampled...:	09/30/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280286				
Dilution Factor:	0.99				
% Moisture.....:	22	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.51 U	6.4	ug/kg	0.33

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66EB01-093010

Dissolved HPLC

Lot-Sample #...: G0J050516-012	Work Order #...: L71XP1AA	Matrix.....:	WATER
Date Sampled...: 09/30/10	Date Received..: 10/05/10		
Prep Date.....: 10/07/10	Analysis Date..: 10/25/10		
Prep Batch #...: 0280401			
Dilution Factor: 1	Method.....: SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB02-093010

Dissolved HPLC

Lot-Sample #...: G0J050516-013	Work Order #...: L71XR1AA	Matrix.....:	WATER
Date Sampled...: 09/30/10	Date Received..: 10/05/10		
Prep Date.....: 10/07/10	Analysis Date..: 10/25/10		
Prep Batch #...: 0280401			
Dilution Factor: 1	Method.....: SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910 (SW)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82838

Analysis Date: 05-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.051	0.0070	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.051	0.0073	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.051	0.0082	0.026
Aldrin	U	0.026	ug/L	1	.05	0.051	0.0076	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.051	0.0064	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.051	0.013	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.051	0.0076	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.051	0.0065	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.051	0.0061	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.051	0.0078	0.026
4,4'-DDE	U	0.051	ug/L	1	.1	0.10	0.0050	0.051
Dieldrin	U	0.051	ug/L	1	.1	0.10	0.0066	0.051
Endrin	U	0.051	ug/L	1	.1	0.10	0.0086	0.051
4,4'-DDD	U	0.051	ug/L	1	.1	0.10	0.0092	0.051
Endosulfan II	U	0.051	ug/L	1	.1	0.10	0.0058	0.051
4,4'-DDT	U	0.051	ug/L	1	.1	0.10	0.0091	0.051
Endrin Aldehyde	U	0.051	ug/L	1	.1	0.10	0.0063	0.051
Endosulfan Sulfate	U	0.051	ug/L	1	.1	0.10	0.0068	0.051
Methoxychlor	U	0.26	ug/L	1	.5	0.51	0.0086	0.26
Endrin Ketone	U	0.051	ug/L	1	.1	0.10	0.0080	0.051
Toxaphene	U	0.51	ug/L	1	1	1.0	0.17	0.51
Tetrachloro-M-Xylene		81.0	%					
Decachlorobiphenyl		69.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: IS66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82838

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0071	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0074	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0082	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0065	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.013	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0078	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0050	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0067	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0086	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0092	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0069	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0086	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0080	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		79.4	%					
Decachlorobiphenyl		63.2	%					

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Katahdin Analytical Services A0000251

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82838

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0071	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0074	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0082	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0065	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.013	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0076	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0078	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0050	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0067	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0086	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0092	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0069	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0086	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0080	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		77.0	%					
Decachlorobiphenyl		56.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82838

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.025	ug/L	1	.05	0.050	0.0068	0.025
Gamma-BHC	U	0.025	ug/L	1	.05	0.050	0.0071	0.025
Heptachlor	U	0.025	ug/L	1	.05	0.050	0.0079	0.025
Aldrin	U	0.025	ug/L	1	.05	0.050	0.0073	0.025
beta-BHC	U	0.025	ug/L	1	.05	0.050	0.0062	0.025
delta-BHC	U	0.025	ug/L	1	.05	0.050	0.013	0.025
Heptachlor Epoxide	U	0.025	ug/L	1	.05	0.050	0.0073	0.025
Endosulfan I	U	0.025	ug/L	1	.05	0.050	0.0063	0.025
Gamma-Chlordane	U	0.025	ug/L	1	.05	0.050	0.0059	0.025
Alpha-Chlordane	U	0.025	ug/L	1	.05	0.050	0.0075	0.025
4,4'-DDE	U	0.050	ug/L	1	.1	0.099	0.0048	0.050
Dieldrin	U	0.050	ug/L	1	.1	0.099	0.0064	0.050
Endrin	U	0.050	ug/L	1	.1	0.099	0.0083	0.050
4,4'-DDD	U	0.050	ug/L	1	.1	0.099	0.0089	0.050
Endosulfan II	U	0.050	ug/L	1	.1	0.099	0.0056	0.050
4,4'-DDT	U	0.050	ug/L	1	.1	0.099	0.0088	0.050
Endrin Aldehyde	U	0.050	ug/L	1	.1	0.099	0.0061	0.050
Endosulfan Sulfate	U	0.050	ug/L	1	.1	0.099	0.0066	0.050
Methoxychlor	U	0.25	ug/L	1	.5	0.50	0.0083	0.25
Endrin Ketone	U	0.050	ug/L	1	.1	0.099	0.0077	0.050
Toxaphene	U	0.50	ug/L	1	1	0.99	0.17	0.50
Tetrachloro-M-Xylene		69.6	%					
Decachlorobiphenyl		39.3	%					

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Katahdin Analytical Services A0000253

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.29	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.54	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	69.4	%					
Decachlorobiphenyl		69.4	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2RE
Client ID: IS66DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude PE	0.94	ug/Kgdrywt	1	1.7	1.9	0.38	0.94
gamma-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.30	0.94
Heptachlor	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.32	0.94
Aldrin	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.31	0.94
beta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.36	0.94
delta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.35	0.94
Heptachlor Epoxide	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.24	0.94
Endosulfan I	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.26	0.94
Gamma-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.25	0.94
Alpha-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.23	0.94
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.94	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.4	ug/Kgdrywt	1	17	19.	0.55	9.4
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.7	18.
Tetrachloro-M-Xylene	*	62.2	%					
Decachlorobiphenyl		70.1	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.36	0.90
gamma-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.29	0.90
Heptachlor	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.31	0.90
Aldrin	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.30	0.90
beta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.35	0.90
delta-BHC	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.34	0.90
Heptachlor Epoxide	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.23	0.90
Endosulfan I	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.25	0.90
Gamma-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.24	0.90
Alpha-Chlordane	U	0.90	ug/Kgdrywt	1	1.7	1.8	0.22	0.90
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.90	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.21	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.36	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.33	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.52	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.62	1.7
Methoxychlor	U	9.0	ug/Kgdrywt	1	17	18.	0.53	9.0
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.5	0.42	1.7
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.4	17.
Tetrachloro-M-Xylene	*	57.5	%					
Decachlorobiphenyl		70.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3RE
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.31	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.35	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	60.4	%					
Decachlorobiphenyl		67.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.31	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.96	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.38	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.66	1.9
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.57	9.6
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.45	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	63.4	%					
Decachlorobiphenyl		79.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4RE
Client ID: IS66DP320809 SR
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-PE	0.97	ug/Kgdrywt	1	1.7	1.9	0.39	0.97
gamma-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.31	0.97
Heptachlor	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.33	0.97
Aldrin	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.32	0.97
beta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.38	0.97
delta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.36	0.97
Heptachlor Epoxide	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.25	0.97
Endosulfan I	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.27	0.97
Gamma-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.26	0.97
Alpha-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.24	0.97
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.97	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.66	1.9
Methoxychlor	U	9.7	ug/Kgdrywt	1	17	19.	0.57	9.7
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.0	18.
Tetrachloro-M-Xylene	*	64.2	%					
Decachlorobiphenyl		73.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66DP32P0809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UUJSSL	0.94	ug/Kgdrywt	1	1.7	1.9	0.38	0.94
gamma-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.30	0.94
Heptachlor	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.32	0.94
Aldrin	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.31	0.94
beta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.37	0.94
delta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.36	0.94
Heptachlor Epoxide	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.24	0.94
Endosulfan I	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.27	0.94
Gamma-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.26	0.94
Alpha-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.23	0.94
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.94	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.64	1.8
Methoxychlor	U	9.4	ug/Kgdrywt	1	17	19.	0.56	9.4
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.8	18.
Tetrachloro-M-Xylene	*	57.8	%					
Decachlorobiphenyl		67.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5RE
Client ID: IS66DP32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.39	0.97
gamma-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.31	0.97
Heptachlor	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.33	0.97
Aldrin	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.32	0.97
beta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.38	0.97
delta-BHC	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.37	0.97
Heptachlor Epoxide	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.25	0.97
Endosulfan I	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.27	0.97
Gamma-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.26	0.97
Alpha-Chlordane	U	0.97	ug/Kgdrywt	1	1.7	1.9	0.24	0.97
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.25	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.97	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.35	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.56	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.66	1.9
Methoxychlor	U	9.7	ug/Kgdrywt	1	17	19.	0.57	9.7
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.0	18.
Tetrachloro-M-Xylene	*	67.7	%					
Decachlorobiphenyl		75.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.24	0.93
Endosulfan I	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.9	0.23	0.93
4,4'-DDE	J	0.84	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J	0.99	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	19.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.7	18.
Tetrachloro-M-Xylene	*	49.3	%					
Decachlorobiphenyl		57.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6RE
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 90.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.36	0.91
gamma-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.29	0.91
Heptachlor	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.31	0.91
Aldrin	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.30	0.91
beta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.35	0.91
delta-BHC	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.34	0.91
Heptachlor Epoxide	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.23	0.91
Endosulfan I	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.26	0.91
Gamma-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.24	0.91
Alpha-Chlordane	U	0.91	ug/Kgdrywt	1	1.7	1.8	0.22	0.91
4,4'-DDE	J	1.3	ug/Kgdrywt	1	3.3	3.5	0.20	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.23	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.91	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.21	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.36	1.8
4,4'-DDT	J	1.2	ug/Kgdrywt	1	3.3	3.5	0.33	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.52	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.62	1.8
Methoxychlor	U	9.1	ug/Kgdrywt	1	17	18.	0.53	9.1
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.5	0.43	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	35.	7.5	17.
Tetrachloro-M-Xylene	*	66.0	%					
Decachlorobiphenyl		74.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82846

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UJ-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.60	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.4	19.
Tetrachloro-M-Xylene	*	64.7	%					
Decachlorobiphenyl		74.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7RE
Client ID: IS66DP351415 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.22	1.9
Dieldrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.26	1.9
Endrin	U	1.9	ug/Kgdrywt	1	3.3	3.9	1.0	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.40	1.9
4,4'-DDT	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.36	1.9
Endrin Aldehyde	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.58	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.68	1.9
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.9	0.47	1.9
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.2	19.
Tetrachloro-M-Xylene	*	60.1	%					
Decachlorobiphenyl		68.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: 1S66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UJ-SSL	1.4	ug/Kgdrywt	1	1.7	2.8	0.57	1.4
gamma-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.45	1.4
Heptachlor	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.49	1.4
Aldrin	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.47	1.4
beta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.56	1.4
delta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.54	1.4
Heptachlor Epoxide	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.37	1.4
Endosulfan I	J-SSL	2.3	ug/Kgdrywt	1	1.7	2.8	0.40	1.4
Gamma-Chlordane	UJ-SSL	1.4	ug/Kgdrywt	1	1.7	2.8	0.39	1.4
Alpha-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.8	0.35	1.4
4,4'-DDE	J-SSL	12.	ug/Kgdrywt	1	3.3	5.6	0.32	2.8
Dieldrin	UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	0.37	2.8
Endrin	U	2.8	ug/Kgdrywt	1	3.3	5.6	1.4	2.8
4,4'-DDD	J-SSL	6.4	ug/Kgdrywt	1	3.3	5.6	0.34	2.8
Endosulfan II	UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	0.57	2.8
4,4'-DDT	J-SSL	5.4	ug/Kgdrywt	1	3.3	5.6	0.52	2.8
Endrin Aldehyde	UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	0.82	2.8
Endosulfan Sulfate	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.98	2.8
Methoxychlor	U	14.	ug/Kgdrywt	1	17	28.	0.84	14.
Endrin Ketone	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.67	2.8
Toxaphene	U	27.	ug/Kgdrywt	1	33	56.	12.	27.
Tetrachloro-M-Xylene	*	56.4	%					
Decachlorobiphenyl		83.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1RE
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 55.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.58	1.4
gamma-BHC		16.	ug/Kgdrywt	1	1.7	2.9	0.46	1.4
Heptachlor	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.49	1.4
Aldrin	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.48	1.4
beta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.56	1.4
delta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.54	1.4
Heptachlor Epoxide	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.37	1.4
Endosulfan I	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.41	1.4
Gamma-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.39	1.4
Alpha-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.36	1.4
4,4'-DDE		16.	ug/Kgdrywt	1	3.3	5.6	0.32	2.8
Dieldrin	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.37	2.8
Endrin	U	2.8	ug/Kgdrywt	1	3.3	5.6	1.4	2.8
4,4'-DDD		7.4	ug/Kgdrywt	1	3.3	5.6	0.34	2.8
Endosulfan II	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.58	2.8
4,4'-DDT		6.9	ug/Kgdrywt	1	3.3	5.6	0.53	2.8
Endrin Aldehyde	JU	1.9	ug/Kgdrywt	1	3.3	5.6	0.83	2.8
Endosulfan Sulfate	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.98	2.8
Methoxychlor	U	14.	ug/Kgdrywt	1	17	29.	0.85	14.
Endrin Ketone	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.68	2.8
Toxaphene	U	27.	ug/Kgdrywt	1	33	56.	12.	27.
Tetrachloro-M-Xylene	*	59.8	%					
Decachlorobiphenyl		82.1	%					

Exclude RE

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 32.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	2.6	ug/Kgdrywt	1	1.7	5.3	1.1	2.6
gamma-BHC	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.84	2.6
Heptachlor	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.90	2.6
Aldrin	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.87	2.6
beta-BHC	U	2.6	ug/Kgdrywt	1	1.7	5.3	1.0	2.6
delta-BHC	U	2.6	ug/Kgdrywt	1	1.7	5.3	1.0	2.6
Heptachlor Epoxide	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.69	2.6
Endosulfan I	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.75	2.6
Gamma-Chlordane	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.72	2.6
Alpha-Chlordane	U	2.6	ug/Kgdrywt	1	1.7	5.3	0.66	2.6
4,4'-DDE	J J-SSL	22.	ug/Kgdrywt	1	3.3	10.	0.59	5.2
Dieldrin	U UJ-SSL	5.2	ug/Kgdrywt	1	3.3	10.	0.69	5.2
Endrin	U	5.2	ug/Kgdrywt	1	3.3	10.	2.6	5.2
4,4'-DDD	J J-SSL	23.	ug/Kgdrywt	1	3.3	10.	0.62	5.2
Endosulfan II	U UJ-SSL	5.2	ug/Kgdrywt	1	3.3	10.	1.1	5.2
4,4'-DDT	J J-SSL	39.	ug/Kgdrywt	1	3.3	10.	0.97	5.2
Endrin Aldehyde	U UJ-SSL	5.2	ug/Kgdrywt	1	3.3	10.	1.5	5.2
Endosulfan Sulfate	U	5.2	ug/Kgdrywt	1	3.3	10.	1.8	5.2
Methoxychlor	JJ J-SSL	12.	ug/Kgdrywt	1	17	53.	1.6	26.
Endrin Ketone	U UJ-SSL	5.2	ug/Kgdrywt	1	3.3	10.	1.2	5.2
Toxaphene	U UJ-SSL	50.	ug/Kgdrywt	1	33	100	22.	50.
Tetrachloro-M-Xylene	*	63.8	%					
Decachlorobiphenyl		70.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2RE
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 32.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	2.5	ug/Kgdrywt	1	1.7	5.0	0.99	2.5
gamma-BHC	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.79	2.5
Heptachlor	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.84	2.5
Aldrin	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.82	2.5
beta-BHC	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.96	2.5
delta-BHC	J	5.6	ug/Kgdrywt	1	1.7	5.0	0.93	2.5
Heptachlor Epoxide	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.64	2.5
Endosulfan I	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.70	2.5
Gamma-Chlordane	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.67	2.5
Alpha-Chlordane	U	2.5	ug/Kgdrywt	1	1.7	5.0	0.61	2.5
4,4'-DDE	J	18.	ug/Kgdrywt	1	3.3	9.6	0.55	4.8
Dieldrin	U	4.8	ug/Kgdrywt	1	3.3	9.6	0.64	4.8
Endrin	U	4.8	ug/Kgdrywt	1	3.3	9.6	2.5	4.8
4,4'-DDD	J	19.	ug/Kgdrywt	1	3.3	9.6	0.58	4.8
Endosulfan II	U	4.8	ug/Kgdrywt	1	3.3	9.6	0.99	4.8
4,4'-DDT	J	32.	ug/Kgdrywt	1	3.3	9.6	0.90	4.8
Endrin Aldehyde	U	4.8	ug/Kgdrywt	1	3.3	9.6	1.4	4.8
Endosulfan Sulfate	U	4.8	ug/Kgdrywt	1	3.3	9.6	1.7	4.8
Methoxychlor	U	25.	ug/Kgdrywt	1	17	50.	1.4	25.
Endrin Ketone	U	4.8	ug/Kgdrywt	1	3.3	9.6	1.2	4.8
Toxaphene	U	47.	ug/Kgdrywt	1	33	96.	20.	47.
Tetrachloro-M-Xylene	*	57.1	%					
Decachlorobiphenyl		62.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	J J-SSL	0.97	ug/Kgdrywt	1	3.3	3.9	0.22	2.0
Dieldrin	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	JJ J-SSL	1.1	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	JJ J-SSL	2.2	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.68	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.47	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.3	19.
Tetrachloro-M-Xylene	*	56.3	%					
Decachlorobiphenyl		68.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3RE
Client ID: IS66DP400001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.25	1.0
4,4'-DDE	J	0.94	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.0	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.61	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	53.0	%					
Decachlorobiphenyl		68.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910 (SB)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 14-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.44	2.1
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.74	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.64	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.51	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	9.0	20.
Tetrachloro-M-Xylene	*	59.0	%					
Decachlorobiphenyl		78.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4RE
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.44	2.1
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.64	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	42.	9.0	21.
Tetrachloro-M-Xylene	*	61.3	%					
Decachlorobiphenyl		71.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83001

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.053	0.0073	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.053	0.0076	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.053	0.0085	0.026
Aldrin	U	0.026	ug/L	1	.05	0.053	0.0079	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.053	0.0067	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.053	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.053	0.0079	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.053	0.0068	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0064	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.053	0.0081	0.026
4,4'-DDE	U	0.053	ug/L	1	.1	0.11	0.0052	0.053
Dieldrin	U	0.053	ug/L	1	.1	0.11	0.0069	0.053
Endrin	U	0.053	ug/L	1	.1	0.11	0.0089	0.053
4,4'-DDD	U	0.053	ug/L	1	.1	0.11	0.0096	0.053
Endosulfan II	U	0.053	ug/L	1	.1	0.11	0.0061	0.053
4,4'-DDT	U	0.053	ug/L	1	.1	0.11	0.0095	0.053
Endrin Aldehyde	U	0.053	ug/L	1	.1	0.11	0.0066	0.053
Endosulfan Sulfate	U	0.053	ug/L	1	.1	0.11	0.0071	0.053
Methoxychlor	U	0.26	ug/L	1	.5	0.53	0.0089	0.26
Endrin Ketone	U	0.053	ug/L	1	.1	0.11	0.0083	0.053
Toxaphene	U	0.53	ug/L	1	1	1.1	0.18	0.53
Tetrachloro-M-Xylene		78.1	%					
Decachlorobiphenyl		52.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: 1S66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83001

Analysis Date: 07-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.028	ug/L	1	.05	0.056	0.0077	0.028
Gamma-BHC	U	0.028	ug/L	1	.05	0.056	0.0080	0.028
Heptachlor	U	0.028	ug/L	1	.05	0.056	0.0089	0.028
Aldrin	U	0.028	ug/L	1	.05	0.056	0.0082	0.028
beta-BHC	U	0.028	ug/L	1	.05	0.056	0.0070	0.028
delta-BHC	U	0.028	ug/L	1	.05	0.056	0.014	0.028
Heptachlor Epoxide	U	0.028	ug/L	1	.05	0.056	0.0082	0.028
Endosulfan I	U	0.028	ug/L	1	.05	0.056	0.0071	0.028
Gamma-Chlordane	U	0.028	ug/L	1	.05	0.056	0.0067	0.028
Alpha-Chlordane	U	0.028	ug/L	1	.05	0.056	0.0084	0.028
4,4'-DDE	U	0.056	ug/L	1	.1	0.11	0.0054	0.056
Dieldrin	U	0.056	ug/L	1	.1	0.11	0.0072	0.056
Endrin	U	0.056	ug/L	1	.1	0.11	0.0093	0.056
4,4'-DDD	U	0.056	ug/L	1	.1	0.11	0.010	0.056
Endosulfan II	U	0.056	ug/L	1	.1	0.11	0.0063	0.056
4,4'-DDT	U	0.056	ug/L	1	.1	0.11	0.0099	0.056
Endrin Aldehyde	U	0.056	ug/L	1	.1	0.11	0.0069	0.056
Endosulfan Sulfate	U	0.056	ug/L	1	.1	0.11	0.0074	0.056
Methoxychlor	U	0.28	ug/L	1	.5	0.56	0.0093	0.28
Endrin Ketone	U	0.056	ug/L	1	.1	0.11	0.0087	0.056
Toxaphene	U	0.56	ug/L	1	1	1.1	0.19	0.56
Tetrachloro-M-Xylene		74.7	%					
Decachlorobiphenyl		51.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 58.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.4	ug/Kgdrywt	1	1.7	2.9	0.58	1.4
gamma-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.46	1.4
Heptachlor	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.50	1.4
Aldrin	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.48	1.4
beta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.56	1.4
delta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.55	1.4
Heptachlor Epoxide	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.38	1.4
Endosulfan I	J J-SSL	5.1	ug/Kgdrywt	1	1.7	2.9	0.41	1.4
Gamma-Chlordane	U UJ-SSL	1.4	ug/Kgdrywt	1	1.7	2.9	0.39	1.4
Alpha-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.36	1.4
4,4'-DDE	E Exclude-LR	230	ug/Kgdrywt	1	3.3	5.6	0.32	2.8
Dieldrin	J-SSL	71.	ug/Kgdrywt	1	3.3	5.6	0.38	2.8
Endrin	U UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	1.4	2.8
4,4'-DDD	E Exclude-LR	400	ug/Kgdrywt	1	3.3	5.6	0.34	2.8
Endosulfan II	U UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	0.58	2.8
4,4'-DDT	E Exclude-LR	320	ug/Kgdrywt	1	3.3	5.6	0.53	2.8
Endrin Aldehyde	U UJ-SSL	2.8	ug/Kgdrywt	1	3.3	5.6	0.84	2.8
Endosulfan Sulfate	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.99	2.8
Methoxychlor	U	14.	ug/Kgdrywt	1	17	29.	0.86	14.
Endrin Ketone	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.68	2.8
Toxaphene	U	27.	ug/Kgdrywt	1	33	56.	12.	27.
Tetrachloro-M-Xylene	*	69.6	%					
Decachlorobiphenyl		74.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8DL
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 19-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	14.	ug/Kgdrywt	10	1.7	29.	5.8	14.
gamma-BHC	U	14.	ug/Kgdrywt	10	1.7	29.	4.6	14.
Heptachlor	U	14.	ug/Kgdrywt	10	1.7	29.	5.0	14.
Aldrin	U	14.	ug/Kgdrywt	10	1.7	29.	4.8	14.
beta-BHC	U	14.	ug/Kgdrywt	10	1.7	29.	5.6	14.
delta-BHC	U	14.	ug/Kgdrywt	10	1.7	29.	5.5	14.
Heptachlor Epoxide	U	14.	ug/Kgdrywt	10	1.7	29.	3.8	14.
Endosulfan I	U	14.	ug/Kgdrywt	10	1.7	29.	4.1	14.
Gamma-Chlordane	U	14.	ug/Kgdrywt	10	1.7	29.	3.9	14.
Alpha-Chlordane	U	14.	ug/Kgdrywt	10	1.7	29.	3.6	14.
4,4'-DDE		230	ug/Kgdrywt	10	3.3	56.	3.2	28.
Dieldrin		65.	ug/Kgdrywt	10	3.3	56.	3.8	28.
Endrin	U	28.	ug/Kgdrywt	10	3.3	56.	14.	28.
4,4'-DDD		640	ug/Kgdrywt	10	3.3	56.	3.4	28.
Endosulfan II	U	28.	ug/Kgdrywt	10	3.3	56.	5.8	28.
4,4'-DDT		460	ug/Kgdrywt	10	3.3	56.	5.3	28.
Endrin Aldehyde	U	28.	ug/Kgdrywt	10	3.3	56.	8.4	28.
Endosulfan Sulfate	U	28.	ug/Kgdrywt	10	3.3	56.	9.9	28.
Methoxychlor	U	140	ug/Kgdrywt	10	17	290	8.6	140
Endrin Ketone	U	28.	ug/Kgdrywt	10	3.3	56.	6.8	28.
Toxaphene	U	270	ug/Kgdrywt	10	33	560	120	270
Tetrachloro-M-Xylene	*D	0.00	%					
Decachlorobiphenyl	*D	0.00	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8RE
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	1.4	ug/Kgdrywt	1	1.7	2.9	0.57	1.4
gamma-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.46	1.4
Heptachlor	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.49	1.4
Aldrin	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.47	1.4
beta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.56	1.4
delta-BHC	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.54	1.4
Heptachlor Epoxide	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.37	1.4
Endosulfan I	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.40	1.4
Gamma-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.39	1.4
Alpha-Chlordane	U	1.4	ug/Kgdrywt	1	1.7	2.9	0.35	1.4
4,4'-DDE	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.32	2.8
Dieldrin	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.37	2.8
Endrin	U	2.8	ug/Kgdrywt	1	3.3	5.6	1.4	2.8
4,4'-DDD	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.34	2.8
Endosulfan II	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.57	2.8
4,4'-DDT	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.52	2.8
Endrin Aldehyde	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.83	2.8
Endosulfan Sulfate	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.98	2.8
Methoxychlor	U	14.	ug/Kgdrywt	1	17	29.	0.84	14.
Endrin Ketone	U	2.8	ug/Kgdrywt	1	3.3	5.6	0.68	2.8
Toxaphene	U	27.	ug/Kgdrywt	1	33	56.	12.	27.
Tetrachloro-M-Xylene	*	59.2	%					
Decachlorobiphenyl		66.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 76.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	J J-SSL	1.5	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	E Exclude-LR	160	ug/Kgdrywt	1	3.3	4.3	0.24	2.1
Dieldrin	J-SSL	27.	ug/Kgdrywt	1	3.3	4.3	0.28	2.1
Endrin	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.3	1.1	2.1
4,4'-DDD	E Exclude-LR	120	ug/Kgdrywt	1	3.3	4.3	0.26	2.1
Endosulfan II	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.3	0.44	2.1
4,4'-DDT	J-SSL	5.7	ug/Kgdrywt	1	3.3	4.3	0.40	2.1
Endrin Aldehyde	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.3	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.65	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	43.	9.0	21.
Tetrachloro-M-Xylene	*	54.4	%					
Decachlorobiphenyl		78.1	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9DL
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 05-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83008

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	5.5	ug/Kgdrywt	5	1.7	11.	2.2	5.5
gamma-BHC	U	5.5	ug/Kgdrywt	5	1.7	11.	1.7	5.5
Heptachlor	U	5.5	ug/Kgdrywt	5	1.7	11.	1.9	5.5
Aldrin	U	5.5	ug/Kgdrywt	5	1.7	11.	1.8	5.5
beta-BHC	U	5.5	ug/Kgdrywt	5	1.7	11.	2.1	5.5
delta-BHC	U	5.5	ug/Kgdrywt	5	1.7	11.	2.1	5.5
Heptachlor Epoxide	U	5.5	ug/Kgdrywt	5	1.7	11.	1.4	5.5
Endosulfan I	J	3.2	ug/Kgdrywt	5	1.7	11.	1.6	5.5
Gamma-Chlordane	U	5.5	ug/Kgdrywt	5	1.7	11.	1.5	5.5
Alpha-Chlordane	U	5.5	ug/Kgdrywt	5	1.7	11.	1.4	5.5
4,4'-DDE		180	ug/Kgdrywt	5	3.3	21.	1.2	11.
Dieldrin		27.	ug/Kgdrywt	5	3.3	21.	1.4	11.
Endrin	U	11.	ug/Kgdrywt	5	3.3	21.	5.5	11.
4,4'-DDD		120	ug/Kgdrywt	5	3.3	21.	1.3	11.
Endosulfan II	U	11.	ug/Kgdrywt	5	3.3	21.	2.2	11.
4,4'-DDT	J	7.7	ug/Kgdrywt	5	3.3	21.	2.0	11.
Endrin Aldehyde	U	11.	ug/Kgdrywt	5	3.3	21.	3.2	11.
Endosulfan Sulfate	U	11.	ug/Kgdrywt	5	3.3	21.	3.7	11.
Methoxychlor	U	55.	ug/Kgdrywt	5	17	110	3.2	55.
Endrin Ketone	U	11.	ug/Kgdrywt	5	3.3	21.	2.6	11.
Toxaphene	U	100	ug/Kgdrywt	5	33	210	45.	100
Tetrachloro-M-Xylene	*	54.0	%					
Decachlorobiphenyl		80.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9RE
Client ID: IS66DP410607 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U EXCLUDED RE	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.44	2.1
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.64	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	42.	9.0	21.
Tetrachloro-M-Xylene	*	67.6	%					
Decachlorobiphenyl		74.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UJ-SSL	0.98	ug/Kgdrywt	1	1.7	2.0	0.39	0.98
gamma-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.31	0.98
Heptachlor	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.34	0.98
Aldrin	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.32	0.98
beta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.38	0.98
delta-BHC	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.37	0.98
Heptachlor Epoxide	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.26	0.98
Endosulfan I	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.28	0.98
Gamma-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.27	0.98
Alpha-Chlordane	U	0.98	ug/Kgdrywt	1	1.7	2.0	0.24	0.98
4,4'-DDE	J-SSL	6.2	ug/Kgdrywt	1	3.3	3.8	0.22	1.9
Dieldrin	JJ	1.3	ug/Kgdrywt	1	3.3	3.8	0.26	1.9
Endrin	UJ-SSL	1.9	ug/Kgdrywt	1	3.3	3.8	0.98	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.23	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.39	1.9
4,4'-DDT	J-SSL	3.5	ug/Kgdrywt	1	3.3	3.8	0.36	1.9
Endrin Aldehyde	UJ-SSL	1.9	ug/Kgdrywt	1	3.3	3.8	0.57	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.67	1.9
Methoxychlor	U	9.8	ug/Kgdrywt	1	17	20.	0.58	9.8
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.8	0.46	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	38.	8.1	18.
Tetrachloro-M-Xylene	*	60.1	%					
Decachlorobiphenyl		84.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1RE
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.38	0.95
gamma-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.30	0.95
Heptachlor	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.32	0.95
Aldrin	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.31	0.95
beta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.37	0.95
delta-BHC	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.36	0.95
Heptachlor Epoxide	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.25	0.95
Endosulfan I	JJ	0.83	ug/Kgdrywt	1	1.7	1.9	0.27	0.95
Gamma-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.26	0.95
Alpha-Chlordane	U	0.95	ug/Kgdrywt	1	1.7	1.9	0.24	0.95
4,4'-DDE	J	2.9	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	JJ	0.78	ug/Kgdrywt	1	3.3	3.7	0.25	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.95	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	J	1.5	ug/Kgdrywt	1	3.3	3.7	0.35	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.55	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.65	1.8
Methoxychlor	U	9.5	ug/Kgdrywt	1	17	19.	0.56	9.5
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.45	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.8	18.
Tetrachloro-M-Xylene	*	37.2	%					
Decachlorobiphenyl	*	39.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66DP231516 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UL-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.22	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.47	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.3	19.
Tetrachloro-M-Xylene	*	52.4	%					
Decachlorobiphenyl		58.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2RE
Client ID: IS66DP231516
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.26	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.60	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.61	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.49	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	66.2	%					
Decachlorobiphenyl		72.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.30	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	J J-SSL	1.3	ug/Kgdrywt	1	3.3	3.7	0.21	1.8
Dieldrin	U UJ-SSL	1.8	ug/Kgdrywt	1	3.3	3.7	0.25	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.96	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.38	1.8
4,4'-DDT	J J-SSL	1.8	ug/Kgdrywt	1	3.3	3.7	0.35	1.8
Endrin Aldehyde	U UJ-SSL	1.8	ug/Kgdrywt	1	3.3	3.7	0.55	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.65	1.8
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.56	9.6
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.7	0.45	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	61.3	%					
Decachlorobiphenyl		78.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3RE
Client ID: IS66DP220001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 86.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	0.93	ug/Kgdrywt	1	1.7	1.8	0.37	0.93
gamma-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.30	0.93
Heptachlor	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.32	0.93
Aldrin	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.31	0.93
beta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.36	0.93
delta-BHC	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.35	0.93
Heptachlor Epoxide	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.24	0.93
Endosulfan I	J	1.1	ug/Kgdrywt	1	1.7	1.8	0.26	0.93
Gamma-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.25	0.93
Alpha-Chlordane	U	0.93	ug/Kgdrywt	1	1.7	1.8	0.23	0.93
4,4'-DDE	J	1.2	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.93	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	J	1.4	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.3	ug/Kgdrywt	1	17	18.	0.55	9.3
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	59.9	%					
Decachlorobiphenyl		70.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4
Client ID: IS66DP22P0001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.96	ug/Kgdrywt	1	1.7	1.9	0.38	0.96
gamma-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.30	0.96
Heptachlor	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.33	0.96
Aldrin	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.32	0.96
beta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.37	0.96
delta-BHC	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.36	0.96
Heptachlor Epoxide	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.25	0.96
Endosulfan I	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.27	0.96
Gamma-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.26	0.96
Alpha-Chlordane	U	0.96	ug/Kgdrywt	1	1.7	1.9	0.24	0.96
4,4'-DDE	J J-SSL	1.6	ug/Kgdrywt	1	3.3	3.7	0.21	1.9
Dieldrin	JJ	0.88	ug/Kgdrywt	1	3.3	3.7	0.25	1.9
Endrin	U UJ-SSL	1.9	ug/Kgdrywt	1	3.3	3.7	0.96	1.9
4,4'-DDD	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.22	1.9
Endosulfan II	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.38	1.9
4,4'-DDT	J J-SSL	2.1	ug/Kgdrywt	1	3.3	3.7	0.35	1.9
Endrin Aldehyde	U UJ-SSL	1.9	ug/Kgdrywt	1	3.3	3.7	0.55	1.9
Endosulfan Sulfate	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.65	1.9
Methoxychlor	U	9.6	ug/Kgdrywt	1	17	19.	0.56	9.6
Endrin Ketone	U	1.9	ug/Kgdrywt	1	3.3	3.7	0.45	1.9
Toxaphene	U	18.	ug/Kgdrywt	1	33	37.	7.9	18.
Tetrachloro-M-Xylene	*	67.0	%					
Decachlorobiphenyl		76.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RE
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 85.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.38	0.94
gamma-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.30	0.94
Heptachlor	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.32	0.94
Aldrin	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.31	0.94
beta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.36	0.94
delta-BHC	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.35	0.94
Heptachlor Epoxide	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.24	0.94
Endosulfan I	J	0.55	ug/Kgdrywt	1	1.7	1.9	0.26	0.94
Gamma-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.25	0.94
Alpha-Chlordane	U	0.94	ug/Kgdrywt	1	1.7	1.9	0.23	0.94
4,4'-DDE	J	1.6	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.94	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.38	1.8
4,4'-DDT	J	2.0	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.54	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.64	1.8
Methoxychlor	U	9.4	ug/Kgdrywt	1	17	19.	0.55	9.4
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	18.	ug/Kgdrywt	1	33	36.	7.8	18.
Tetrachloro-M-Xylene	*	68.0	%					
Decachlorobiphenyl		82.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.1	0.43	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.34	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.36	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.35	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.40	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.30	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.29	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.26	1.1
4,4'-DDE	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.25	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.43	2.1
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.39	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.62	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.73	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	21.	0.63	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.50	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	8.8	20.
Tetrachloro-M-Xylene	*	59.0	%					
Decachlorobiphenyl		71.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5RE
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.42	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.36	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.30	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.26	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.24	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.1	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.25	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.42	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.61	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.72	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.62	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.1	0.49	2.0
Toxaphene	U	20.	ug/Kgdrywt	1	33	41.	8.7	20.
Tetrachloro-M-Xylene	*	61.4	%					
Decachlorobiphenyl		69.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66DP22P1112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.41	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.27	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.1	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.27	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.38	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	21.	0.61	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	63.9	%					
Decachlorobiphenyl		76.7	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6RE
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 18-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83671

Analysis Date: 21-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.22	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.47	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.3	19.
Tetrachloro-M-Xylene	*	59.6	%					
Decachlorobiphenyl		70.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910 (SW)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82835

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U UL-BSL	0.10	ug/L	1	.2	0.21	0.043	0.10
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.076	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.21	0.077	0.10
Nitrobenzene EXCLUDE-RE	~~U~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.092	0.10
2,4,6-Trichlorophenol	U	0.53	ug/L	1	1	1.0	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2,4-Dinitrophenol	U UJ-ICB	0.53	ug/L	1	1	1.0	0.25	0.53
4-Nitrophenol	U	0.53	ug/L	1	1	1.0	0.24	0.53
Dibenzofuran	U UL-BSL	0.10	ug/L	1	.2	0.21	0.072	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.037	0.10
4-Nitroaniline	U UJ-2S	0.10	ug/L	1	.2	0.21	0.068	0.10
4,6-Dinitro-2-methylphenol	U	0.79	ug/L	1	1	1.0	0.53	0.79
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.058	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.040	0.10
Pentachlorophenol	U	0.53	ug/L	1	1	1.0	0.35	0.53
3,3'-Dichlorobenzidine	U UJ-2S	0.10	ug/L	1	.2	0.21	0.059	0.10
Benzo(a)anthracene	U UL-BSL	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.038	0.10
bis(2-Ethylhexyl)phthalate	B-EBL	1.2	ug/L	1	1	1.0	0.53	0.53
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.094	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.052	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.055	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.074	0.10
2-Methylnaphthalene-D10		64.8	%					
Fluorene-D10		43.6	%					
pyrene-d10		91.5	%					
2,4-Dibromophenol		46.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: IS66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82835

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	UUL-BSL	0.10	ug/L	1	.2	0.20	0.041	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.072	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.064	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.20	0.087	0.10
2,4,6-Trichlorophenol	U	0.50	ug/L	1	1	1.0	0.12	0.50
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
2,4-Dinitrophenol	UUJ-ICB	0.50	ug/L	1	1	1.0	0.24	0.50
4-Nitrophenol	U	0.50	ug/L	1	1	1.0	0.23	0.50
Dibenzofuran	UUL-BSL	0.10	ug/L	1	.2	0.20	0.068	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.035	0.10
4-Nitroaniline	UUJ-2S	0.10	ug/L	1	.2	0.20	0.065	0.10
4,6-Dinitro-2-methylphenol	U	0.75	ug/L	1	1	1.0	0.50	0.75
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.055	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.038	0.10
Pentachlorophenol	U	0.50	ug/L	1	1	1.0	0.33	0.50
3,3'-Dichlorobenzidine	UUJ-2S	0.10	ug/L	1	.2	0.20	0.056	0.10
Benzo(a)anthracene	UUL-BSL	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
bis(2-Ethylhexyl)phthalate		2.5	ug/L	1	1	1.0	0.50	0.50
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.066	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.070	0.10
2-Methylnaphthalene-D10		62.7	%					
Fluorene-D10		52.6	%					
pyrene-d10		77.8	%					
2,4-Dibromophenol		57.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82835

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.10	ug/L	1	.2	0.21	0.043	0.10
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.12	0.16
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.21	0.075	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.21	0.076	0.10
Nitrobenzene	EXCLUDE-RE U	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	U	0.10	ug/L	1	.2	0.21	0.067	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.21	0.091	0.10
2,4,6-Trichlorophenol	U	0.52	ug/L	1	1	1.0	0.12	0.52
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.12	0.16
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.073	0.10
2,4-Dinitrophenol	U	0.52	ug/L	1	1	1.0	0.25	0.52
4-Nitrophenol	U	0.52	ug/L	1	1	1.0	0.24	0.52
Dibenzofuran	U	0.10	ug/L	1	.2	0.21	0.071	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.21	0.036	0.10
4-Nitroaniline	U	0.10	ug/L	1	.2	0.21	0.068	0.10
4,6-Dinitro-2-methylphenol	U	0.78	ug/L	1	1	1.0	0.52	0.78
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.21	0.057	0.10
Atrazine	U	0.10	ug/L	1	.2	0.21	0.040	0.10
Pentachlorophenol	U	0.52	ug/L	1	1	1.0	0.34	0.52
3,3'-Dichlorobenzidine	U	0.10	ug/L	1	.2	0.21	0.058	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.21	0.048	0.10
Chrysene	U	0.10	ug/L	1	.2	0.21	0.038	0.10
bis(2-Ethylhexyl)phthalate	B-EBL	1.1	ug/L	1	1	1.0	0.52	0.52
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.093	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.21	0.051	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.21	0.069	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.21	0.054	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.21	0.073	0.10
2-Methylnaphthalene-D10		60.4	%					
Fluorene-D10		61.3	%					
pyrene-d10		85.0	%					
2,4-Dibromophenol		54.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82835

Analysis Date: 19-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	~~U~~ UL-BSL	0.10	ug/L	1	.2	0.20	0.042	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Hexachlorobutadiene	~~U~~ UJ-25	0.10	ug/L	1	.2	0.20	0.089	0.10
2,4,6-Trichlorophenol	U	0.51	ug/L	1	1	1.0	0.12	0.51
2-Nitroaniline	~~U~~ UJ-25	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2,4-Dinitrophenol	U	0.51	ug/L	1	1	1.0	0.24	0.51
4-Nitrophenol	~~U~~ UJ-25	0.51	ug/L	1	1	1.0	0.23	0.51
Dibenzofuran	~~U~~ UL-BSL	0.10	ug/L	1	.2	0.20	0.069	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
4-Nitroaniline	~~U~~ UJ-25	0.10	ug/L	1	.2	0.20	0.066	0.10
4,6-Dinitro-2-methylphenol	U	0.76	ug/L	1	1	1.0	0.51	0.76
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.039	0.10
Pentachlorophenol	U	0.51	ug/L	1	1	1.0	0.34	0.51
3,3'-Dichlorobenzidine	~~U~~ UJ-25	0.10	ug/L	1	.2	0.20	0.057	0.10
Benzo(a)anthracene	~~U~~ UL-BSL	0.10	ug/L	1	.2	0.20	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.037	0.10
bis(2-Ethylhexyl)phthalate	U	0.51	ug/L	1	1	1.0	0.51	0.51
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.091	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.053	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2-Methylnaphthalene-D10		72.1	%					
Fluorene-D10		51.7	%					
pyrene-d10		78.0	%					
2,4-Dibromophenol		62.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	54.	ug/Kgdrywt	1	100	110	6.6	54.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
2-Chlorophenol	U	54.	ug/Kgdrywt	1	100	110	5.7	54.
2-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	9.2	54.
3&4-Methylphenol	U	54.	ug/Kgdrywt	1	100	110	11.	54.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.2	11.
2,4-Dimethylphenol	U	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.8	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	3.6	54.
2,4,5-Trichlorophenol	U	54.	ug/Kgdrywt	1	100	110	2.7	54.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	~~U~~ UJ ICB	54.	ug/Kgdrywt	1	100	110	8.7	54.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.6	11.
Fluorene	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	54.	ug/Kgdrywt	1	100	110	15.	54.
Phenanthrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	U UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.2	11.
Benzo (a) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Chrysene	U	11.	ug/Kgdrywt	1	20	22.	1.8	11.
bis(2-Ethylhexyl)phthalate K-BSL	JB B-MBL	70.	ug/Kgdrywt	1	100	110	35.	54.
Di-n-octylphthalate	U	54.	ug/Kgdrywt	1	100	110	50.	54.
Benzo (b) Fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Dibenzo (a,h) anthracene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	U	11.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		57.6	%					
Fluorene-D10		34.1	%					
Pyrene-D10		72.6	%					
2,4-Dibromophenol		40.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 89.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	53.	ug/Kgdrywt	1	100	100	6.4	53.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	53.	ug/Kgdrywt	1	100	100	5.6	53.
2-Methylphenol	U	53.	ug/Kgdrywt	1	100	100	9.0	53.
3&4-Methylphenol	U	53.	ug/Kgdrywt	1	100	100	10.	53.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.4	10.
2,4-Dichlorophenol	U	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	U	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	UUL-BSL	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	J	12.	ug/Kgdrywt	1	100	100	3.5	53.
2,4,5-Trichlorophenol	J	3.4	ug/Kgdrywt	1	100	100	2.6	53.
Dimethyl phthalate	J B-MBL	2.7	ug/Kgdrywt	1	20	21.	1.5	10.
Acenaphthylene	UUL-BSL	10.	ug/Kgdrywt	1	20	21.	1.3	10.
Acenaphthene	U UL-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	U UJ ICB	53.	ug/Kgdrywt	1	100	100	8.4	53.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.4	10.
Fluorene	UUL-BSL	10.	ug/Kgdrywt	1	20	21.	3.4	10.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	330	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	J B-MBL	3.8	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	53.	ug/Kgdrywt	1	100	100	15.	53.
Phenanthrene	J	2.6	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	J	2.1	ug/Kgdrywt	1	20	21.	1.3	10.
Fluoranthene	J	3.8	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene	J	4.5	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	UUL-BSL	10.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo (a) anthracene	J B-MBL	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene	J B-MBL	4.1	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	J BSH B B-MBL	120	ug/Kgdrywt	1	100	100	34.	53.
Di-n-octylphthalate	U	53.	ug/Kgdrywt	1	100	100	48.	53.
Benzo (b) Fluoranthene	J B-MBL	3.9	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66SP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 89.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	JB-MBL	3.4	ug/Kgdrywt	1	20	21.	3.3	10.
Benzo(a)pyrene	J-BMBL	4.2	ug/Kgdrywt	1	20	21.	3.5	10.
Indeno (1,2,3-cd) pyrene	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	U	10.	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		46.2	%					
Fluorene-D10		33.2	%					
Pyrene-D10		80.8	%					
2,4-Dibromophenol		38.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.1	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.2	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.9	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	12.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.6	12.
2,4-Dimethylphenol	U	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.7	12.
2-Methylnaphthalene	UUL-BSL	12.	ug/Kgdrywt	1	20	23.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.8	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	UUL-BSL	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	UUL-BSL	12.	ug/Kgdrywt	1	20	23.	1.8	12.
4-Nitrophenol	U UJ ICB	58.	ug/Kgdrywt	1	100	120	9.3	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.2	12.
Fluorene	UUL-BSL	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	360	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	UUL-BSL	12.	ug/Kgdrywt	1	20	23.	3.5	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate	~~B BSH~~ B B-MBL	150	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	54.	58.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 15-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		46.6	%					
Fluorene-D10		32.8	%					
Pyrene-D10		68.4	%					
2,4-Dibromophenol		38.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66SP32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 19-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	52.	ug/Kgdrywt	1	100	100	6.3	52.
bis(2-Chloroethyl)ether	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
2-Chlorophenol	U	52.	ug/Kgdrywt	1	100	100	5.5	52.
2-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	8.8	52.
3&4-Methylphenol	U	52.	ug/Kgdrywt	1	100	100	10.	52.
n-Nitroso-di-n-propylamine	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Nitrobenzene	U	10.	ug/Kgdrywt	1	20	21.	5.0	10.
2,4-Dimethylphenol	U	10.	ug/Kgdrywt	1	20	21.	3.3	10.
2,4-Dichlorophenol	UJ-2S	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Naphthalene	U	10.	ug/Kgdrywt	1	20	21.	2.7	10.
Hexachlorobutadiene	UJ-2S	10.	ug/Kgdrywt	1	20	21.	2.4	10.
2-Methylnaphthalene	U-BSL	10.	ug/Kgdrywt	1	20	21.	2.3	10.
Hexachlorocyclopentadiene	U	10.	ug/Kgdrywt	1	20	21.	1.6	10.
2,4,6-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	3.4	52.
2,4,5-Trichlorophenol	U	52.	ug/Kgdrywt	1	100	100	2.6	52.
Dimethyl phthalate	J-B-MBL	2.0	ug/Kgdrywt	1	20	21.	1.4	10.
Acenaphthylene	U-BSL	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Acenaphthene	U-BSL	10.	ug/Kgdrywt	1	20	21.	1.6	10.
4-Nitrophenol	UJ-2S	52.	ug/Kgdrywt	1	100	100	8.3	52.
2,4-Dinitrotoluene	U	10.	ug/Kgdrywt	1	20	21.	7.2	10.
Fluorene	U-BSL	10.	ug/Kgdrywt	1	20	21.	3.3	10.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	320	100	160
Hexachlorobenzene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Atrazine	U	10.	ug/Kgdrywt	1	20	21.	1.0	10.
Pentachlorophenol	U	52.	ug/Kgdrywt	1	100	100	14.	52.
Phenanthrene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Anthracene	U	10.	ug/Kgdrywt	1	20	21.	1.2	10.
Fluoranthene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Pyrene	U	10.	ug/Kgdrywt	1	20	21.	2.2	10.
3,3'-Dichlorobenzidine	U-BSL	10.	ug/Kgdrywt	1	20	21.	3.1	10.
Benzo (a) anthracene	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Chrysene	U	10.	ug/Kgdrywt	1	20	21.	1.8	10.
bis(2-Ethylhexyl)phthalate	JB-B-MBL	76.	ug/Kgdrywt	1	100	100	33.	52.
Di-n-octylphthalate	U	52.	ug/Kgdrywt	1	100	100	48.	52.
Benzo (b) Fluoranthene	U	10.	ug/Kgdrywt	1	20	21.	2.5	10.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66BP32P0809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 19-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	10.	ug/Kgdrywt	1	20	21.	3.2	10.
Benzo(a)pyrene	J BMBL	6.1	ug/Kgdrywt	1	20	21.	3.4	10.
Indeno (1,2,3-cd) pyrene	U	10.	ug/Kgdrywt	1	20	21.	2.0	10.
Dibenzo (a,h) anthracene	U	10.	ug/Kgdrywt	1	20	21.	1.9	10.
Benzo(g,h,i)perylene	U	10.	ug/Kgdrywt	1	20	21.	2.1	10.
2-Methylnaphthalene-D10		33.0	%					
Fluorene-D10		33.0	%					
Pyrene-D10		60.6	%					
2,4-Dibromophenol		37.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66BP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	9.4	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.3	11.
2,4-Dimethylphenol	U UL BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	U	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	UL-MSL	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	UL-BSL	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.8	55.
Dimethyl phthalate	JB-MBL	3.4	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	UL-BSL	11.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	U UJ ICB	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene	UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	JB-MBL	2.6	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene	L-MSL	59.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	L-MSL	14.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	L-MSL	94.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	L-MSL	82.	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	R-MSL UL-BSL	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene	L-MSL	46.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	L-MSL	31.	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	R-BSH JB-MBL	89.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	51.	55.
Benzo (b) Fluoranthene		51.	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 16-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J-B-MBL	17.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene		36.	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene	J	22.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	J	8.2	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene		24.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		46.5	%					
Fluorene-D10		40.8	%					
Pyrene-D10		92.5	%					
2,4-Dibromophenol		50.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 19-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.0	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.1	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.8	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	11.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.5	12.
2,4-Dimethylphenol	~~U~~ UL-MSL	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	~~U~~ UJ-2S	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	~~U~~ UJ-2S	12.	ug/Kgdrywt	1	20	23.	2.6	12.
2-Methylnaphthalene	~~U~~ UL-BSL	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	~~J~~ B-MBL	2.5	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	~~U~~ UL-BSL	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	~~U~~ UL-BSL	12.	ug/Kgdrywt	1	20	23.	1.7	12.
4-Nitrophenol	~~U~~ UJ-2S	58.	ug/Kgdrywt	1	100	120	9.2	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.1	12.
Fluorene	~~U~~ UL-BSL	12.	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	360	120	170
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	U	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine R-MSL	~~U~~ UL-BSL	12.	ug/Kgdrywt	1	20	23.	3.4	12.
Benzo (a) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate ← BSH	~~B~~ B-MBL	200	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	53.	58.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82830

Analysis Date: 19-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	~~J~~ B·MBL	6.5	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		34.1	%					
Fluorene-D10		29.0	%					
Pyrene-D10		58.5	%					
2,4-Dibromophenol		36.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 55.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	88.	ug/Kgdrywt	1	100	180	11.	88.
bis(2-Chloroethyl)ether	U	18.	ug/Kgdrywt	1	20	35.	3.0	18.
2-Chlorophenol	U	88.	ug/Kgdrywt	1	100	180	9.3	88.
2-Methylphenol	U	88.	ug/Kgdrywt	1	100	180	15.	88.
3&4-Methylphenol	J	51.	ug/Kgdrywt	1	100	180	17.	88.
n-Nitroso-di-n-propylamine	U	18.	ug/Kgdrywt	1	20	35.	3.3	18.
Nitrobenzene	U	18.	ug/Kgdrywt	1	20	35.	8.4	18.
2,4-Dimethylphenol	UUL-BSL	18.	ug/Kgdrywt	1	20	35.	5.6	18.
2,4-Dichlorophenol	UUJ-25	18.	ug/Kgdrywt	1	20	35.	3.8	18.
Naphthalene	JB-FBL	5.1	ug/Kgdrywt	1	20	35.	4.6	18.
Hexachlorobutadiene	UUJ-25	18.	ug/Kgdrywt	1	20	35.	4.0	18.
2-Methylnaphthalene	UUL-BSL	18.	ug/Kgdrywt	1	20	35.	3.8	18.
Hexachlorocyclopentadiene	U	18.	ug/Kgdrywt	1	20	35.	2.6	18.
2,4,6-Trichlorophenol	U	88.	ug/Kgdrywt	1	100	180	5.8	88.
2,4,5-Trichlorophenol	U	88.	ug/Kgdrywt	1	100	180	4.4	88.
Dimethyl phthalate	J	2.5	ug/Kgdrywt	1	20	35.	2.4	18.
Acenaphthylene	J	11.	ug/Kgdrywt	1	20	35.	2.1	18.
Acenaphthene	J	20.	ug/Kgdrywt	1	20	35.	2.6	18.
4-Nitrophenol	UUJ-25	88.	ug/Kgdrywt	1	100	180	14.	88.
2,4-Dinitrotoluene	U	18.	ug/Kgdrywt	1	20	35.	12.	18.
Fluorene	J	22.	ug/Kgdrywt	1	20	35.	5.6	18.
4,6-Dinitro-2-methylphenol	U	260	ug/Kgdrywt	1	310	540	180	260
Hexachlorobenzene	U	18.	ug/Kgdrywt	1	20	35.	3.2	18.
Atrazine	U	18.	ug/Kgdrywt	1	20	35.	1.8	18.
Pentachlorophenol	UUL-BSL	88.	ug/Kgdrywt	1	100	180	24.	88.
Phenanthrene		260	ug/Kgdrywt	1	20	35.	3.2	18.
Anthracene		39.	ug/Kgdrywt	1	20	35.	2.1	18.
Fluoranthene		450	ug/Kgdrywt	1	20	35.	3.2	18.
Pyrene		470	ug/Kgdrywt	1	20	35.	3.7	18.
3,3'-Dichlorobenzidine	UUJ-25	18.	ug/Kgdrywt	1	20	35.	5.2	18.
Benzo (a) anthracene		240	ug/Kgdrywt	1	20	35.	3.3	18.
Chrysene		170	ug/Kgdrywt	1	20	35.	3.0	18.
bis(2-Ethylhexyl)phthalate ~~K-BSH~~	B-MBL	230	ug/Kgdrywt	1	100	180	56.	88.
Di-n-octylphthalate	U	88.	ug/Kgdrywt	1	100	180	81.	88.
Benzo (b) Fluoranthene		340	ug/Kgdrywt	1	20	35.	4.2	18.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 55.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		74.	ug/Kgdrywt	1	20	35.	5.4	18.
Benzo(a)pyrene		190	ug/Kgdrywt	1	20	35.	5.8	18.
Indeno (1,2,3-cd) pyrene		110	ug/Kgdrywt	1	20	35.	3.3	18.
Dibenzo (a,h) anthracene	J	34.	ug/Kgdrywt	1	20	35.	3.2	18.
Benzo(g,h,i)perylene		130	ug/Kgdrywt	1	20	35.	3.5	18.
2-Methylnaphthalene-D10		47.4	%					
Fluorene-D10		46.0	%					
Pyrene-D10		101.	%					
2,4-Dibromophenol		60.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 32.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	140	ug/Kgdrywt	1	100	280	17.	140
bis(2-Chloroethyl)ether	U	28.	ug/Kgdrywt	1	20	57.	4.8	28.
2-Chlorophenol	U	140	ug/Kgdrywt	1	100	280	15.	140
2-Methylphenol	U	140	ug/Kgdrywt	1	100	280	24.	140
3&4-Methylphenol	J	140	ug/Kgdrywt	1	100	280	28.	140
n-Nitroso-di-n-propylamine	U	28.	ug/Kgdrywt	1	20	57.	5.4	28.
Nitrobenzene	U	28.	ug/Kgdrywt	1	20	57.	14.	28.
2,4-Dimethylphenol	UJL-BSL	28.	ug/Kgdrywt	1	20	57.	9.1	28.
2,4-Dichlorophenol	UJ-2S	28.	ug/Kgdrywt	1	20	57.	6.2	28.
Naphthalene	U	28.	ug/Kgdrywt	1	20	57.	7.4	28.
Hexachlorobutadiene	UJ-2S	28.	ug/Kgdrywt	1	20	57.	6.5	28.
2-Methylnaphthalene	UJL-BSL	28.	ug/Kgdrywt	1	20	57.	6.2	28.
Hexachlorocyclopentadiene	U	28.	ug/Kgdrywt	1	20	57.	4.3	28.
2,4,6-Trichlorophenol	U	140	ug/Kgdrywt	1	100	280	9.4	140
2,4,5-Trichlorophenol	U	140	ug/Kgdrywt	1	100	280	7.1	140
Dimethyl phthalate	J	5.5	ug/Kgdrywt	1	20	57.	4.0	28.
Acenaphthylene	J	23.	ug/Kgdrywt	1	20	57.	3.4	28.
Acenaphthene	J	5.5	ug/Kgdrywt	1	20	57.	4.3	28.
4-Nitrophenol	UJ-2S	140	ug/Kgdrywt	1	100	280	23.	140
2,4-Dinitrotoluene	U	28.	ug/Kgdrywt	1	20	57.	20.	28.
Fluorene	U	28.	ug/Kgdrywt	1	20	57.	9.1	28.
4,6-Dinitro-2-methylphenol	U	430	ug/Kgdrywt	1	310	880	280	430
Hexachlorobenzene	U	28.	ug/Kgdrywt	1	20	57.	5.1	28.
Atrazine	U	28.	ug/Kgdrywt	1	20	57.	2.8	28.
Pentachlorophenol	UJL-BSL	140	ug/Kgdrywt	1	100	280	40.	140
Phenanthrene		110	ug/Kgdrywt	1	20	57.	5.1	28.
Anthracene	J	30.	ug/Kgdrywt	1	20	57.	3.4	28.
Fluoranthene		560	ug/Kgdrywt	1	20	57.	5.1	28.
Pyrene		600	ug/Kgdrywt	1	20	57.	6.0	28.
3,3'-Dichlorobenzidine	UJ-2S	28.	ug/Kgdrywt	1	20	57.	8.5	28.
Benzo (a) anthracene		420	ug/Kgdrywt	1	20	57.	5.4	28.
Chrysene		330	ug/Kgdrywt	1	20	57.	4.8	28.
bis(2-Ethylhexyl)phthalate ~~J-BSH~~	J B-MBL	220	ug/Kgdrywt	1	100	280	91.	140
Di-n-octylphthalate	U	140	ug/Kgdrywt	1	100	280	130	140
Benzo (b) Fluoranthene		700	ug/Kgdrywt	1	20	57.	6.8	28.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 32.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		180	ug/Kgdrywt	1	20	57.	8.8	28.
Benzo(a)pyrene		370	ug/Kgdrywt	1	20	57.	9.4	28.
Indeno (1,2,3-cd) pyrene		210	ug/Kgdrywt	1	20	57.	5.4	28.
Dibenzo (a,h) anthracene		88.	ug/Kgdrywt	1	20	57.	5.1	28.
Benzo(g,h,i)perylene		230	ug/Kgdrywt	1	20	57.	5.7	28.
2-Methylnaphthalene-D10		47.0	%					
Fluorene-D10		41.7	%					
Pyrene-D10		88.4	%					
2,4-Dibromophenol		53.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	59.	ug/Kgdrywt	1	100	120	7.2	59.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
2-Chlorophenol	U	59.	ug/Kgdrywt	1	100	120	6.2	59.
2-Methylphenol	U	59.	ug/Kgdrywt	1	100	120	10.	59.
3&4-Methylphenol	U	59.	ug/Kgdrywt	1	100	120	12.	59.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.6	12.
2,4-Dimethylphenol	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
2,4-Dichlorophenol	UUJ-2S	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	24.	3.1	12.
Hexachlorobutadiene	UUJ-2S	12.	ug/Kgdrywt	1	20	24.	2.7	12.
2-Methylnaphthalene	UUL-BL	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.9	59.
2,4,5-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	2.9	59.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	24.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	J	2.8	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	UUJ-2S	59.	ug/Kgdrywt	1	100	120	9.4	59.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.2	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	24.	3.8	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	360	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	UUL-BSL	59.	ug/Kgdrywt	1	100	120	16.	59.
Phenanthrene	J	19.	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	J	3.9	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene		42.	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene		44.	ug/Kgdrywt	1	20	24.	2.5	12.
3,3'-Dichlorobenzidine	UUJ-2S	12.	ug/Kgdrywt	1	20	24.	3.5	12.
Benzo (a) anthracene		31.	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene	J	15.	ug/Kgdrywt	1	20	24.	2.0	12.
bis(2-Ethylhexyl)phthalate	~~K-BSH~~ J B-MBL	59.	ug/Kgdrywt	1	100	120	38.	59.
Di-n-octylphthalate	U	59.	ug/Kgdrywt	1	100	120	54.	59.
Benzo (b) Fluoranthene		37.	ug/Kgdrywt	1	20	24.	2.8	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	10.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo(a)pyrene		26.	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno (1,2,3-cd) pyrene	J	17.	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo (a,h) anthracene	J	9.5	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene	J	15.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		47.3	%					
Fluorene-D10		53.8	%					
Pyrene-D10		101.	%					
2,4-Dibromophenol		70.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: SS6DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 75.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	J	8.6	ug/Kgdrywt	1	100	130	8.0	66.
bis(2-Chloroethyl)ether	U	13.	ug/Kgdrywt	1	20	26.	2.2	13.
2-Chlorophenol	U	66.	ug/Kgdrywt	1	100	130	7.0	66.
2-Methylphenol	U	66.	ug/Kgdrywt	1	100	130	11.	66.
3&4-Methylphenol	U	66.	ug/Kgdrywt	1	100	130	13.	66.
n-Nitroso-di-n-propylamine	U	13.	ug/Kgdrywt	1	20	26.	2.5	13.
Nitrobenzene	U	13.	ug/Kgdrywt	1	20	26.	6.3	13.
2,4-Dimethylphenol	U UL-BSL	13.	ug/Kgdrywt	1	20	26.	4.2	13.
2,4-Dichlorophenol	J-2S	8.3	ug/Kgdrywt	1	20	26.	2.9	13.
Naphthalene	U	13.	ug/Kgdrywt	1	20	26.	3.4	13.
Hexachlorobutadiene	UJ-2S	13.	ug/Kgdrywt	1	20	26.	3.0	13.
2-Methylnaphthalene	U UL-BSL	13.	ug/Kgdrywt	1	20	26.	2.9	13.
Hexachlorocyclopentadiene	J	5.3	ug/Kgdrywt	1	20	26.	2.0	13.
2,4,6-Trichlorophenol	J	7.9	ug/Kgdrywt	1	100	130	4.3	66.
2,4,5-Trichlorophenol	J	13.	ug/Kgdrywt	1	100	130	3.3	66.
Dimethyl phthalate	J	5.4	ug/Kgdrywt	1	20	26.	1.8	13.
Acenaphthylene	J	6.2	ug/Kgdrywt	1	20	26.	1.6	13.
Acenaphthene	J	3.6	ug/Kgdrywt	1	20	26.	2.0	13.
4-Nitrophenol	UJ-2S	66.	ug/Kgdrywt	1	100	130	10.	66.
2,4-Dinitrotoluene	U	13.	ug/Kgdrywt	1	20	26.	9.2	13.
Fluorene	U	13.	ug/Kgdrywt	1	20	26.	4.2	13.
4,6-Dinitro-2-methylphenol	U	200	ug/Kgdrywt	1	310	410	130	200
Hexachlorobenzene	J	3.5	ug/Kgdrywt	1	20	26.	2.4	13.
Atrazine	J	4.8	ug/Kgdrywt	1	20	26.	1.3	13.
Pentachlorophenol	U UL-BSL	66.	ug/Kgdrywt	1	100	130	18.	66.
Phenanthrene	J	6.9	ug/Kgdrywt	1	20	26.	2.4	13.
Anthracene	J	4.7	ug/Kgdrywt	1	20	26.	1.6	13.
Fluoranthene	J	6.5	ug/Kgdrywt	1	20	26.	2.4	13.
Pyrene	J	8.5	ug/Kgdrywt	1	20	26.	2.8	13.
3,3'-Dichlorobenzidine	U UJ-2S	13.	ug/Kgdrywt	1	20	26.	4.0	13.
Benzo (a) anthracene	J	7.5	ug/Kgdrywt	1	20	26.	2.5	13.
Chrysene	U	13.	ug/Kgdrywt	1	20	26.	2.2	13.
bis(2-Ethylhexyl)phthalate	K-BSH B-MBL	140	ug/Kgdrywt	1	100	130	42.	66.
Di-n-octylphthalate	J	96.	ug/Kgdrywt	1	100	130	61.	66.
Benzo (b) Fluoranthene	J	6.0	ug/Kgdrywt	1	20	26.	3.2	13.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 75.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	4.4	ug/Kgdrywt	1	20	26.	4.1	13.
Benzo(a)pyrene	J	12.	ug/Kgdrywt	1	20	26.	4.3	13.
Indeno (1,2,3-cd) pyrene	J	10.	ug/Kgdrywt	1	20	26.	2.5	13.
Dibenzo (a,h) anthracene	J	11.	ug/Kgdrywt	1	20	26.	2.4	13.
Benzo(g,h,i)perylene	J	5.3	ug/Kgdrywt	1	20	26.	2.6	13.
2-Methylnaphthalene-D10		51.7	%					
Fluorene-D10		44.9	%					
Pyrene-D10		83.6	%					
2,4-Dibromophenol		54.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82953

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.11	ug/L	1	.2	0.21	0.044	0.11
2,2'-Oxybis(1-chloropropane)	U	0.16	ug/L	1	.2	0.21	0.13	0.16
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.21	0.076	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.21	0.078	0.11
Nitrobenzene	EXCLUDE-RE ~~U~~	0.16	ug/L	1	.2	0.21	0.14	0.16
Naphthalene	U	0.11	ug/L	1	.2	0.21	0.068	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.21	0.092	0.11
2,4,6-Trichlorophenol	U	0.53	ug/L	1	1	1.1	0.13	0.53
2-Nitroaniline	U	0.16	ug/L	1	.2	0.21	0.13	0.16
2,6-Dinitrotoluene	U	0.11	ug/L	1	.2	0.21	0.074	0.11
2,4-Dinitrophenol	UJ-ICB	0.53	ug/L	1	1	1.1	0.26	0.53
4-Nitrophenol	U	0.53	ug/L	1	1	1.1	0.24	0.53
Dibenzofuran	U	0.11	ug/L	1	.2	0.21	0.072	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.21	0.037	0.11
4-Nitroaniline	UJ-2S	0.11	ug/L	1	.2	0.21	0.069	0.11
4,6-Dinitro-2-methylphenol	U	0.80	ug/L	1	1	1.1	0.53	0.80
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.21	0.058	0.11
Atrazine	U	0.11	ug/L	1	.2	0.21	0.040	0.11
Pentachlorophenol	U	0.53	ug/L	1	1	1.1	0.35	0.53
3,3'-Dichlorobenzidine	UJ-2S	0.11	ug/L	1	.2	0.21	0.060	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.21	0.049	0.11
Chrysene	U	0.11	ug/L	1	.2	0.21	0.038	0.11
bis(2-Ethylhexyl)phthalate	JB-MBL	0.66	ug/L	1	1	1.1	0.53	0.53
Benzo(b)fluoranthene	U	0.11	ug/L	1	.2	0.21	0.095	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.21	0.052	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.21	0.070	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.21	0.055	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.21	0.074	0.11
2-Methylnaphthalene-D10		63.7	%					
Fluorene-D10		60.8	%					
pyrene-d10		89.0	%					
2,4-Dibromophenol		58.9	%					

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Cert No EB7604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82953

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U	0.11	ug/L	1	.2	0.22	0.046	0.11
2,2'-Oxybis(1-chloropropane)	U	0.17	ug/L	1	.2	0.22	0.13	0.17
n-Nitroso-di-n-propylamine	U	0.11	ug/L	1	.2	0.22	0.080	0.11
Hexachloroethane	U	0.11	ug/L	1	.2	0.22	0.081	0.11
Nitrobenzene	EXCLUDE-RE U	0.17	ug/L	1	.2	0.22	0.14	0.17
Naphthalene	U	0.11	ug/L	1	.2	0.22	0.071	0.11
Hexachlorobutadiene	U	0.11	ug/L	1	.2	0.22	0.097	0.11
2,4,6-Trichlorophenol	U	0.56	ug/L	1	1	1.1	0.13	0.56
2-Nitroaniline	U	0.17	ug/L	1	.2	0.22	0.13	0.17
2,6-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
2,4-Dinitrophenol	UJ-LCS-108	0.56	ug/L	1	1	1.1	0.27	0.56
4-Nitrophenol	U	0.56	ug/L	1	1	1.1	0.26	0.56
Dibenzofuran	U	0.11	ug/L	1	.2	0.22	0.076	0.11
2,4-Dinitrotoluene	U	0.11	ug/L	1	.2	0.22	0.039	0.11
4-Nitroaniline	U-LCS-25	0.11	ug/L	1	.2	0.22	0.072	0.11
4,6-Dinitro-2-methylphenol	U	0.83	ug/L	1	1	1.1	0.56	0.83
Hexachlorobenzene	U	0.11	ug/L	1	.2	0.22	0.061	0.11
Atrazine	U	0.11	ug/L	1	.2	0.22	0.042	0.11
Pentachlorophenol	U	0.56	ug/L	1	1	1.1	0.37	0.56
3,3'-Dichlorobenzidine	U-LCS-25	0.11	ug/L	1	.2	0.22	0.062	0.11
Benzo(a)anthracene	U	0.11	ug/L	1	.2	0.22	0.051	0.11
Chrysene	U	0.11	ug/L	1	.2	0.22	0.040	0.11
bis(2-Ethylhexyl)phthalate	U	0.56	ug/L	1	1	1.1	0.56	0.56
Benzo(b)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.099	0.11
Benzo(k)fluoranthene	U	0.11	ug/L	1	.2	0.22	0.054	0.11
Benzo(a)pyrene	U	0.11	ug/L	1	.2	0.22	0.073	0.11
Indeno(1,2,3-cd)pyrene	U	0.11	ug/L	1	.2	0.22	0.058	0.11
Dibenzo(a,h)anthracene	U	0.11	ug/L	1	.2	0.22	0.078	0.11
2-Methylnaphthalene-D10		80.6	%					
Fluorene-D10		59.4	%					
pyrene-d10		93.3	%					
2,4-Dibromophenol		57.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 58.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	77.	ug/Kgdrywt	1	100	150	9.4	77.
bis(2-Chloroethyl)ether	U	15.	ug/Kgdrywt	1	20	31.	2.6	15.
2-Chlorophenol	U	77.	ug/Kgdrywt	1	100	150	8.2	77.
2-Methylphenol	U	77.	ug/Kgdrywt	1	100	150	13.	77.
3&4-Methylphenol	U	77.	ug/Kgdrywt	1	100	150	15.	77.
n-Nitroso-di-n-propylamine	U	15.	ug/Kgdrywt	1	20	31.	2.9	15.
Nitrobenzene	U	15.	ug/Kgdrywt	1	20	31.	7.4	15.
2,4-Dimethylphenol	UJL-BSL	15.	ug/Kgdrywt	1	20	31.	4.9	15.
2,4-Dichlorophenol	UJ-2S	15.	ug/Kgdrywt	1	20	31.	3.4	15.
Naphthalene	U	15.	ug/Kgdrywt	1	20	31.	4.0	15.
Hexachlorobutadiene	UJ-2S	15.	ug/Kgdrywt	1	20	31.	3.5	15.
2-Methylnaphthalene	UJL-BSL	15.	ug/Kgdrywt	1	20	31.	3.4	15.
Hexachlorocyclopentadiene	U	15.	ug/Kgdrywt	1	20	31.	2.3	15.
2,4,6-Trichlorophenol	U	77.	ug/Kgdrywt	1	100	150	5.1	77.
2,4,5-Trichlorophenol	U	77.	ug/Kgdrywt	1	100	150	3.8	77.
Dimethyl phthalate	J	3.1	ug/Kgdrywt	1	20	31.	2.2	15.
Acenaphthylene	J	4.1	ug/Kgdrywt	1	20	31.	1.8	15.
Acenaphthene	J	3.1	ug/Kgdrywt	1	20	31.	2.3	15.
4-Nitrophenol	UJ-2S	77.	ug/Kgdrywt	1	100	150	12.	77.
2,4-Dinitrotoluene	U	15.	ug/Kgdrywt	1	20	31.	11.	15.
Fluorene	U	15.	ug/Kgdrywt	1	20	31.	4.9	15.
4,6-Dinitro-2-methylphenol	U	230	ug/Kgdrywt	1	310	480	150	230
Hexachlorobenzene	U	15.	ug/Kgdrywt	1	20	31.	2.8	15.
Atrazine	U	15.	ug/Kgdrywt	1	20	31.	1.5	15.
Pentachlorophenol	UJL-BSL	77.	ug/Kgdrywt	1	100	150	22.	77.
Phenanthrene		96.	ug/Kgdrywt	1	20	31.	2.8	15.
Anthracene	J	21.	ug/Kgdrywt	1	20	31.	1.8	15.
Fluoranthene		370	ug/Kgdrywt	1	20	31.	2.8	15.
Pyrene		350	ug/Kgdrywt	1	20	31.	3.2	15.
3,3'-Dichlorobenzidine	UJ-2S	15.	ug/Kgdrywt	1	20	31.	4.6	15.
Benzo (a) anthracene		220	ug/Kgdrywt	1	20	31.	2.9	15.
Chrysene		130	ug/Kgdrywt	1	20	31.	2.6	15.
bis(2-Ethylhexyl)phthalate	R-BSH-J-MBL	82.	ug/Kgdrywt	1	100	150	49.	77.
Di-n-octylphthalate	U	77.	ug/Kgdrywt	1	100	150	71.	77.
Benzo (b) Fluoranthene		180	ug/Kgdrywt	1	20	31.	3.7	15.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 58.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		46.	ug/Kgdrywt	1	20	31.	4.8	15.
Benzo(a)pyrene		94.	ug/Kgdrywt	1	20	31.	5.1	15.
Indeno (1,2,3-cd) pyrene		47.	ug/Kgdrywt	1	20	31.	2.9	15.
Dibenzo (a,h) anthracene	J	23.	ug/Kgdrywt	1	20	31.	2.8	15.
Benzo(g,h,i)perylene		45.	ug/Kgdrywt	1	20	31.	3.1	15.
2-Methylnaphthalene-D10		43.7	%					
Fluorene-D10		53.4	%					
Pyrene-D10		87.9	%					
2,4-Dibromophenol		64.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: 1S66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	57.	ug/Kgdrywt	1	100	110	7.0	57.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
2-Chlorophenol	U	57.	ug/Kgdrywt	1	100	110	6.0	57.
2-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	9.7	57.
3&4-Methylphenol	J	14.	ug/Kgdrywt	1	100	110	11.	57.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	23.	5.5	11.
2,4-Dimethylphenol	UJL-BSL	11.	ug/Kgdrywt	1	20	23.	3.6	11.
2,4-Dichlorophenol	UJ-2S	11.	ug/Kgdrywt	1	20	23.	2.5	11.
Naphthalene	E Exclude-LL	1100	ug/Kgdrywt	1	20	23.	3.0	11.
Hexachlorobutadiene	U-UJ-2S	11.	ug/Kgdrywt	1	20	23.	2.6	11.
2-Methylnaphthalene	L-BSL	100	ug/Kgdrywt	1	20	23.	2.5	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	23.	1.7	11.
2,4,6-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	3.8	57.
2,4,5-Trichlorophenol	U	57.	ug/Kgdrywt	1	100	110	2.8	57.
Dimethyl phthalate	U	11.	ug/Kgdrywt	1	20	23.	1.6	11.
Acenaphthylene	J	3.9	ug/Kgdrywt	1	20	23.	1.4	11.
Acenaphthene	J	18.	ug/Kgdrywt	1	20	23.	1.7	11.
4-Nitrophenol	UUJ-2S	57.	ug/Kgdrywt	1	100	110	9.1	57.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	23.	8.0	11.
Fluorene	J	9.2	ug/Kgdrywt	1	20	23.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	23.	1.1	11.
Pentachlorophenol	UJL-BSL	57.	ug/Kgdrywt	1	100	110	16.	57.
Phenanthrene		27.	ug/Kgdrywt	1	20	23.	2.0	11.
Anthracene	J	5.0	ug/Kgdrywt	1	20	23.	1.4	11.
Fluoranthene		59.	ug/Kgdrywt	1	20	23.	2.0	11.
Pyrene		54.	ug/Kgdrywt	1	20	23.	2.4	11.
3,3'-Dichlorobenzidine	UUJ-2S	11.	ug/Kgdrywt	1	20	23.	3.4	11.
Benzo (a) anthracene		30.	ug/Kgdrywt	1	20	23.	2.2	11.
Chrysene	J	23.	ug/Kgdrywt	1	20	23.	1.9	11.
bis(2-Ethylhexyl)phthalate	~~R-BSH~~ B-MBL	190	ug/Kgdrywt	1	100	110	36.	57.
Di-n-octylphthalate	U	57.	ug/Kgdrywt	1	100	110	52.	57.
Benzo (b) Fluoranthene		45.	ug/Kgdrywt	1	20	23.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 20-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	13.	ug/Kgdrywt	1	20	23.	3.5	11.
Benzo(a)pyrene		28.	ug/Kgdrywt	1	20	23.	3.8	11.
Indeno (1,2,3-cd) pyrene	J	21.	ug/Kgdrywt	1	20	23.	2.2	11.
Dibenzo (a,h) anthracene	J	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Benzo(g,h,i)perylene	J	20.	ug/Kgdrywt	1	20	23.	2.3	11.
2-Methylnaphthalene-D10		58.3	%					
Fluorene-D10		35.5	%					
Pyrene-D10		75.8	%					
2,4-Dibromophenol		48.5	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9DL
Client ID: IS66DP410607 (SB)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-TL	400	ug/Kgdrywt	7	100	800	49.	400
bis(2-Chloroethyl)ether	U	80.	ug/Kgdrywt	7	20	160	14.	80.
2-Chlorophenol	U	400	ug/Kgdrywt	7	100	800	42.	400
2-Methylphenol	U	400	ug/Kgdrywt	7	100	800	68.	400
3&4-Methylphenol	U	400	ug/Kgdrywt	7	100	800	79.	400
n-Nitroso-di-n-propylamine	U	80.	ug/Kgdrywt	7	20	160	15.	80.
Nitrobenzene	U	80.	ug/Kgdrywt	7	20	160	38.	80.
2,4-Dimethylphenol	U	80.	ug/Kgdrywt	7	20	160	26.	80.
2,4-Dichlorophenol	U	80.	ug/Kgdrywt	7	20	160	18.	80.
Naphthalene		1300	ug/Kgdrywt	7	20	160	21.	80.
Hexachlorobutadiene	U Exclude-DL	80.	ug/Kgdrywt	7	20	160	18.	80.
2-Methylnaphthalene	J	75.	ug/Kgdrywt	7	20	160	18.	80.
Hexachlorocyclopentadiene	U	80.	ug/Kgdrywt	7	20	160	12.	80.
2,4,6-Trichlorophenol	U	400	ug/Kgdrywt	7	100	800	26.	400
2,4,5-Trichlorophenol	U	400	ug/Kgdrywt	7	100	800	20.	400
Dimethyl phthalate	U	80.	ug/Kgdrywt	7	20	160	11.	80.
Acenaphthylene	U	80.	ug/Kgdrywt	7	20	160	9.6	80.
Acenaphthene	J	19.	ug/Kgdrywt	7	20	160	12.	80.
4-Nitrophenol	U	400	ug/Kgdrywt	7	100	800	64.	400
2,4-Dinitrotoluene	U	80.	ug/Kgdrywt	7	20	160	56.	80.
Fluorene	U	80.	ug/Kgdrywt	7	20	160	26.	80.
4,6-Dinitro-2-methylphenol	U	1200	ug/Kgdrywt	7	310	2500	800	1200
Hexachlorobenzene	U	80.	ug/Kgdrywt	7	20	160	14.	80.
Atrazine	U	80.	ug/Kgdrywt	7	20	160	8.0	80.
Pentachlorophenol	U	400	ug/Kgdrywt	7	100	800	110	400
Phenanthrene	J	28.	ug/Kgdrywt	7	20	160	14.	80.
Anthracene	U	80.	ug/Kgdrywt	7	20	160	9.6	80.
Fluoranthene	J	68.	ug/Kgdrywt	7	20	160	14.	80.
Pyrene	J	51.	ug/Kgdrywt	7	20	160	17.	80.
3,3'-Dichlorobenzidine	U	80.	ug/Kgdrywt	7	20	160	24.	80.
Benzo (a) anthracene	J	59.	ug/Kgdrywt	7	20	160	15.	80.
Chrysene	J	30.	ug/Kgdrywt	7	20	160	14.	80.
bis(2-Ethylhexyl)phthalate	U	400	ug/Kgdrywt	7	100	800	260	400
Di-n-octylphthalate	U	400	ug/Kgdrywt	7	100	800	370	400
Benzo (b) Fluoranthene	J	73.	ug/Kgdrywt	7	20	160	19.	80.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9DL
Client ID: 1S66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude D	80.	ug/Kgdrywt	7	20	160	25.	80.
Benzo(a)pyrene	J	29.	ug/Kgdrywt	7	20	160	26.	80.
Indeno (1,2,3-cd) pyrene	U	80.	ug/Kgdrywt	7	20	160	15.	80.
Dibenzo (a,h) anthracene	U	80.	ug/Kgdrywt	7	20	160	14.	80.
Benzo(g,h,i)perylene	U	80.	ug/Kgdrywt	7	20	160	16.	80.
2-Methylnaphthalene-D10		87.4	%					
Fluorene-D10		41.7	%					
Pyrene-D10		72.1	%					
2,4-Dibromophenol		45.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1RA
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	55.	ug/Kgdrywt	1	100	110	6.7	55.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	55.	ug/Kgdrywt	1	100	110	5.8	55.
2-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	9.4	55.
3&4-Methylphenol	U	55.	ug/Kgdrywt	1	100	110	11.	55.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.3	11.
2,4-Dimethylphenol	UJL-BSL	11.	ug/Kgdrywt	1	20	22.	3.5	11.
2,4-Dichlorophenol	UJS-CCL	11.	ug/Kgdrywt	1	20	22.	2.4	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.5	11.
2-Methylnaphthalene	JL-BSL	3.9	ug/Kgdrywt	1	20	22.	2.4	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.6	11.
2,4,6-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	3.6	55.
2,4,5-Trichlorophenol	U	55.	ug/Kgdrywt	1	100	110	2.8	55.
Dimethyl phthalate	J	2.4	ug/Kgdrywt	1	20	22.	1.5	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene		23.	ug/Kgdrywt	1	20	22.	1.6	11.
4-Nitrophenol	UJS-ICB	55.	ug/Kgdrywt	1	100	110	8.8	55.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.7	11.
Fluorene	J	16.	ug/Kgdrywt	1	20	22.	3.5	11.
4,6-Dinitro-2-methylphenol	U	160	ug/Kgdrywt	1	310	340	110	160
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	UJL-BSL	55.	ug/Kgdrywt	1	100	110	15.	55.
Phenanthrene		210	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene		37.	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene		300	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene		220	ug/Kgdrywt	1	20	22.	2.3	11.
3,3'-Dichlorobenzidine	UJS-2S	11.	ug/Kgdrywt	1	20	22.	3.3	11.
Benzo (a) anthracene		140	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene		92.	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate	~~B-BSH~~ J-B-MBL	83.	ug/Kgdrywt	1	100	110	35.	55.
Di-n-octylphthalate	U	55.	ug/Kgdrywt	1	100	110	51.	55.
Benzo (b) Fluoranthene		160	ug/Kgdrywt	1	20	22.	2.6	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1RA
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		52.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo(a)pyrene		120	ug/Kgdrywt	1	20	22.	3.6	11.
Indeno (1,2,3-cd) pyrene		94.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene		32.	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene		96.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		61.3	%					
Fluorene-D10		46.9	%					
Pyrene-D10		123.	%					
2,4-Dibromophenol		63.8	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2RA
Client ID: 1S66DP231516
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	61.	ug/Kgdrywt	1	100	120	7.4	61.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
2-Chlorophenol	U	61.	ug/Kgdrywt	1	100	120	6.4	61.
2-Methylphenol	U	61.	ug/Kgdrywt	1	100	120	10.	61.
3&4-Methylphenol	U	61.	ug/Kgdrywt	1	100	120	12.	61.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.3	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.8	12.
2,4-Dimethylphenol	U ULL-BSL	12.	ug/Kgdrywt	1	20	24.	3.9	12.
2,4-Dichlorophenol	J- JCCL	14.	ug/Kgdrywt	1	20	24.	2.7	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	24.	3.2	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.8	12.
2-Methylnaphthalene	U ULL-BSL	12.	ug/Kgdrywt	1	20	24.	2.7	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	J	16.	ug/Kgdrywt	1	100	120	4.0	61.
2,4,5-Trichlorophenol	U	61.	ug/Kgdrywt	1	100	120	3.0	61.
Dimethyl phthalate	J	2.9	ug/Kgdrywt	1	20	24.	1.7	12.
Acenaphthylene	J	4.0	ug/Kgdrywt	1	20	24.	1.5	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	U ULJ-ICB	61.	ug/Kgdrywt	1	100	120	9.7	61.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.5	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	24.	3.9	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	380	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Atrazine	J	3.6	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	U ULL-BSL	61.	ug/Kgdrywt	1	100	120	17.	61.
Phenanthrene	J	3.1	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	J	2.0	ug/Kgdrywt	1	20	24.	1.5	12.
Fluoranthene	J	3.9	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	J	4.6	ug/Kgdrywt	1	20	24.	2.6	12.
3,3'-Dichlorobenzidine	U ULJ-2S	12.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo (a) anthracene	J	8.5	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	J	3.9	ug/Kgdrywt	1	20	24.	2.1	12.
bis(2-Ethylhexyl)phthalate	J- BSH	150	ug/Kgdrywt	1	100	120	39.	61.
Di-n-octylphthalate	U	61.	ug/Kgdrywt	1	100	120	56.	61.
Benzo (b) Fluoranthene	J	8.1	ug/Kgdrywt	1	20	24.	2.9	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2RA
Client ID: IS66DP231516
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 81.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	J	4.3	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		40.7	%					
Fluorene-D10		35.1	%					
Pyrene-D10		68.7	%					
2,4-Dibromophenol		41.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3RA
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	56.	ug/Kgdrywt	1	100	110	6.8	56.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	22.	1.9	11.
2-Chlorophenol	U	56.	ug/Kgdrywt	1	100	110	5.9	56.
2-Methylphenol	U	56.	ug/Kgdrywt	1	100	110	9.5	56.
3&4-Methylphenol	U	56.	ug/Kgdrywt	1	100	110	11.	56.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	22.	2.1	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	22.	5.4	11.
2,4-Dimethylphenol	U-LL-BSL	11.	ug/Kgdrywt	1	20	22.	3.6	11.
2,4-Dichlorophenol	U-LL-CCL	11.	ug/Kgdrywt	1	20	22.	2.5	11.
Naphthalene	U	11.	ug/Kgdrywt	1	20	22.	2.9	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	22.	2.6	11.
2-Methylnaphthalene	J-BSL	3.2	ug/Kgdrywt	1	20	22.	2.5	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	22.	1.7	11.
2,4,6-Trichlorophenol	J	13.	ug/Kgdrywt	1	100	110	3.7	56.
2,4,5-Trichlorophenol	U	56.	ug/Kgdrywt	1	100	110	2.8	56.
Dimethyl phthalate	J	2.3	ug/Kgdrywt	1	20	22.	1.6	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	22.	1.3	11.
Acenaphthene	J	2.9	ug/Kgdrywt	1	20	22.	1.7	11.
4-Nitrophenol	U-LL-ICB	56.	ug/Kgdrywt	1	100	110	9.0	56.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	22.	7.8	11.
Fluorene	U	11.	ug/Kgdrywt	1	20	22.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	22.	2.0	11.
Atrazine	U	11.	ug/Kgdrywt	1	20	22.	1.1	11.
Pentachlorophenol	U-LL-BSL	56.	ug/Kgdrywt	1	100	110	16.	56.
Phenanthrene	J-FD	23.	ug/Kgdrywt	1	20	22.	2.0	11.
Anthracene	J	3.5	ug/Kgdrywt	1	20	22.	1.3	11.
Fluoranthene	J-FD	43.	ug/Kgdrywt	1	20	22.	2.0	11.
Pyrene	J-FD	42.	ug/Kgdrywt	1	20	22.	2.4	11.
3,3'-Dichlorobenzidine	U-LL-2S	11.	ug/Kgdrywt	1	20	22.	3.4	11.
Benzo (a) anthracene		26.	ug/Kgdrywt	1	20	22.	2.1	11.
Chrysene	J	16.	ug/Kgdrywt	1	20	22.	1.9	11.
bis(2-Ethylhexyl)phthalate K-BSH	J	58.	ug/Kgdrywt	1	100	110	36.	56.
Di-n-octylphthalate	U	56.	ug/Kgdrywt	1	100	110	52.	56.
Benzo (b) Fluoranthene	J-FD	32.	ug/Kgdrywt	1	20	22.	2.7	11.

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3RA
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	12.	ug/Kgdrywt	1	20	22.	3.5	11.
Benzo(a)pyrene	J J-FD	22.	ug/Kgdrywt	1	20	22.	3.7	11.
Indeno (1,2,3-cd) pyrene	J	16.	ug/Kgdrywt	1	20	22.	2.1	11.
Dibenzo (a,h) anthracene	J	4.9	ug/Kgdrywt	1	20	22.	2.0	11.
Benzo(g,h,i)perylene	J	19.	ug/Kgdrywt	1	20	22.	2.2	11.
2-Methylnaphthalene-D10		59.4	%					
Fluorene-D10		49.5	%					
Pyrene-D10		87.4	%					
2,4-Dibromophenol		61.8	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RA
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	58.	ug/Kgdrywt	1	100	120	7.0	58.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	23.	2.0	12.
2-Chlorophenol	U	58.	ug/Kgdrywt	1	100	120	6.1	58.
2-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	9.8	58.
3&4-Methylphenol	U	58.	ug/Kgdrywt	1	100	120	11.	58.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	23.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	23.	5.5	12.
2,4-Dimethylphenol	UJL-BSL	12.	ug/Kgdrywt	1	20	23.	3.7	12.
2,4-Dichlorophenol	UJL-CCL	12.	ug/Kgdrywt	1	20	23.	2.5	12.
Naphthalene	J-B-FBL	5.8	ug/Kgdrywt	1	20	23.	3.0	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	23.	2.6	12.
2-Methylnaphthalene	J-L-BSL	3.9	ug/Kgdrywt	1	20	23.	2.5	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	23.	1.7	12.
2,4,6-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	3.8	58.
2,4,5-Trichlorophenol	U	58.	ug/Kgdrywt	1	100	120	2.9	58.
Dimethyl phthalate	J	2.0	ug/Kgdrywt	1	20	23.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Acenaphthene	J	13.	ug/Kgdrywt	1	20	23.	1.7	12.
4-Nitrophenol	UJ-ICB	58.	ug/Kgdrywt	1	100	120	9.2	58.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	23.	8.0	12.
Fluorene	J	7.6	ug/Kgdrywt	1	20	23.	3.7	12.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	360	120	170
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	23.	2.1	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	23.	1.2	12.
Pentachlorophenol	UJL-BSL	58.	ug/Kgdrywt	1	100	120	16.	58.
Phenanthrene	J-FD	71.	ug/Kgdrywt	1	20	23.	2.1	12.
Anthracene	J	12.	ug/Kgdrywt	1	20	23.	1.4	12.
Fluoranthene	J-FD	100	ug/Kgdrywt	1	20	23.	2.1	12.
Pyrene	J-FD	86.	ug/Kgdrywt	1	20	23.	2.4	12.
3,3'-Dichlorobenzidine	UJ-2S	12.	ug/Kgdrywt	1	20	23.	3.4	12.
Benzo (a) anthracene		53.	ug/Kgdrywt	1	20	23.	2.2	12.
Chrysene		34.	ug/Kgdrywt	1	20	23.	2.0	12.
bis(2-Ethylhexyl)phthalate CBSK	J	46.	ug/Kgdrywt	1	100	120	37.	58.
Di-n-octylphthalate	U	58.	ug/Kgdrywt	1	100	120	53.	58.
Benzo (b) Fluoranthene	J-FD	61.	ug/Kgdrywt	1	20	23.	2.8	12.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RA
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 85.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	18.	ug/Kgdrywt	1	20	23.	3.6	12.
Benzo(a)pyrene	J-FD	45.	ug/Kgdrywt	1	20	23.	3.8	12.
Indeno (1,2,3-cd) pyrene		29.	ug/Kgdrywt	1	20	23.	2.2	12.
Dibenzo (a,h) anthracene	J	9.1	ug/Kgdrywt	1	20	23.	2.1	12.
Benzo(g,h,i)perylene		31.	ug/Kgdrywt	1	20	23.	2.3	12.
2-Methylnaphthalene-D10		53.4	%					
Fluorene-D10		53.1	%					
Pyrene-D10		74.5	%					
2,4-Dibromophenol		65.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5RA
Client ID: IS66DP221112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 78.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	63.	ug/Kgdrywt	1	100	120	7.7	63.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	25.	2.1	12.
2-Chlorophenol	U	63.	ug/Kgdrywt	1	100	120	6.7	63.
2-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	11.	63.
3&4-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	12.	63.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	25.	2.4	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	25.	6.0	12.
2,4-Dimethylphenol	UJL-BSL	12.	ug/Kgdrywt	1	20	25.	4.0	12.
2,4-Dichlorophenol	UJL-CCL	12.	ug/Kgdrywt	1	20	25.	2.8	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	25.	3.3	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	25.	2.9	12.
2-Methylnaphthalene	UJL-BSL	12.	ug/Kgdrywt	1	20	25.	2.8	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	25.	1.9	12.
2,4,6-Trichlorophenol	U	63.	ug/Kgdrywt	1	100	120	4.1	63.
2,4,5-Trichlorophenol	U	63.	ug/Kgdrywt	1	100	120	3.1	63.
Dimethyl phthalate	U	12.	ug/Kgdrywt	1	20	25.	1.8	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	25.	1.9	12.
4-Nitrophenol	UJ-ICB	63.	ug/Kgdrywt	1	100	120	10.	63.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	25.	8.8	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	25.	4.0	12.
4,6-Dinitro-2-methylphenol	U	190	ug/Kgdrywt	1	310	390	120	190
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	25.	1.2	12.
Pentachlorophenol	UJL-BSL	63.	ug/Kgdrywt	1	100	120	18.	63.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	25.	2.6	12.
3,3'-Dichlorobenzidine	UJ 2S	12.	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo (a) anthracene	J	7.3	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	25.	2.1	12.
bis(2-Ethylhexyl)phthalate K-BSH	J	50.	ug/Kgdrywt	1	100	120	40.	63.
Di-n-octylphthalate	U	63.	ug/Kgdrywt	1	100	120	58.	63.
Benzo (b) Fluoranthene	J	8.4	ug/Kgdrywt	1	20	25.	3.0	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5RA
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 78.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	25.	3.9	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	25.	4.1	12.
Indeno (1,2,3-cd) pyrene	J	5.3	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo (a,h) anthracene	J	3.9	ug/Kgdrywt	1	20	25.	2.3	12.
Benzo(g,h,i)perylene	J	5.9	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		37.9	%					
Fluorene-D10		33.9	%					
Pyrene-D10		67.9	%					
2,4-Dibromophenol		37.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6RA
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 79.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	61.	ug/Kgdrywt	1	100	120	7.4	61.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
2-Chlorophenol	U	61.	ug/Kgdrywt	1	100	120	6.4	61.
2-Methylphenol	U	61.	ug/Kgdrywt	1	100	120	10.	61.
3&4-Methylphenol	U	61.	ug/Kgdrywt	1	100	120	12.	61.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.3	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.8	12.
2,4-Dimethylphenol	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	3.9	12.
2,4-Dichlorophenol	J-J-CCL	14.	ug/Kgdrywt	1	20	24.	2.7	12.
Naphthalene	U	12.	ug/Kgdrywt	1	20	24.	3.2	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.8	12.
2-Methylnaphthalene	JL-BSL	3.3	ug/Kgdrywt	1	20	24.	2.7	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	J	14.	ug/Kgdrywt	1	100	120	4.0	61.
2,4,5-Trichlorophenol	U	61.	ug/Kgdrywt	1	100	120	3.0	61.
Dimethyl phthalate	J	2.3	ug/Kgdrywt	1	20	24.	1.7	12.
Acenaphthylene	J	3.7	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	UUJ-ICB	61.	ug/Kgdrywt	1	100	120	9.7	61.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.5	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	24.	3.9	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	380	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Atrazine	J	1.5	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	UUL-BSL	61.	ug/Kgdrywt	1	100	120	17.	61.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.5	12.
3,3'-Dichlorobenzidine	UUCJ-2S	12.	ug/Kgdrywt	1	20	24.	3.6	12.
Benzo (a) anthracene	J	7.6	ug/Kgdrywt	1	20	24.	2.3	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
bis(2-Ethylhexyl)phthalate	J-BSH	J B-MBL 78.	ug/Kgdrywt	1	100	120	39.	61.
Di-n-octylphthalate	U	61.	ug/Kgdrywt	1	100	120	56.	61.
Benzo (b) Fluoranthene	J	7.4	ug/Kgdrywt	1	20	24.	2.9	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD608[illegible]6RA
Client ID: IS66[illegible]P22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83063

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 79.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	3.8	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	24.	4.0	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.3	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		26.6	%					
Fluorene-D10		28.6	%					
Pyrene-D10		52.5	%					
2,4-Dibromophenol		36.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	7.9	ug/L	1	10	10.	1.0	7.9
Phenol	U	7.9	ug/L	1	10	10.	1.9	7.9
2-Chlorophenol	U	7.9	ug/L	1	10	10.	3.4	7.9
2-Methylphenol	U	7.9	ug/L	1	10	10.	4.0	7.9
Acetophenone	U	7.9	ug/L	1	10	10.	4.1	7.9
3&4-Methylphenol	U	7.9	ug/L	1	10	10.	5.9	7.9
Isophorone	U	7.9	ug/L	1	10	10.	1.8	7.9
2-Nitrophenol	U	7.9	ug/L	1	10	10.	2.8	7.9
2,4-Dimethylphenol	U	7.9	ug/L	1	10	10.	4.6	7.9
Bis(2-Chloroethoxy) Methane	U	7.9	ug/L	1	10	10.	2.2	7.9
2,4-Dichlorophenol	U	7.9	ug/L	1	10	10.	3.2	7.9
4-Chloroaniline	U	7.9	ug/L	1	10	10.	2.0	7.9
Caprolactam	U	7.9	ug/L	1	10	10.	0.42	7.9
4-Chloro-3-Methylphenol	U	7.9	ug/L	1	10	10.	3.8	7.9
2-Methylnaphthalene	U	7.9	ug/L	1	10	10.	3.4	7.9
Hexachlorocyclopentadiene	U	7.9	ug/L	1	10	10.	1.3	7.9
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	7.9	ug/L	1	10	10.	2.8	7.9
2-Chloronaphthalene	U	7.9	ug/L	1	10	10.	3.0	7.9
Dimethyl Phthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Acenaphthylene	U	7.9	ug/L	1	10	10.	1.6	7.9
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	7.9	ug/L	1	10	10.	1.6	7.9
Diethylphthalate	U	7.9	ug/L	1	10	10.	2.1	7.9
Fluorene	U	7.9	ug/L	1	10	10.	2.2	7.9
4-Chlorophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.3	7.9
N-Nitrosodiphenylamine	U	7.9	ug/L	1	10	10.	3.9	7.9
4-Bromophenyl-Phenylether	U	7.9	ug/L	1	10	10.	2.0	7.9
Phenanthrene	U	7.9	ug/L	1	10	10.	2.5	7.9
Anthracene	U	7.9	ug/L	1	10	10.	1.8	7.9
Carbazole	U	7.9	ug/L	1	10	10.	2.2	7.9
Di-N-Butylphthalate	U	7.9	ug/L	1	10	10.	2.6	7.9
Fluoranthene	U	7.9	ug/L	1	10	10.	2.5	7.9
Pyrene	U	7.9	ug/L	1	10	10.	2.0	7.9
Butylbenzylphthalate	U	7.9	ug/L	1	10	10.	2.0	7.9

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910 SW
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.9	ug/L	1	10	10.	1.9	7.9
Benzo(g,h,i)perylene	U	7.9	ug/L	1	10	10.	1.6	7.9
2-Fluorophenol		37.8	%					
Phenol-D6		19.2	%					
Nitrobenzene-d5		67.9	%					
2-Fluorobiphenyl		67.8	%					
2,4,6-Tribromophenol		64.3	%					
Terphenyl-d14		75.8	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: IS66EB02-092910
Project: CTO-JU04 Indian Head Site E
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	7.5	ug/L	1	10	10.	1.0	7.5
Phenol	U	7.5	ug/L	1	10	10.	1.8	7.5
2-Chlorophenol	U	7.5	ug/L	1	10	10.	3.2	7.5
2-Methylphenol	U	7.5	ug/L	1	10	10.	3.8	7.5
Acetophenone	U	7.5	ug/L	1	10	10.	3.9	7.5
3&4-Methylphenol	U	7.5	ug/L	1	10	10.	5.6	7.5
Isophorone	U	7.5	ug/L	1	10	10.	1.7	7.5
2-Nitrophenol	U	7.5	ug/L	1	10	10.	2.7	7.5
2,4-Dimethylphenol	U	7.5	ug/L	1	10	10.	4.4	7.5
Bis(2-Chloroethoxy) Methane	U	7.5	ug/L	1	10	10.	2.1	7.5
2,4-Dichlorophenol	U	7.5	ug/L	1	10	10.	3.0	7.5
4-Chloroaniline	U	7.5	ug/L	1	10	10.	1.9	7.5
Caprolactam	U	7.5	ug/L	1	10	10.	0.40	7.5
4-Chloro-3-Methylphenol	U	7.5	ug/L	1	10	10.	3.6	7.5
2-Methylnaphthalene	U	7.5	ug/L	1	10	10.	3.2	7.5
Hexachlorocyclopentadiene	U	7.5	ug/L	1	10	10.	1.2	7.5
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	25.	3.6	19.
1,1'-Biphenyl	U	7.5	ug/L	1	10	10.	2.7	7.5
2-Chloronaphthalene	U	7.5	ug/L	1	10	10.	2.9	7.5
Dimethyl Phthalate	U	7.5	ug/L	1	10	10.	2.0	7.5
Acenaphthylene	U	7.5	ug/L	1	10	10.	1.5	7.5
3-Nitroaniline	U	19.	ug/L	1	25	25.	1.5	19.
Acenaphthene	U	7.5	ug/L	1	10	10.	1.5	7.5
Diethylphthalate	U	7.5	ug/L	1	10	10.	2.0	7.5
Fluorene	U	7.5	ug/L	1	10	10.	2.1	7.5
4-Chlorophenyl-Phenylether	U	7.5	ug/L	1	10	10.	2.2	7.5
N-Nitrosodiphenylamine	U	7.5	ug/L	1	10	10.	3.7	7.5
4-Bromophenyl-Phenylether	U	7.5	ug/L	1	10	10.	1.9	7.5
Phenanthrene	U	7.5	ug/L	1	10	10.	2.4	7.5
Anthracene	U	7.5	ug/L	1	10	10.	1.7	7.5
Carbazole	U	7.5	ug/L	1	10	10.	2.1	7.5
Di-N-Butylphthalate	U	7.5	ug/L	1	10	10.	2.5	7.5
Fluoranthene	U	7.5	ug/L	1	10	10.	2.4	7.5
Pyrene	U	7.5	ug/L	1	10	10.	1.9	7.5
Butylbenzylphthalate	U	7.5	ug/L	1	10	10.	1.9	7.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: 1S66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.5	ug/L	1	10	10.	1.8	7.5
Benzo(g,h,i)perylene	U	7.5	ug/L	1	10	10.	1.5	7.5
2-Fluorophenol		30.0	%					
Phenol-D6		16.6	%					
Nitrobenzene-d5		55.1	%					
2-Fluorobiphenyl		72.9	%					
2,4,6-Tribromophenol		74.9	%					
Terphenyl-d14		76.6	%					

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REISSUE

HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UJ-25	7.8	ug/L	1	10	10.	1.0	7.8
Phenol	U	7.8	ug/L	1	10	10.	1.9	7.8
2-Chlorophenol	U	7.8	ug/L	1	10	10.	3.3	7.8
2-Methylphenol	U	7.8	ug/L	1	10	10.	4.0	7.8
Acetophenone	U	7.8	ug/L	1	10	10.	4.1	7.8
3&4-Methylphenol	U	7.8	ug/L	1	10	10.	5.8	7.8
Isophorone	U	7.8	ug/L	1	10	10.	1.8	7.8
2-Nitrophenol	U	7.8	ug/L	1	10	10.	2.8	7.8
2,4-Dimethylphenol	U	7.8	ug/L	1	10	10.	4.6	7.8
Bis(2-Chloroethoxy) Methane	U	7.8	ug/L	1	10	10.	2.2	7.8
2,4-Dichlorophenol	U	7.8	ug/L	1	10	10.	3.1	7.8
4-Chloroaniline	U	7.8	ug/L	1	10	10.	2.0	7.8
Caprolactam	U	7.8	ug/L	1	10	10.	0.42	7.8
4-Chloro-3-Methylphenol	U	7.8	ug/L	1	10	10.	3.8	7.8
2-Methylnaphthalene	U	7.8	ug/L	1	10	10.	3.3	7.8
Hexachlorocyclopentadiene	U	7.8	ug/L	1	10	10.	1.2	7.8
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	7.8	ug/L	1	10	10.	2.8	7.8
2-Chloronaphthalene	U	7.8	ug/L	1	10	10.	3.0	7.8
Dimethyl Phthalate	U	7.8	ug/L	1	10	10.	2.1	7.8
Acenaphthylene	U	7.8	ug/L	1	10	10.	1.6	7.8
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	7.8	ug/L	1	10	10.	1.6	7.8
Diethylphthalate	U	7.8	ug/L	1	10	10.	2.1	7.8
Fluorene	U	7.8	ug/L	1	10	10.	2.2	7.8
4-Chlorophenyl-Phenylether	U	7.8	ug/L	1	10	10.	2.3	7.8
N-Nitrosodiphenylamine	U	7.8	ug/L	1	10	10.	3.8	7.8
4-Bromophenyl-Phenylether	U	7.8	ug/L	1	10	10.	2.0	7.8
Phenanthrene	U	7.8	ug/L	1	10	10.	2.5	7.8
Anthracene	U	7.8	ug/L	1	10	10.	1.8	7.8
Carbazole	U	7.8	ug/L	1	10	10.	2.2	7.8
Di-N-Butylphthalate	U	7.8	ug/L	1	10	10.	2.6	7.8
Fluoranthene	U	7.8	ug/L	1	10	10.	2.5	7.8
Pyrene	U	7.8	ug/L	1	10	10.	2.0	7.8
Butylbenzylphthalate	U	7.8	ug/L	1	10	10.	2.0	7.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 04-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.8	ug/L	1	10	10.	1.9	7.8
Benzo(g,h,i)perylene	U	7.8	ug/L	1	10	10.	1.6	7.8
2-Fluorophenol		28.2	%					
Phenol-D6		15.0	%					
Nitrobenzene-d5		60.0	%					
2-Fluorobiphenyl		64.0	%					
2,4,6-Tribromophenol		65.0	%					
Terphenyl-d14		67.4	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UUJ-25	7.6	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.3	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.9	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	4.0	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.7	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U	7.6	ug/L	1	10	10.	2.8	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.5	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.1	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.41	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.7	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.3	7.6
Hexachlorocyclopentadiene	U	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.8	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	3.0	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.8	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.6	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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REISSUE

HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG82833

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		33.1	%					
Phenol-D6		20.0	%					
Nitrobenzene-d5		71.1	%					
2-Fluorobiphenyl		51.9	%					
2,4,6-Tribromophenol		66.1	%					
Terphenyl-d14		64.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: 1S66SDP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 90.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~UUJ-2S~~	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	96.	270
Acetophenone	~~UUL-BSL~~	270	ug/Kgdrywt	1	330	360	190	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	81.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	~~UUL-BSL~~	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	79.	270
2-Chloronaphthalene	~~UUL-BSL~~	270	ug/Kgdrywt	1	330	360	94.	270
2-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	81.	670
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	86.	270
3-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	100	670
2,4-Dinitrophenol	U	670	ug/Kgdrywt	1	820	890	410	670
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	86.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	87.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	84.	270
4-Nitroaniline	U	670	ug/Kgdrywt	1	820	890	140	670
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	92.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		50.1	%					
Phenol-D6		47.6	%					
Nitrobenzene-d5		45.5	%					
2-Fluorobiphenyl		50.7	%					
2,4,6-Tribromophenol		48.5	%					
Terphenyl-d14		60.6	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 89.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UUJ-2S	260	ug/Kgdrywt	1	330	350	130	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	350	94.	260
Acetophenone	UUL-BSL	260	ug/Kgdrywt	1	330	350	190	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	350	100	260
Isophorone	U	260	ug/Kgdrywt	1	330	350	79.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	350	180	260
Bis(2-Chloroethoxy) Methane	UUL-BSL	260	ug/Kgdrywt	1	330	350	100	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	350	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	350	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	350	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	350	77.	260
2-Chloronaphthalene	UUL-BSL	260	ug/Kgdrywt	1	330	350	92.	260
2-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	79.	650
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	260	ug/Kgdrywt	1	330	350	83.	260
3-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	99.	650
2,4-Dinitrophenol	U	650	ug/Kgdrywt	1	820	860	400	650
Dibenzofuran	U	260	ug/Kgdrywt	1	330	350	83.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	350	84.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	82.	260
4-Nitroaniline	U	650	ug/Kgdrywt	1	820	860	140	650
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	350	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	350	90.	260
Carbazole	U	260	ug/Kgdrywt	1	330	350	120	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	350	110	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	350	98.	260
2-Fluorophenol		53.6	%					
Phenol-D6		51.6	%					
Nitrobenzene-d5		49.9	%					
2-Fluorobiphenyl		60.8	%					
2,4,6-Tribromophenol		56.1	%					
Terphenyl-d14		65.9	%					

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ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4
Client ID: IS66DP320809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UUJ-25	290	ug/Kgdrywt	1	330	380	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	380	100	290
Acetophenone	UUL-BSL	290	ug/Kgdrywt	1	330	380	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	380	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	380	88.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	380	190	290
Bis(2-Chloroethoxy) Methane	UUL-BSL	290	ug/Kgdrywt	1	330	380	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	380	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	380	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	380	190	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	380	85.	290
2-Chloronaphthalene	UUL-BSL	290	ug/Kgdrywt	1	330	380	100	290
2-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	88.	720
2,6-Dinitrotoluene EXCLUDE-RE	U	290	ug/Kgdrywt	1	330	380	92.	290
3-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	110	720
2,4-Dinitrophenol	U	720	ug/Kgdrywt	1	820	960	440	720
Dibenzofuran	U	290	ug/Kgdrywt	1	330	380	92.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	380	93.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	91.	290
4-Nitroaniline	U	720	ug/Kgdrywt	1	820	960	160	720
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	380	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	380	99.	290
Carbazole	U	290	ug/Kgdrywt	1	330	380	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	380	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	380	110	290
2-Fluorophenol		47.3	%					
Phenol-D6		46.0	%					
Nitrobenzene-d5		42.9	%					
2-Fluorobiphenyl		50.9	%					
2,4,6-Tribromophenol		52.4	%					
Terphenyl-d14		69.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66DP32P0809 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 86.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UWJ-2S	260	ug/Kgdrywt	1	330	340	120	260
2,2'-Oxybis(1-Chloropropane)	U	260	ug/Kgdrywt	1	330	340	92.	260
Acetophenone	UUL-BSL	260	ug/Kgdrywt	1	330	340	180	260
Hexachloroethane	U	260	ug/Kgdrywt	1	330	340	99.	260
Isophorone	U	260	ug/Kgdrywt	1	330	340	78.	260
2-Nitrophenol	U	260	ug/Kgdrywt	1	330	340	170	260
Bis(2-Chloroethoxy) Methane	UUL-BSL	260	ug/Kgdrywt	1	330	340	99.	260
4-Chloroaniline	U	260	ug/Kgdrywt	1	330	340	120	260
Caprolactam	U	260	ug/Kgdrywt	1	330	340	150	260
4-Chloro-3-Methylphenol	U	260	ug/Kgdrywt	1	330	340	170	260
1,1'-Biphenyl	U	260	ug/Kgdrywt	1	330	340	76.	260
2-Chloronaphthalene	UUL-BSL	260	ug/Kgdrywt	1	330	340	90.	260
2-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	78.	640
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	260	ug/Kgdrywt	1	330	340	82.	260
3-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	97.	640
2,4-Dinitrophenol	U	640	ug/Kgdrywt	1	820	850	390	640
Dibenzofuran	U	260	ug/Kgdrywt	1	330	340	82.	260
Diethylphthalate	U	260	ug/Kgdrywt	1	330	340	83.	260
4-Chlorophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	81.	260
4-Nitroaniline	U	640	ug/Kgdrywt	1	820	850	140	640
N-Nitrosodiphenylamine	U	260	ug/Kgdrywt	1	330	340	230	260
4-Bromophenyl-Phenylether	U	260	ug/Kgdrywt	1	330	340	88.	260
Carbazole	U	260	ug/Kgdrywt	1	330	340	110	260
Di-N-Butylphthalate	U	260	ug/Kgdrywt	1	330	340	100	260
Butylbenzylphthalate	U	260	ug/Kgdrywt	1	330	340	96.	260
2-Fluorophenol		46.7	%					
Phenol-D6		44.6	%					
Nitrobenzene-d5		43.1	%					
2-Fluorobiphenyl		48.1	%					
2,4,6-Tribromophenol		42.6	%					
Terphenyl-d14		58.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 90.
Report Date: 26-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UCS-25	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	98.	270
Acetophenone	UUL-BSL	270	ug/Kgdrywt	1	330	360	200	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	100	270
Isophorone	UUL-MSL	270	ug/Kgdrywt	1	330	360	83.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	UUL-BSL	270	ug/Kgdrywt	1	330	360	100	270
4-Chloroaniline	UR-MSL	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	UU-MSL	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	UUL-MSL	270	ug/Kgdrywt	1	330	360	80.	270
2-Chloronaphthalene	UUL-BSL	270	ug/Kgdrywt	1	330	360	96.	270
2-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	83.	680
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	87.	270
3-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	100	680
2,4-Dinitrophenol	U	680	ug/Kgdrywt	1	820	900	420	680
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	87.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	88.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	150	680
N-Nitrosodiphenylamine	UUL-MSL	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	94.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		56.5	%					
Phenol-D6		50.0	%					
Nitrobenzene-d5		45.6	%					
2-Fluorobiphenyl		52.7	%					
2,4,6-Tribromophenol		59.8	%					
Terphenyl-d14		63.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7RA
Client ID: IS66DP351415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date: 01-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG82829

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 82.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-2S	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	U-BSL	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U-MSL	280	ug/Kgdrywt	1	330	380	86.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	U-BSL	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U-MSL	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U ~~U-MSL~~	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U-MSL	280	ug/Kgdrywt	1	330	380	84.	280
2-Chloronaphthalene	U-BSL	280	ug/Kgdrywt	1	330	380	100	280
2-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	86.	710
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	380	91.	280
3-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	110	710
2,4-Dinitrophenol	U	710	ug/Kgdrywt	1	820	940	430	710
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	91.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	92.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	90.	280
4-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	150	710
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	98.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		40.1	%					
Phenol-D6	*	37.8	%					
Nitrobenzene-d5		43.0	%					
2-Fluorobiphenyl	*	44.7	%					
2,4,6-Tribromophenol		44.3	%					
Terphenyl-d14		46.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 55.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UJ-2S	430	ug/Kgdrywt	1	330	580	210	430
2,2'-Oxybis(1-Chloropropane)	U	430	ug/Kgdrywt	1	330	580	160	430
Acetophenone	~~U~~ UJ-BSL	430	ug/Kgdrywt	1	330	580	310	430
Hexachloroethane	U	430	ug/Kgdrywt	1	330	580	170	430
Isophorone	U	430	ug/Kgdrywt	1	330	580	130	430
2-Nitrophenol	U	430	ug/Kgdrywt	1	330	580	290	430
Bis(2-Chloroethoxy) Methane	~~U~~ UJ-CCL	430	ug/Kgdrywt	1	330	580	170	430
4-Chloroaniline	U	430	ug/Kgdrywt	1	330	580	210	430
Caprolactam	U	430	ug/Kgdrywt	1	330	580	250	430
4-Chloro-3-Methylphenol	U	430	ug/Kgdrywt	1	330	580	290	430
1,1'-Biphenyl	U	430	ug/Kgdrywt	1	330	580	130	430
2-Chloronaphthalene	~~U~~ UJ-BSL	430	ug/Kgdrywt	1	330	580	150	430
2-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	130	1100
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	430	ug/Kgdrywt	1	330	580	140	430
3-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	160	1100
2,4-Dinitrophenol	U	1100	ug/Kgdrywt	1	820	1400	660	1100
Dibenzofuran	U	430	ug/Kgdrywt	1	330	580	140	430
Diethylphthalate	U	430	ug/Kgdrywt	1	330	580	140	430
4-Chlorophenyl-Phenylether	U	430	ug/Kgdrywt	1	330	580	140	430
4-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	230	1100
N-Nitrosodiphenylamine	U	430	ug/Kgdrywt	1	330	580	380	430
4-Bromophenyl-Phenylether	U	430	ug/Kgdrywt	1	330	580	150	430
Carbazole	U	430	ug/Kgdrywt	1	330	580	190	430
Di-N-Butylphthalate	U	430	ug/Kgdrywt	1	330	580	180	430
Butylbenzylphthalate	U	430	ug/Kgdrywt	1	330	580	160	430
2-Fluorophenol		82.4	%					
Phenol-D6		64.7	%					
Nitrobenzene-d5		54.8	%					
2-Fluorobiphenyl		56.8	%					
2,4,6-Tribromophenol		58.0	%					
Terphenyl-d14		69.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 32.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	700	ug/Kgdrywt	1	330	940	340	700
2,2'-Oxybis(1-Chloropropane)	U	700	ug/Kgdrywt	1	330	940	250	700
Acetophenone	UJL-BSL	700	ug/Kgdrywt	1	330	940	500	700
Hexachloroethane	U	700	ug/Kgdrywt	1	330	940	270	700
Isophorone	U	700	ug/Kgdrywt	1	330	940	210	700
2-Nitrophenol	U	700	ug/Kgdrywt	1	330	940	470	700
Bis(2-Chloroethoxy) Methane	UJ-CCL	700	ug/Kgdrywt	1	330	940	270	700
4-Chloroaniline	U	700	ug/Kgdrywt	1	330	940	340	700
Caprolactam	U	700	ug/Kgdrywt	1	330	940	410	700
4-Chloro-3-Methylphenol	U	700	ug/Kgdrywt	1	330	940	470	700
1,1'-Biphenyl	U	700	ug/Kgdrywt	1	330	940	210	700
2-Chloronaphthalene	UJL-BSL	700	ug/Kgdrywt	1	330	940	250	700
2-Nitroaniline	U	1700	ug/Kgdrywt	1	820	2300	210	1700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	700	ug/Kgdrywt	1	330	940	220	700
3-Nitroaniline	U	1700	ug/Kgdrywt	1	820	2300	270	1700
2,4-Dinitrophenol	U	1700	ug/Kgdrywt	1	820	2300	1100	1700
Dibenzofuran	U	700	ug/Kgdrywt	1	330	940	220	700
Diethylphthalate	U	700	ug/Kgdrywt	1	330	940	230	700
4-Chlorophenyl-Phenylether	U	700	ug/Kgdrywt	1	330	940	220	700
4-Nitroaniline	U	1700	ug/Kgdrywt	1	820	2300	380	1700
N-Nitrosodiphenylamine	U	700	ug/Kgdrywt	1	330	940	620	700
4-Bromophenyl-Phenylether	U	700	ug/Kgdrywt	1	330	940	240	700
Carbazole	U	700	ug/Kgdrywt	1	330	940	320	700
Di-N-Butylphthalate	U	700	ug/Kgdrywt	1	330	940	290	700
Butylbenzylphthalate	U	700	ug/Kgdrywt	1	330	940	260	700
2-Fluorophenol		68.2	%					
Phenol-D6		55.5	%					
Nitrobenzene-d5		44.7	%					
2-Fluorobiphenyl		46.4	%					
2,4,6-Tribromophenol		49.5	%					
Terphenyl-d14		58.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 82.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	290	ug/Kgdrywt	1	330	390	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	390	100	290
Acetophenone	UJL-BSL	290	ug/Kgdrywt	1	330	390	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	390	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	390	88.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	390	200	290
Bis(2-Chloroethoxy) Methane	UJCL-CCL	290	ug/Kgdrywt	1	330	390	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	390	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	390	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	390	200	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	390	86.	290
2-Chloronaphthalene	UJL-BSL	290	ug/Kgdrywt	1	330	390	100	290
2-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	88.	720
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	290	ug/Kgdrywt	1	330	390	93.	290
3-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	110	720
2,4-Dinitrophenol	U	720	ug/Kgdrywt	1	820	970	440	720
Dibenzofuran	U	290	ug/Kgdrywt	1	330	390	93.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	390	94.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	92.	290
4-Nitroaniline	U	720	ug/Kgdrywt	1	820	970	160	720
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	390	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	100	290
Carbazole	U	290	ug/Kgdrywt	1	330	390	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	390	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	390	110	290
2-Fluorophenol		66.7	%					
Phenol-D6		52.7	%					
Nitrobenzene-d5		45.0	%					
2-Fluorobiphenyl		64.8	%					
2,4,6-Tribromophenol		66.2	%					
Terphenyl-d14		75.5	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 75.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	330	ug/Kgdrywt	1	330	430	160	330
2,2'-Oxybis(1-Chloropropane)	U	330	ug/Kgdrywt	1	330	430	120	330
Acetophenone	U-UL-BSL	330	ug/Kgdrywt	1	330	430	230	330
Hexachloroethane	U	330	ug/Kgdrywt	1	330	430	130	330
Isophorone	U	330	ug/Kgdrywt	1	330	430	99.	330
2-Nitrophenol	U	330	ug/Kgdrywt	1	330	430	220	330
Bis(2-Chloroethoxy) Methane	U-UJ-CCL	330	ug/Kgdrywt	1	330	430	130	330
4-Chloroaniline	U	330	ug/Kgdrywt	1	330	430	160	330
Caprolactam	U	330	ug/Kgdrywt	1	330	430	190	330
4-Chloro-3-Methylphenol	U	330	ug/Kgdrywt	1	330	430	220	330
1,1'-Biphenyl	U	330	ug/Kgdrywt	1	330	430	96.	330
2-Chloronaphthalene	U-UL-BSL	330	ug/Kgdrywt	1	330	430	110	330
2-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	99.	810
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	330	ug/Kgdrywt	1	330	430	100	330
3-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	120	810
2,4-Dinitrophenol	U	810	ug/Kgdrywt	1	820	1100	500	810
Dibenzofuran	U	330	ug/Kgdrywt	1	330	430	100	330
Diethylphthalate	U	330	ug/Kgdrywt	1	330	430	100	330
4-Chlorophenyl-Phenylether	U	330	ug/Kgdrywt	1	330	430	100	330
4-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	180	810
N-Nitrosodiphenylamine	U	330	ug/Kgdrywt	1	330	430	290	330
4-Bromophenyl-Phenylether	U	330	ug/Kgdrywt	1	330	430	110	330
Carbazole	U	330	ug/Kgdrywt	1	330	430	150	330
Di-N-Butylphthalate	U	330	ug/Kgdrywt	1	330	430	130	330
Butylbenzylphthalate	U	330	ug/Kgdrywt	1	330	430	120	330
2-Fluorophenol		59.4	%					
Phenol-D6		50.3	%					
Nitrobenzene-d5		46.4	%					
2-Fluorobiphenyl		61.8	%					
2,4,6-Tribromophenol		61.3	%					
Terphenyl-d14		67.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6
Client ID: 1S66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82952

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	8.0	ug/L	1	10	11.	1.1	8.0
Phenol	U	8.0	ug/L	1	10	11.	1.9	8.0
2-Chlorophenol	U	8.0	ug/L	1	10	11.	3.4	8.0
2-Methylphenol	U	8.0	ug/L	1	10	11.	4.0	8.0
Acetophenone	U	8.0	ug/L	1	10	11.	4.1	8.0
3&4-Methylphenol	U	8.0	ug/L	1	10	11.	6.0	8.0
Isophorone	U	8.0	ug/L	1	10	11.	1.8	8.0
2-Nitrophenol	U	8.0	ug/L	1	10	11.	2.9	8.0
2,4-Dimethylphenol	U	8.0	ug/L	1	10	11.	4.7	8.0
Bis(2-Chloroethoxy) Methane	U	8.0	ug/L	1	10	11.	2.2	8.0
2,4-Dichlorophenol	U	8.0	ug/L	1	10	11.	3.2	8.0
4-Chloroaniline	U	8.0	ug/L	1	10	11.	2.0	8.0
Caprolactam	UJL-BS	8.0	ug/L	1	10	11.	0.42	8.0
4-Chloro-3-Methylphenol	U	8.0	ug/L	1	10	11.	3.8	8.0
2-Methylnaphthalene	U	8.0	ug/L	1	10	11.	3.4	8.0
Hexachlorocyclopentadiene	U	8.0	ug/L	1	10	11.	1.3	8.0
2,4,5-Trichlorophenol	U	20.	ug/L	1	25	26.	3.8	20.
1,1'-Biphenyl	U	8.0	ug/L	1	10	11.	2.9	8.0
2-Chloronaphthalene	U	8.0	ug/L	1	10	11.	3.1	8.0
Dimethyl Phthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Acenaphthylene	U	8.0	ug/L	1	10	11.	1.6	8.0
3-Nitroaniline	U	20.	ug/L	1	25	26.	1.6	20.
Acenaphthene	U	8.0	ug/L	1	10	11.	1.6	8.0
Diethylphthalate	U	8.0	ug/L	1	10	11.	2.1	8.0
Fluorene	U	8.0	ug/L	1	10	11.	2.2	8.0
4-Chlorophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.3	8.0
N-Nitrosodiphenylamine	U	8.0	ug/L	1	10	11.	3.9	8.0
4-Bromophenyl-Phenylether	U	8.0	ug/L	1	10	11.	2.0	8.0
Phenanthrene	U	8.0	ug/L	1	10	11.	2.6	8.0
Anthracene	U	8.0	ug/L	1	10	11.	1.8	8.0
Carbazole	U	8.0	ug/L	1	10	11.	2.2	8.0
Di-N-Butylphthalate	U	8.0	ug/L	1	10	11.	2.6	8.0
Fluoranthene	U	8.0	ug/L	1	10	11.	2.6	8.0
Pyrene	U	8.0	ug/L	1	10	11.	2.0	8.0
Butylbenzylphthalate	U	8.0	ug/L	1	10	11.	2.0	8.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site E
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82952

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.0	ug/L	1	10	11.	1.9	8.0
Benzo(g,h,i)perylene	U	8.0	ug/L	1	10	11.	1.6	8.0
2-Fluorophenol		33.6	%					
Phenol-D6		19.9	%					
Nitrobenzene-d5		59.0	%					
2-Fluorobiphenyl		63.8	%					
2,4,6-Tribromophenol		68.3	%					
Terphenyl-d14		69.1	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82952

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	8.3	ug/L	1	10	11.	1.1	8.3
Phenol	U	8.3	ug/L	1	10	11.	2.0	8.3
2-Chlorophenol	U	8.3	ug/L	1	10	11.	3.6	8.3
2-Methylphenol	U	8.3	ug/L	1	10	11.	4.2	8.3
Acetophenone	U	8.3	ug/L	1	10	11.	4.3	8.3
3&4-Methylphenol	U	8.3	ug/L	1	10	11.	6.2	8.3
Isophorone	U	8.3	ug/L	1	10	11.	1.9	8.3
2-Nitrophenol	U	8.3	ug/L	1	10	11.	3.0	8.3
2,4-Dimethylphenol	U	8.3	ug/L	1	10	11.	4.9	8.3
Bis(2-Chloroethoxy) Methane	U	8.3	ug/L	1	10	11.	2.3	8.3
2,4-Dichlorophenol	U	8.3	ug/L	1	10	11.	3.3	8.3
4-Chloroaniline	U	8.3	ug/L	1	10	11.	2.1	8.3
Caprolactam	UJL-BSL	8.3	ug/L	1	10	11.	0.44	8.3
4-Chloro-3-Methylphenol	U	8.3	ug/L	1	10	11.	4.0	8.3
2-Methylnaphthalene	U	8.3	ug/L	1	10	11.	3.6	8.3
Hexachlorocyclopentadiene	U	8.3	ug/L	1	10	11.	1.3	8.3
2,4,5-Trichlorophenol	U	21.	ug/L	1	25	28.	4.0	21.
1,1'-Biphenyl	U	8.3	ug/L	1	10	11.	3.0	8.3
2-Chloronaphthalene	U	8.3	ug/L	1	10	11.	3.2	8.3
Dimethyl Phthalate	U	8.3	ug/L	1	10	11.	2.2	8.3
Acenaphthylene	U	8.3	ug/L	1	10	11.	1.7	8.3
3-Nitroaniline	U	21.	ug/L	1	25	28.	1.7	21.
Acenaphthene	U	8.3	ug/L	1	10	11.	1.7	8.3
Diethylphthalate	U	8.3	ug/L	1	10	11.	2.2	8.3
Fluorene	U	8.3	ug/L	1	10	11.	2.3	8.3
4-Chlorophenyl-Phenylether	U	8.3	ug/L	1	10	11.	2.4	8.3
N-Nitrosodiphenylamine	U	8.3	ug/L	1	10	11.	4.1	8.3
4-Bromophenyl-Phenylether	U	8.3	ug/L	1	10	11.	2.1	8.3
Phenanthrene	U	8.3	ug/L	1	10	11.	2.7	8.3
Anthracene	U	8.3	ug/L	1	10	11.	1.9	8.3
Carbazole	U	8.3	ug/L	1	10	11.	2.3	8.3
Di-N-Butylphthalate	U	8.3	ug/L	1	10	11.	2.8	8.3
Fluoranthene	U	8.3	ug/L	1	10	11.	2.7	8.3
Pyrene	U	8.3	ug/L	1	10	11.	2.1	8.3
Butylbenzylphthalate	U	8.3	ug/L	1	10	11.	2.1	8.3

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 04-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG82952

Analysis Date: 20-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	8.3	ug/L	1	10	11.	2.0	8.3
Benzo(g,h,i)perylene	U	8.3	ug/L	1	10	11.	1.7	8.3
2-Fluorophenol		32.1	%					
Phenol-D6		19.7	%					
Nitrobenzene-d5		60.4	%					
2-Fluorobiphenyl		66.4	%					
2,4,6-Tribromophenol		58.4	%					
Terphenyl-d14		62.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 58.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	380	ug/Kgdrywt	1	330	510	180	380
2,2'-Oxybis(1-Chloropropane)	U	380	ug/Kgdrywt	1	330	510	140	380
Acetophenone	UJ-BSL	380	ug/Kgdrywt	1	330	510	270	380
Hexachloroethane	U	380	ug/Kgdrywt	1	330	510	150	380
Isophorone	U	380	ug/Kgdrywt	1	330	510	120	380
2-Nitrophenol	U	380	ug/Kgdrywt	1	330	510	260	380
Bis(2-Chloroethoxy) Methane	UJ-CCL	380	ug/Kgdrywt	1	330	510	150	380
4-Chloroaniline	U	380	ug/Kgdrywt	1	330	510	180	380
Caprolactam	U	380	ug/Kgdrywt	1	330	510	220	380
4-Chloro-3-Methylphenol	U	380	ug/Kgdrywt	1	330	510	260	380
1,1'-Biphenyl	U	380	ug/Kgdrywt	1	330	510	110	380
2-Chloronaphthalene	UJ-BSL	380	ug/Kgdrywt	1	330	510	130	380
2-Nitroaniline	U	950	ug/Kgdrywt	1	820	1300	120	950
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	380	ug/Kgdrywt	1	330	510	120	380
3-Nitroaniline	U	950	ug/Kgdrywt	1	820	1300	140	950
2,4-Dinitrophenol	U	950	ug/Kgdrywt	1	820	1300	580	950
Dibenzofuran	U	380	ug/Kgdrywt	1	330	510	120	380
Diethylphthalate	U	380	ug/Kgdrywt	1	330	510	120	380
4-Chlorophenyl-Phenylether	U	380	ug/Kgdrywt	1	330	510	120	380
4-Nitroaniline	U	950	ug/Kgdrywt	1	820	1300	210	950
N-Nitrosodiphenylamine	U	380	ug/Kgdrywt	1	330	510	340	380
4-Bromophenyl-Phenylether	U	380	ug/Kgdrywt	1	330	510	130	380
Carbazole	U	380	ug/Kgdrywt	1	330	510	170	380
Di-N-Butylphthalate	U	380	ug/Kgdrywt	1	330	510	160	380
Butylbenzylphthalate	U	380	ug/Kgdrywt	1	330	510	140	380
2-Fluorophenol		75.9	%					
Phenol-D6		56.8	%					
Nitrobenzene-d5		52.1	%					
2-Fluorobiphenyl		58.8	%					
2,4,6-Tribromophenol		47.8	%					
Terphenyl-d14		70.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 76.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-25	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	UJL-BSL	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	380	85.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	UJ-CCL	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	380	83.	280
2-Chloronaphthalene	UJL-BSL	280	ug/Kgdrywt	1	330	380	99.	280
2-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	85.	700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	380	90.	280
3-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	110	700
2,4-Dinitrophenol	U	700	ug/Kgdrywt	1	820	930	430	700
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	90.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	91.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	89.	280
4-Nitroaniline	U	700	ug/Kgdrywt	1	820	930	150	700
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	97.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		65.0	%					
Phenol-D6		51.8	%					
Nitrobenzene-d5		42.0	%					
2-Fluorobiphenyl	*	43.7	%					
2,4,6-Tribromophenol		56.8	%					
Terphenyl-d14		48.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 86.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~UJ-25~~	270	ug/Kgdrywt	1	330	360	130	270
2,2'-Oxybis(1-Chloropropane)	U	270	ug/Kgdrywt	1	330	360	98.	270
Acetophenone	~~UJL-BSL~~	270	ug/Kgdrywt	1	330	360	200	270
Hexachloroethane	U	270	ug/Kgdrywt	1	330	360	110	270
Isophorone	U	270	ug/Kgdrywt	1	330	360	83.	270
2-Nitrophenol	U	270	ug/Kgdrywt	1	330	360	180	270
Bis(2-Chloroethoxy) Methane	~~UJS-CCL~~	270	ug/Kgdrywt	1	330	360	110	270
4-Chloroaniline	U	270	ug/Kgdrywt	1	330	360	130	270
Caprolactam	U	270	ug/Kgdrywt	1	330	360	160	270
4-Chloro-3-Methylphenol	U	270	ug/Kgdrywt	1	330	360	180	270
1,1'-Biphenyl	U	270	ug/Kgdrywt	1	330	360	81.	270
2-Chloronaphthalene	~~UJL-BSL~~	270	ug/Kgdrywt	1	330	360	96.	270
2-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	83.	680
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	270	ug/Kgdrywt	1	330	360	87.	270
3-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	100	680
2,4-Dinitrophenol	U	680	ug/Kgdrywt	1	820	900	420	680
Dibenzofuran	U	270	ug/Kgdrywt	1	330	360	87.	270
Diethylphthalate	U	270	ug/Kgdrywt	1	330	360	88.	270
4-Chlorophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	86.	270
4-Nitroaniline	U	680	ug/Kgdrywt	1	820	900	150	680
N-Nitrosodiphenylamine	U	270	ug/Kgdrywt	1	330	360	240	270
4-Bromophenyl-Phenylether	U	270	ug/Kgdrywt	1	330	360	94.	270
Carbazole	U	270	ug/Kgdrywt	1	330	360	120	270
Di-N-Butylphthalate	U	270	ug/Kgdrywt	1	330	360	110	270
Butylbenzylphthalate	U	270	ug/Kgdrywt	1	330	360	100	270
2-Fluorophenol		70.4	%					
Phenol-D6		58.4	%					
Nitrobenzene-d5		52.9	%					
2-Fluorobiphenyl		71.7	%					
2,4,6-Tribromophenol		69.6	%					
Terphenyl-d14		85.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66DP231516 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 81.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UHS-25	300	ug/Kgdrywt	1	330	400	150	300
2,2'-Oxybis(1-Chloropropane)	U	300	ug/Kgdrywt	1	330	400	110	300
Acetophenone	UUL-BSL	300	ug/Kgdrywt	1	330	400	220	300
Hexachloroethane	U	300	ug/Kgdrywt	1	330	400	120	300
Isophorone	U	300	ug/Kgdrywt	1	330	400	91.	300
2-Nitrophenol	U	300	ug/Kgdrywt	1	330	400	200	300
Bis(2-Chloroethoxy) Methane	UUJ-CCL	300	ug/Kgdrywt	1	330	400	120	300
4-Chloroaniline	U	300	ug/Kgdrywt	1	330	400	140	300
Caprolactam	U	300	ug/Kgdrywt	1	330	400	180	300
4-Chloro-3-Methylphenol	U	300	ug/Kgdrywt	1	330	400	200	300
1,1'-Biphenyl	U	300	ug/Kgdrywt	1	330	400	89.	300
2-Chloronaphthalene	UUL-BSL	300	ug/Kgdrywt	1	330	400	100	300
2-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	91.	750
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	300	ug/Kgdrywt	1	330	400	96.	300
3-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	110	750
2,4-Dinitrophenol	U	750	ug/Kgdrywt	1	820	1000	460	750
Dibenzofuran	U	300	ug/Kgdrywt	1	330	400	96.	300
Diethylphthalate	U	300	ug/Kgdrywt	1	330	400	97.	300
4-Chlorophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	95.	300
4-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	160	750
N-Nitrosodiphenylamine	U	300	ug/Kgdrywt	1	330	400	270	300
4-Bromophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	100	300
Carbazole	U	300	ug/Kgdrywt	1	330	400	140	300
Di-N-Butylphthalate	U	300	ug/Kgdrywt	1	330	400	120	300
Butylbenzylphthalate	U	300	ug/Kgdrywt	1	330	400	110	300
2-Fluorophenol		49.8	%					
Phenol-D6		42.4	%					
Nitrobenzene-d5		37.2	%					
2-Fluorobiphenyl		51.7	%					
2,4,6-Tribromophenol		41.1	%					
Terphenyl-d14		49.3	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 86.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UJ-LCS	280	ug/Kgdrywt	1	330	370	130	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	370	100	280
Acetophenone	UJL-BSL	280	ug/Kgdrywt	1	330	370	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	370	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	370	84.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	370	190	280
Bis(2-Chloroethoxy) Methane	UJL-BSL	280	ug/Kgdrywt	1	330	370	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	370	130	280
Caprolactam	U	280	ug/Kgdrywt	1	330	370	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	370	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	370	82.	280
2-Chloronaphthalene	UJL-BSL	280	ug/Kgdrywt	1	330	370	98.	280
2-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	84.	690
2,6-Dinitrotoluene	EXCLUDE-RE U	280	ug/Kgdrywt	1	330	370	89.	280
3-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	100	690
2,4-Dinitrophenol	U	690	ug/Kgdrywt	1	820	920	420	690
Dibenzofuran	U	280	ug/Kgdrywt	1	330	370	89.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	370	90.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	87.	280
4-Nitroaniline	U	690	ug/Kgdrywt	1	820	920	150	690
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	370	240	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	370	95.	280
Carbazole	U	280	ug/Kgdrywt	1	330	370	120	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	370	110	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	370	100	280
2-Fluorophenol		69.8	%					
Phenol-D6		69.8	%					
Nitrobenzene-d5		63.1	%					
2-Fluorobiphenyl		69.5	%					
2,4,6-Tribromophenol		63.6	%					
Terphenyl-d14		81.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RA
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 22-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 85.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~UMS-25~~	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	~~UMS-BSL~~	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	380	86.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	~~UMS-BSL~~	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	380	84.	280
2-Chloronaphthalene	~~UMS-BSL~~	280	ug/Kgdrywt	1	330	380	100	280
2-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	86.	710
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	380	91.	280
3-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	110	710
2,4-Dinitrophenol	U	710	ug/Kgdrywt	1	820	940	430	710
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	91.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	92.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	90.	280
4-Nitroaniline	U	710	ug/Kgdrywt	1	820	940	150	710
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	98.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		63.5	%					
Phenol-D6		60.9	%					
Nitrobenzene-d5		56.8	%					
2-Fluorobiphenyl		64.1	%					
2,4,6-Tribromophenol		58.6	%					
Terphenyl-d14		73.4	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 78.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UCT-25	310	ug/Kgdrywt	1	330	410	150	310
2,2'-Oxybis(1-Chloropropane)	U	310	ug/Kgdrywt	1	330	410	110	310
Acetophenone	U ULL-BSL	310	ug/Kgdrywt	1	330	410	220	310
Hexachloroethane	U	310	ug/Kgdrywt	1	330	410	120	310
Isophorone	U	310	ug/Kgdrywt	1	330	410	94.	310
2-Nitrophenol	U	310	ug/Kgdrywt	1	330	410	210	310
Bis(2-Chloroethoxy) Methane	U ULL-BSL	310	ug/Kgdrywt	1	330	410	120	310
4-Chloroaniline	U	310	ug/Kgdrywt	1	330	410	150	310
Caprolactam	U	310	ug/Kgdrywt	1	330	410	180	310
4-Chloro-3-Methylphenol	U	310	ug/Kgdrywt	1	330	410	210	310
1,1'-Biphenyl	U	310	ug/Kgdrywt	1	330	410	92.	310
2-Chloronaphthalene	U ULL-BSL	310	ug/Kgdrywt	1	330	410	110	310
2-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	94.	770
2,6-Dinitrotoluene	U	310	ug/Kgdrywt	1	330	410	99.	310
3-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	120	770
2,4-Dinitrophenol	U	770	ug/Kgdrywt	1	820	1000	470	770
Dibenzofuran	U	310	ug/Kgdrywt	1	330	410	99.	310
Diethylphthalate	U	310	ug/Kgdrywt	1	330	410	100	310
4-Chlorophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	410	98.	310
4-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	170	770
N-Nitrosodiphenylamine	U	310	ug/Kgdrywt	1	330	410	280	310
4-Bromophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	410	110	310
Carbazole	U	310	ug/Kgdrywt	1	330	410	140	310
Di-N-Butylphthalate	U	310	ug/Kgdrywt	1	330	410	130	310
Butylbenzylphthalate	U	310	ug/Kgdrywt	1	330	410	120	310
2-Fluorophenol		52.7	%					
Phenol-D6		55.8	%					
Nitrobenzene-d5		49.5	%					
2-Fluorobiphenyl		52.8	%					
2,4,6-Tribromophenol		43.9	%					
Terphenyl-d14		82.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66SP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: CB
Extraction Method: SW846 3550
Lab Prep Batch: WG83062

Analysis Date: 21-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 79.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U Exclude RE	300	ug/Kgdrywt	1	330	400	140	300
2,2'-Oxybis(1-Chloropropane)	U	300	ug/Kgdrywt	1	330	400	110	300
Acetophenone	U	300	ug/Kgdrywt	1	330	400	220	300
Hexachloroethane	U	300	ug/Kgdrywt	1	330	400	120	300
Isophorone	U	300	ug/Kgdrywt	1	330	400	91.	300
2-Nitrophenol	U	300	ug/Kgdrywt	1	330	400	200	300
Bis(2-Chloroethoxy) Methane	U	300	ug/Kgdrywt	1	330	400	120	300
4-Chloroaniline	U	300	ug/Kgdrywt	1	330	400	140	300
Caprolactam	U	300	ug/Kgdrywt	1	330	400	170	300
4-Chloro-3-Methylphenol	U	300	ug/Kgdrywt	1	330	400	200	300
1,1'-Biphenyl	U	300	ug/Kgdrywt	1	330	400	89.	300
2-Chloronaphthalene	U	300	ug/Kgdrywt	1	330	400	100	300
2-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	91.	750
2,6-Dinitrotoluene	U	300	ug/Kgdrywt	1	330	400	96.	300
3-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	110	750
2,4-Dinitrophenol	U	750	ug/Kgdrywt	1	820	1000	460	750
Dibenzofuran	U	300	ug/Kgdrywt	1	330	400	96.	300
Diethylphthalate	U	300	ug/Kgdrywt	1	330	400	97.	300
4-Chlorophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	95.	300
4-Nitroaniline	U	750	ug/Kgdrywt	1	820	1000	160	750
N-Nitrosodiphenylamine	U	300	ug/Kgdrywt	1	330	400	260	300
4-Bromophenyl-Phenylether	U	300	ug/Kgdrywt	1	330	400	100	300
Carbazole	U	300	ug/Kgdrywt	1	330	400	130	300
Di-N-Butylphthalate	U	300	ug/Kgdrywt	1	330	400	120	300
Butylbenzylphthalate	U	300	ug/Kgdrywt	1	330	400	110	300
2-Fluorophenol		36.5	%					
Phenol-D6	*	40.0	%					
Nitrobenzene-d5	*	31.5	%					
2-Fluorobiphenyl	*	35.3	%					
2,4,6-Tribromophenol	*	31.6	%					
Terphenyl-d14		74.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6RE
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 22-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83929

Analysis Date: 22-OCT-10
Analyst: WAS
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 79.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U	310	ug/Kgdrywt	1	330	410	150	310
2,2'-Oxybis(1-Chloropropane)	U	310	ug/Kgdrywt	1	330	410	110	310
Acetophenone	U	310	ug/Kgdrywt	1	330	410	220	310
Hexachloroethane	U	310	ug/Kgdrywt	1	330	410	120	310
Isophorone	U	310	ug/Kgdrywt	1	330	410	93.	310
2-Nitrophenol	U	310	ug/Kgdrywt	1	330	410	210	310
Bis(2-Chloroethoxy) Methane	U	310	ug/Kgdrywt	1	330	410	120	310
4-Chloroaniline	U	310	ug/Kgdrywt	1	330	410	150	310
Caprolactam	U	310	ug/Kgdrywt	1	330	410	180	310
4-Chloro-3-Methylphenol	U	310	ug/Kgdrywt	1	330	410	210	310
1,1'-Biphenyl	U	310	ug/Kgdrywt	1	330	410	91.	310
2-Chloronaphthalene	U	310	ug/Kgdrywt	1	330	410	110	310
2-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	93.	760
2,6-Dinitrotoluene EXCLUDE-RE	U	310	ug/Kgdrywt	1	330	410	98.	310
3-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	120	760
2,4-Dinitrophenol	U	760	ug/Kgdrywt	1	820	1000	470	760
Dibenzofuran	U	310	ug/Kgdrywt	1	330	410	98.	310
Diethylphthalate	U	310	ug/Kgdrywt	1	330	410	99.	310
4-Chlorophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	410	97.	310
4-Nitroaniline	U	760	ug/Kgdrywt	1	820	1000	170	760
N-Nitrosodiphenylamine	U	310	ug/Kgdrywt	1	330	410	270	310
4-Bromophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	410	100	310
Carbazole	U	310	ug/Kgdrywt	1	330	410	140	310
Di-N-Butylphthalate	U	310	ug/Kgdrywt	1	330	410	120	310
Butylbenzylphthalate	U	310	ug/Kgdrywt	1	330	410	120	310
2-Fluorophenol		79.5	%					
Phenol-D6		76.8	%					
Nitrobenzene-d5		73.4	%					
2-Fluorobiphenyl		79.2	%					
2,4,6-Tribromophenol		81.2	%					
Terphenyl-d14		85.5	%					

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HK 12/22/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UJ-SSH	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/22/2010

Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-1
Client ID: IS66MW020910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		98.0	%					
Toluene-d8		98.5	%					
1,2-Dichloroethane-d4		116.	%					
Dibromofluoromethane	*	117.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: 1S66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	~~B-EBL~~	6.4	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin Analytical Services A0000007

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-3
Client ID: 1S66EB02-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		92.9	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		112.	%					
Dibromofluoromethane		111.	%					

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REISSUE

HK 12/22/2010

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	U	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	J	0.42	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-5
Client ID: IS66MW010910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		89.6	%					
Toluene-d8		98.1	%					
1,2-Dichloroethane-d4		98.5	%					
Dibromofluoromethane		99.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-7
Client ID: IS66TB092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.1	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD5999-7
Client ID: IS66TB092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		98.1	%					
Toluene-d8		104.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.5	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J-CCH	6.0	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-1
Client ID: IS66EB01-092910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83261

Analysis Date: 09-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		89.4	%					
Toluene-d8		95.2	%					
1,2-Dichloroethane-d4		99.1	%					
Dibromofluoromethane		99.2	%					

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HK 12/22/2010

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66-SS-DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J B-EBL	5.7	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-OT	5.1	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-2
Client ID: IS66DP320001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		97.7	%					
Toluene-D8		101.	%					
1,2-Dichloroethane-D4		117.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: IS66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	U	14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J FOT	5.0	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-3
Client ID: 1S66DP32P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 89.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		95.7	%					
Toluene-D8		95.6	%					
1,2-Dichloroethane-D4		114.	%					
Dibromofluoromethane		104.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4RA
Client ID: IS66DP320809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	JB-MBL	0.85	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	BJ-CT	6.4	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-4RA
Client ID: IS66DP320809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		87.3	%					
Toluene-D8		97.8	%					
1,2-Dichloroethane-D4		103.	%					
Dibromofluoromethane		99.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66DP32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	JT-OT	4.4	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-5
Client ID: IS66SB32P0809
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		93.6	%					
Toluene-D8		99.8	%					
1,2-Dichloroethane-D4		122.	%					
Dibromofluoromethane		111.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	JB-EBL	13.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J-J-07	3.2	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-6
Client ID: IS66DP350001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG82995

Analysis Date: 04-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 90.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		87.4	%					
Toluene-D8	*	84.6	%					
1,2-Dichloroethane-D4		107.	%					
Dibromofluoromethane		97.0	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J-B-MBL	0.98	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	BJ-OT	7.4	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6000-7
Client ID: IS66DP351415
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 29-SEP-10
Received Date: 30-SEP-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		97.3	%					
Toluene-D8		98.7	%					
1,2-Dichloroethane-D4		113.	%					
Dibromofluoromethane		106.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSL	8.5	ug/Kgdrywt	1	10	17.	1.6	8.5
Chloromethane	U	8.5	ug/Kgdrywt	1	10	17.	2.4	8.5
Vinyl Chloride	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
Bromomethane	U	8.5	ug/Kgdrywt	1	10	17.	1.9	8.5
Chloroethane	U	8.5	ug/Kgdrywt	1	10	17.	2.2	8.5
Trichlorofluoromethane	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
1,1-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Carbon Disulfide	J-B-TBL	1.6	ug/Kgdrywt	1	5	8.5	1.3	4.2
Freon-113	U UJ-SSL	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Methylene Chloride	U	21.	ug/Kgdrywt	1	25	42.	13.	21.
Acetone	U	21.	ug/Kgdrywt	1	25	42.	8.7	21.
trans-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Methyl tert-butyl Ether	U	4.2	ug/Kgdrywt	1	5	8.5	1.9	4.2
1,1-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.9	4.2
cis-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Chloroform	U	4.2	ug/Kgdrywt	1	5	8.5	0.60	4.2
Carbon Tetrachloride	U	4.2	ug/Kgdrywt	1	5	8.5	2.2	4.2
1,1,1-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	0.71	4.2
2-Butanone	U	21.	ug/Kgdrywt	1	25	42.	10.	21.
Benzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Cyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
1,2-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
Trichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,2-Dichloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
Bromodichloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
cis-1,3-Dichloropropene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Toluene	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
4-Methyl-2-Pentanone	U	21.	ug/Kgdrywt	1	25	42.	10.	21.
Tetrachloroethene	BJ-DT	11.	ug/Kgdrywt	1	5	8.5	2.0	4.2
trans-1,3-Dichloropropene	U UJ-SSL	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
1,1,2-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Dibromochloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
1,2-Dibromoethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.0	4.2
2-Hexanone	U	21.	ug/Kgdrywt	1	25	42.	8.2	21.
Chlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-SSL	4.2	ug/Kgdrywt	1	5	8.5	1.1	4.2
Total Xylene	U	13.	ug/Kgdrywt	1	15	26.	2.2	13.
Styrene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2
Bromoform	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Isopropylbenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
1,1,2,2-Tetrachloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.4	4.2
1,3-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,4-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.75	4.2
1,2-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
1,2-Dibromo-3-Chloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.6	4.2
1,2,4-Trichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
Methyl Acetate	U	5.1	ug/Kgdrywt	1	5	8.5	4.6	5.1
Methylcyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
p-Bromofluorobenzene	*	78.2	%					
Toluene-D8		93.1	%					
1,2-Dichloroethane-D4		109.	%					
Dibromofluoromethane		104.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1RA
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
Bromomethane	U	7.5	ug/Kgdrywt	1	10	15.	1.6	7.5
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Carbon Disulfide	JB-TBL	1.3	ug/Kgdrywt	1	5	7.5	1.2	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Methylene Chloride	U	19.	ug/Kgdrywt	1	25	38.	12.	19.
Acetone	U	19.	ug/Kgdrywt	1	25	38.	7.6	19.
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
2-Butanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Cyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
4-Methyl-2-Pentanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Tetrachloroethene	B	14.	ug/Kgdrywt	1	5	7.5	1.8	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
2-Hexanone	U	19.	ug/Kgdrywt	1	25	38.	7.2	19.
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-1RA
Client ID: IS66SD15
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 55.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Total Xylene	U	11.	ug/Kgdrywt	1	15	22.	2.0	11.
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Methyl Acetate	U	4.5	ug/Kgdrywt	1	5	7.5	4.0	4.5
Methylcyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
p-Bromofluorobenzene	*	64.6	%					
Toluene-D8		85.3	%					
1,2-Dichloroethane-D4		95.8	%					
Dibromofluoromethane		95.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UJ-SSL	20.	ug/Kgdrywt	1	10	39.	3.6	20.
Chloromethane	U	20.	ug/Kgdrywt	1	10	39.	5.5	20.
Vinyl Chloride	U	20.	ug/Kgdrywt	1	10	39.	3.4	20.
Bromomethane	U	20.	ug/Kgdrywt	1	10	39.	4.3	20.
Chloroethane	U	20.	ug/Kgdrywt	1	10	39.	5.1	20.
Trichlorofluoromethane	U	20.	ug/Kgdrywt	1	10	39.	3.5	20.
1,1-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
Carbon Disulfide	J-BTBL	3.6	ug/Kgdrywt	1	5	20.	3.0	9.8
Freon-113	U UJ-SSL	9.8	ug/Kgdrywt	1	5	20.	3.5	9.8
Methylene Chloride	U	49.	ug/Kgdrywt	1	25	98.	31.	49.
Acetone	U	49.	ug/Kgdrywt	1	25	98.	20.	49.
trans-1,2-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	2.8	9.8
Methyl tert-butyl Ether	U	9.8	ug/Kgdrywt	1	5	20.	4.3	9.8
1,1-Dichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	6.6	9.8
cis-1,2-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	3.5	9.8
Chloroform	U	9.8	ug/Kgdrywt	1	5	20.	1.4	9.8
Carbon Tetrachloride	U	9.8	ug/Kgdrywt	1	5	20.	5.1	9.8
1,1,1-Trichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	1.6	9.8
2-Butanone	U	49.	ug/Kgdrywt	1	25	98.	23.	49.
Benzene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
Cyclohexane	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
1,2-Dichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.9	9.8
Trichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	2.3	9.8
1,2-Dichloropropane	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
Bromodichloromethane	U	9.8	ug/Kgdrywt	1	5	20.	2.3	9.8
cis-1,3-Dichloropropene	U	9.8	ug/Kgdrywt	1	5	20.	2.8	9.8
Toluene	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
4-Methyl-2-Pentanone	U	49.	ug/Kgdrywt	1	25	98.	23.	49.
Tetrachloroethene	JB J-OT	17.	ug/Kgdrywt	1	5	20.	4.7	9.8
trans-1,3-Dichloropropene	U UJ-SSL	9.8	ug/Kgdrywt	1	5	20.	3.4	9.8
1,1,2-Trichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.8	9.8
Dibromochloromethane	U	9.8	ug/Kgdrywt	1	5	20.	3.9	9.8
1,2-Dibromoethane	U	9.8	ug/Kgdrywt	1	5	20.	4.7	9.8
2-Hexanone	U	49.	ug/Kgdrywt	1	25	98.	19.	49.
Chlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	2.0	9.8

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	9.8	ug/Kgdrywt	1	5	20.	2.5	9.8
Total Xylene	U	29.	ug/Kgdrywt	1	15	58.	5.1	29.
Styrene	U	9.8	ug/Kgdrywt	1	5	20.	2.0	9.8
Bromoform	U	9.8	ug/Kgdrywt	1	5	20.	2.7	9.8
Isopropylbenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
1,1,2,2-Tetrachloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.3	9.8
1,3-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	2.4	9.8
1,4-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	1.7	9.8
1,2-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.0	9.8
1,2-Dibromo-3-Chloropropane	U	9.8	ug/Kgdrywt	1	5	20.	5.8	9.8
1,2,4-Trichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.1	9.8
Methyl Acetate	U	12.	ug/Kgdrywt	1	5	20.	10.	12.
Methylcyclohexane	U	9.8	ug/Kgdrywt	1	5	20.	3.7	9.8
p-Bromofluorobenzene	*	69.8	%					
Toluene-D8		89.6	%					
1,2-Dichloroethane-D4		105.	%					
Dibromofluoromethane		101.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2RA
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	20.	ug/Kgdrywt	1	10	39.	3.6	20.
Chloromethane	U	20.	ug/Kgdrywt	1	10	39.	5.5	20.
Vinyl Chloride	U	20.	ug/Kgdrywt	1	10	39.	3.4	20.
Bromomethane	U	20.	ug/Kgdrywt	1	10	39.	4.3	20.
Chloroethane	U	20.	ug/Kgdrywt	1	10	39.	5.1	20.
Trichlorofluoromethane	U	20.	ug/Kgdrywt	1	10	39.	3.5	20.
1,1-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
Carbon Disulfide	J	3.4	ug/Kgdrywt	1	5	20.	3.0	9.8
Freon-113	U	9.8	ug/Kgdrywt	1	5	20.	3.5	9.8
Methylene Chloride	U	49.	ug/Kgdrywt	1	25	98.	31.	49.
Acetone	U	49.	ug/Kgdrywt	1	25	98.	20.	49.
trans-1,2-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	2.8	9.8
Methyl tert-butyl Ether	U	9.8	ug/Kgdrywt	1	5	20.	4.3	9.8
1,1-Dichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	6.6	9.8
cis-1,2-Dichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	3.5	9.8
Chloroform	U	9.8	ug/Kgdrywt	1	5	20.	1.4	9.8
Carbon Tetrachloride	U	9.8	ug/Kgdrywt	1	5	20.	5.1	9.8
1,1,1-Trichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	1.6	9.8
2-Butanone	U	49.	ug/Kgdrywt	1	25	98.	23.	49.
Benzene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
Cyclohexane	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
1,2-Dichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.9	9.8
Trichloroethene	U	9.8	ug/Kgdrywt	1	5	20.	2.3	9.8
1,2-Dichloropropane	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
Bromodichloromethane	U	9.8	ug/Kgdrywt	1	5	20.	2.3	9.8
cis-1,3-Dichloropropene	U	9.8	ug/Kgdrywt	1	5	20.	2.8	9.8
Toluene	U	9.8	ug/Kgdrywt	1	5	20.	5.5	9.8
4-Methyl-2-Pentanone	U	49.	ug/Kgdrywt	1	25	98.	23.	49.
Tetrachloroethene	B	26.	ug/Kgdrywt	1	5	20.	4.7	9.8
trans-1,3-Dichloropropene	U	9.8	ug/Kgdrywt	1	5	20.	3.4	9.8
1,1,2-Trichloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.8	9.8
Dibromochloromethane	U	9.8	ug/Kgdrywt	1	5	20.	3.9	9.8
1,2-Dibromoethane	U	9.8	ug/Kgdrywt	1	5	20.	4.7	9.8
2-Hexanone	U	49.	ug/Kgdrywt	1	25	98.	19.	49.
Chlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	2.0	9.8

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HK 12/22/2010

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-2RA
Client ID: IS66SD14
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 32.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude PE	9.8	ug/Kgdrywt	1	5	20.	2.5	9.8
Total Xylene	U	29.	ug/Kgdrywt	1	15	58.	5.1	29.
Styrene	U	9.8	ug/Kgdrywt	1	5	20.	2.0	9.8
Bromoform	U	9.8	ug/Kgdrywt	1	5	20.	2.7	9.8
Isopropylbenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.6	9.8
1,1,2,2-Tetrachloroethane	U	9.8	ug/Kgdrywt	1	5	20.	3.3	9.8
1,3-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	2.4	9.8
1,4-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	1.7	9.8
1,2-Dichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.0	9.8
1,2-Dibromo-3-Chloropropane	U	9.8	ug/Kgdrywt	1	5	20.	5.8	9.8
1,2,4-Trichlorobenzene	U	9.8	ug/Kgdrywt	1	5	20.	3.1	9.8
Methyl Acetate	U	12.	ug/Kgdrywt	1	5	20.	10.	12.
Methylcyclohexane	U	9.8	ug/Kgdrywt	1	5	20.	3.7	9.8
p-Bromofluorobenzene	*	66.1	%					
Toluene-D8		91.0	%					
1,2-Dichloroethane-D4		104.	%					
Dibromofluoromethane		101.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide		1.1	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone		14.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		5.2	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3
Client ID: IS66DP400001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U EXCLUDE-RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene		7.7	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	78.2	%					
Toluene-D8		93.2	%					
1,2-Dichloroethane-D4		125.	%					
Dibromofluoromethane		114.	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3RA
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	JB-MBL	1.4	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U UJ-SSL	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	JB-EBL	15.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-OT	7.3	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-3RA
Client ID: IS66DP400001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	81.3	%					
Toluene-D8		86.2	%					
1,2-Dichloroethane-D4		118.	%					
Dibromofluoromethane		103.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	JB-MBL	1.2	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	JB-EBL	6.6	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	JB-OT	5.1	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		104.	%					
Toluene-D8		112.	%					
1,2-Dichloroethane-D4	*	137.	%					
Dibromofluoromethane		129.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4RA
Client ID: IS66DP400910
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide		1.4	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J	8.0	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		8.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-4RA
Client ID: IS66DP400910 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	126.	%					
Toluene-D8	*	129.	%					
1,2-Dichloroethane-D4	*	142.	%					
Dibromofluoromethane	*	134.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-5RA
Client ID: IS66TB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.90	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	U	2.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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REISSUE

HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-5RA
Client ID: IS66TB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		91.2	%					
Toluene-d8		101.	%					
1,2-Dichloroethane-d4		99.4	%					
Dibromofluoromethane		101.	%					

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REISSUE

HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6RA
Client ID: 1S66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.80	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone		6.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-6RA
Client ID: IS66EB01-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		87.0	%					
Toluene-d8		95.5	%					
1,2-Dichloroethane-d4		98.2	%					
Dibromofluoromethane		94.4	%					

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REISSUE

HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site E
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.92	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.5	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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HK 12/22/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-7
Client ID: IS66EB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83328

Analysis Date: 11-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		100.	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		110.	%					
Dibromofluoromethane		108.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	JB-MBL	1.3	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	U	18.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	JBJ-DT	6.0	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	UJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	UJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene		92.5	%					
Toluene-D8		90.0	%					
1,2-Dichloroethane-D4		132.	%					
Dibromofluoromethane		116.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8RA
Client ID: 1S66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U EXCLUDE-RE	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J B-MDL	1.7	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	J	11.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene		14.	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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HK 12/22/2010

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-8RA
Client ID: IS66DP410001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 58.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene		115.	%					
Toluene-D8	*	125.	%					
1,2-Dichloroethane-D4	*	145.	%					
Dibromofluoromethane	*	135.	%					

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Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH
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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide		2.4	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone		110	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	J	24.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		9.7	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene		8.8	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene		45.	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene		19.	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		92.6	%					
Toluene-D8		110.	%					
1,2-Dichloroethane-D4	*	138.	%					
Dibromofluoromethane	*	131.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9RA
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	JB-MBL	2.3	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone	J-2S	95.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	J	22.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene	J-OT	9.6	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-9RA
Client ID: IS66DP410607
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene		9.3	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene		50.	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene		22.	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene		87.8	%					
Toluene-D8		110.	%					
1,2-Dichloroethane-D4		128.	%					
Dibromofluoromethane		119.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-10
Client ID: IS66TB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 100
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-MBL	0.94	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J2S J B-EBL	14.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	B J-CT	7.1	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Cert No EB760

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6045-10
Client ID: IS66TB02-093010
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 30-SEP-10
Received Date: 01-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83037

Analysis Date: 05-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 100
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		111.	%					
Toluene-D8		103.	%					
1,2-Dichloroethane-D4		114.	%					
Dibromofluoromethane		109.	%					

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REISSUE

HK 12/22/2010

Katahdin
ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UJ-SSL	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-MBL	1.3	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J-SSL	67.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	J-SSL	7.1	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U UJ-SSL	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-OT	6.3	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/22/2010

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1
Client ID: IS66DP230001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	J-SSL	5.6	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	J-SSL	3.7	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U UJ-SSL	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	82.4	%					
Toluene-D8		92.3	%					
1,2-Dichloroethane-D4		119.	%					
Dibromofluoromethane		109.	%					

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ANALYTICAL SERVICES

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1RA
Client ID: SS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U EXCLUDE	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J	1.9	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	~~JB EBL~~	29.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene		8.2	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-1RA
Client ID: IS66DP230001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		105.	%					
Toluene-D8	*	151.	%					
1,2-Dichloroethane-D4	*	171.	%					
Dibromofluoromethane	*	160.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66DP231516 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	J	1.4	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-mBL	1.1	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	U	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J EFOT	4.8	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-2
Client ID: IS66SB231516
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 81.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		91.2	%					
Toluene-D8		98.8	%					
1,2-Dichloroethane-D4		109.	%					
Dibromofluoromethane		104.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UJ-SSL	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J-B-MBL	1.2	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	UJ-SSL	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J-SSL	45.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	J-SSL	3.0	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J-OT	8.6	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	78.5	%					
Toluene-D8		102.	%					
1,2-Dichloroethane-D4		116.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3DLRA
Client ID: IS66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83388

Analysis Date: 12-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RE	320	ug/Kgdrywt	1	10	640	59.	320
Chloromethane	U	320	ug/Kgdrywt	1	10	640	90.	320
Vinyl Chloride	U	320	ug/Kgdrywt	1	10	640	56.	320
Bromomethane	U	320	ug/Kgdrywt	1	10	640	70.	320
Chloroethane	U	320	ug/Kgdrywt	1	10	640	83.	320
Trichlorofluoromethane	U	320	ug/Kgdrywt	1	10	640	58.	320
1,1-Dichloroethene	U	160	ug/Kgdrywt	1	5	320	60.	160
Carbon Disulfide	U	160	ug/Kgdrywt	1	5	320	50.	160
Freon-113	U	160	ug/Kgdrywt	1	5	320	58.	160
Methylene Chloride	U	800	ug/Kgdrywt	1	25	1600	500	800
Acetone	U	800	ug/Kgdrywt	1	25	1600	330	800
trans-1,2-Dichloroethene	U	160	ug/Kgdrywt	1	5	320	45.	160
Methyl tert-butyl Ether	U	160	ug/Kgdrywt	1	5	320	70.	160
1,1-Dichloroethane	U	160	ug/Kgdrywt	1	5	320	110	160
cis-1,2-Dichloroethene	U	160	ug/Kgdrywt	1	5	320	58.	160
Chloroform	U	160	ug/Kgdrywt	1	5	320	22.	160
Carbon Tetrachloride	U	160	ug/Kgdrywt	1	5	320	83.	160
1,1,1-Trichloroethane	U	160	ug/Kgdrywt	1	5	320	27.	160
2-Butanone	U	800	ug/Kgdrywt	1	25	1600	380	800
Benzene	U	160	ug/Kgdrywt	1	5	320	59.	160
Cyclohexane	U	160	ug/Kgdrywt	1	5	320	90.	160
1,2-Dichloroethane	U	160	ug/Kgdrywt	1	5	320	64.	160
Trichloroethene	U	160	ug/Kgdrywt	1	5	320	38.	160
1,2-Dichloropropane	U	160	ug/Kgdrywt	1	5	320	90.	160
Bromodichloromethane	U	160	ug/Kgdrywt	1	5	320	38.	160
cis-1,3-Dichloropropene	U	160	ug/Kgdrywt	1	5	320	46.	160
Toluene	U	160	ug/Kgdrywt	1	5	320	90.	160
4-Methyl-2-Pentanone	U	800	ug/Kgdrywt	1	25	1600	380	800
Tetrachloroethene	U	160	ug/Kgdrywt	1	5	320	77.	160
trans-1,3-Dichloropropene	U	160	ug/Kgdrywt	1	5	320	55.	160
1,1,2-Trichloroethane	U	160	ug/Kgdrywt	1	5	320	62.	160
Dibromochloromethane	U	160	ug/Kgdrywt	1	5	320	64.	160
1,2-Dibromoethane	U	160	ug/Kgdrywt	1	5	320	77.	160
2-Hexanone	U	800	ug/Kgdrywt	1	25	1600	310	800
Chlorobenzene	U	160	ug/Kgdrywt	1	5	320	33.	160

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-3DLRA
Client ID: 1S66DP220001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83388

Analysis Date: 12-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 86.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	160	ug/Kgdrywt	1	5	320	42.	160
Total Xylene	U	480	ug/Kgdrywt	1	15	960	83.	480
Styrene	U	160	ug/Kgdrywt	1	5	320	33.	160
Bromoform	U	160	ug/Kgdrywt	1	5	320	45.	160
Isopropylbenzene	U	160	ug/Kgdrywt	1	5	320	59.	160
1,1,2,2-Tetrachloroethane	U	160	ug/Kgdrywt	1	5	320	54.	160
1,3-Dichlorobenzene	U	160	ug/Kgdrywt	1	5	320	40.	160
1,4-Dichlorobenzene	U	160	ug/Kgdrywt	1	5	320	28.	160
1,2-Dichlorobenzene	U	160	ug/Kgdrywt	1	5	320	50.	160
1,2-Dibromo-3-Chloropropane	U	160	ug/Kgdrywt	1	5	320	96.	160
1,2,4-Trichlorobenzene	U	160	ug/Kgdrywt	1	5	320	50.	160
Methyl Acetate	B	410	ug/Kgdrywt	1	5	320	170	190
Methylcyclohexane	U	160	ug/Kgdrywt	1	5	320	61.	160
p-Bromofluorobenzene	*	127.	%					
Toluene-D8	*	124.	%					
1,2-Dichloroethane-D4	*	134.	%					
Dibromofluoromethane		128.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	UJ-SSL	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	JB-MBL	1.2	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	J-SSL	54.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	J-SSL	4.6	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J-DT	6.9	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	UJ-SSL	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	78.6	%					
Toluene-D8		101.	%					
1,2-Dichloroethane-D4		122.	%					
Dibromofluoromethane		115.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RA
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J	1.4	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	B	35.	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	J	0.76	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		8.0	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-4RA
Client ID: IS66DP22P0001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 85.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude-RE	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		112.	%					
Toluene-D8	*	147.	%					
1,2-Dichloroethane-D4	*	171.	%					
Dibromofluoromethane	*	157.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	JBMBL	1.4	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone	JBEBL	9.2	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene	J-QT	6.7	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5
Client ID: IS66DP221112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene		119.	%					
Toluene-D8	*	122.	%					
1,2-Dichloroethane-D4	*	143.	%					
Dibromofluoromethane	*	133.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5DLRA
Client ID: IS66DP221112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83388

Analysis Date: 12-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-PE	360	ug/Kgdrywt	1	10	710	65.	360
Chloromethane	U	360	ug/Kgdrywt	1	10	710	99.	360
Vinyl Chloride	U	360	ug/Kgdrywt	1	10	710	62.	360
Bromomethane	U	360	ug/Kgdrywt	1	10	710	78.	360
Chloroethane	U	360	ug/Kgdrywt	1	10	710	92.	360
Trichlorofluoromethane	U	360	ug/Kgdrywt	1	10	710	65.	360
1,1-Dichloroethene	U	180	ug/Kgdrywt	1	5	360	66.	180
Carbon Disulfide	U	180	ug/Kgdrywt	1	5	360	55.	180
Freon-113	U	180	ug/Kgdrywt	1	5	360	64.	180
Methylene Chloride	U	890	ug/Kgdrywt	1	25	1800	560	890
Acetone	U	890	ug/Kgdrywt	1	25	1800	360	890
trans-1,2-Dichloroethene	U	180	ug/Kgdrywt	1	5	360	50.	180
Methyl tert-butyl Ether	U	180	ug/Kgdrywt	1	5	360	78.	180
1,1-Dichloroethane	U	180	ug/Kgdrywt	1	5	360	120	180
cis-1,2-Dichloroethene	U	180	ug/Kgdrywt	1	5	360	65.	180
Chloroform	U	180	ug/Kgdrywt	1	5	360	25.	180
Carbon Tetrachloride	U	180	ug/Kgdrywt	1	5	360	92.	180
1,1,1-Trichloroethane	U	180	ug/Kgdrywt	1	5	360	30.	180
2-Butanone	U	890	ug/Kgdrywt	1	25	1800	420	890
Benzene	U	180	ug/Kgdrywt	1	5	360	65.	180
Cyclohexane	U	180	ug/Kgdrywt	1	5	360	99.	180
1,2-Dichloroethane	U	180	ug/Kgdrywt	1	5	360	71.	180
Trichloroethene	U	180	ug/Kgdrywt	1	5	360	42.	180
1,2-Dichloropropane	U	180	ug/Kgdrywt	1	5	360	99.	180
Bromodichloromethane	U	180	ug/Kgdrywt	1	5	360	43.	180
cis-1,3-Dichloropropene	U	180	ug/Kgdrywt	1	5	360	51.	180
Toluene	U	180	ug/Kgdrywt	1	5	360	99.	180
4-Methyl-2-Pentanone	U	890	ug/Kgdrywt	1	25	1800	420	890
Tetrachloroethene	U	180	ug/Kgdrywt	1	5	360	85.	180
trans-1,3-Dichloropropene	U	180	ug/Kgdrywt	1	5	360	61.	180
1,1,2-Trichloroethane	U	180	ug/Kgdrywt	1	5	360	69.	180
Dibromochloromethane	U	180	ug/Kgdrywt	1	5	360	71.	180
1,2-Dibromoethane	U	180	ug/Kgdrywt	1	5	360	85.	180
2-Hexanone	U	890	ug/Kgdrywt	1	25	1800	340	890
Chlorobenzene	U	180	ug/Kgdrywt	1	5	360	36.	180

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-5DLRA
Client ID: IS66DP221112 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83388

Analysis Date: 12-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 78.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U Exclude RF	180	ug/Kgdrywt	1	5	360	46.	180
Total Xylene	U	530	ug/Kgdrywt	1	15	1100	92.	530
Styrene	U	180	ug/Kgdrywt	1	5	360	36.	180
Bromoform	U	180	ug/Kgdrywt	1	5	360	50.	180
Isopropylbenzene	U	180	ug/Kgdrywt	1	5	360	65.	180
1,1,2,2-Tetrachloroethane	U	180	ug/Kgdrywt	1	5	360	60.	180
1,3-Dichlorobenzene	U	180	ug/Kgdrywt	1	5	360	44.	180
1,4-Dichlorobenzene	U	180	ug/Kgdrywt	1	5	360	31.	180
1,2-Dichlorobenzene	U	180	ug/Kgdrywt	1	5	360	55.	180
1,2-Dibromo-3-Chloropropane	U	180	ug/Kgdrywt	1	5	360	110	180
1,2,4-Trichlorobenzene	U	180	ug/Kgdrywt	1	5	360	56.	180
Methyl Acetate	JB	270	ug/Kgdrywt	1	5	360	190	210
Methylcyclohexane	U	180	ug/Kgdrywt	1	5	360	68.	180
p-Bromofluorobenzene		101.	%					
Toluene-D8		96.2	%					
1,2-Dichloroethane-D4		107.	%					
Dibromofluoromethane		94.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	JB MBL	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	JB-EBL	11.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene		13.	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-5-OT	2.1	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6082-6
Client ID: IS66DP22P1112
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-4

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 79.
Report Date: 22-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		99.8	%					
Toluene-D8		98.9	%					
1,2-Dichloroethane-D4		116.	%					
Dibromofluoromethane		107.	%					

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Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 29th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001049.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66MW020910	E1001049-001
IS66EB01-092910	E1001049-002
IS66EB02-092910	E1001049-003
IS66MW010910	E1001049-004
IS66DP320001	E1001049-005
IS66DP32P0001	E1001049-006
IS66DP320809	E1001049-007
IS66DP32P0809	E1001049-008
IS66DP350001	E1001049-009
IS66DP351415	E1001049-010

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times
According to the chain of custody records, sampling was performed on 9/29/10. Samples were received at the laboratory on 9/30/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66MW020910	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66EB02-092910	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP350001	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP350001	1,2,3,6,7,8-Hexachlorodibenzofuran

EMPCs
The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66EB01-092910	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66EB02-092910	Octachlorodibenzofuran
IS66MW010910	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP351415	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP351415	Octachlorodibenzofuran

Blanks

Various compounds in were detected in the method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.538	2.69
Method Blank	Octachlorodibenzo-p-dioxin	5.03	50.3
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.124	0.62
Method Blank	Octachlorodibenzofuran	0.215	1.075
Method Blank	Total heptachlorodibenzo-p-dioxin	1.34	6.7
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	61	305
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	56	280
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	67	335
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	60	300
Method Blank	Octachlorodibenzo-p-dioxin-C13	50	500
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	60	300
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	65	325
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	59	295
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	74	370
Method Blank	Octachlorodibenzo-p-dioxin	2.56	25.6
Method Blank	Total heptachlorodibenzo-p-dioxin	1.55	7.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	60	300
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	62	310
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	53	265
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	55	275
Method Blank	Octachlorodibenzo-p-dioxin-C13	51	510
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	59	295
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	77	385

Matrix Spike/Spike Duplicate

1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin exhibited high recoveries for the MS/MSD for sample IS66DP351415. Data are summarized in **Attachment 1.**

Field Duplicate Precision
Field duplicate precision was not met for the compounds in the samples listed below. Affected data are summarized in **Attachment 1.**

Sample ID	Compound
IS66DP320001	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP320001	Octachlorodibenzo-p-dioxin
IS66DP32P0001	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP32P0001	Octachlorodibenzo-p-dioxin
IS66DP320809	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP320809	Octachlorodibenzo-p-dioxin
IS66DP32P0809	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66DP32P0809	Octachlorodibenzo-p-dioxin

Linear Range
Octachlorodibenzo-p-dioxin was outside of linear range for samples IS66DP350001 and IS66DP351415. Data are summarized in **Attachment 1.**

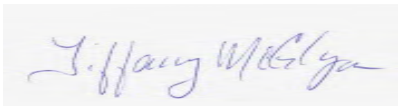
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 29th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001059.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66EB01-100110	E1001059-001
IS66EB02-100110	E1001059-002
IS66EB02-093010	E1001059-003
IS66EB01-093010	E1001059-004
IS66SD15	E1001059-005
IS66SD14	E1001059-006
IS66DP400001	E1001059-007
IS66DP400910	E1001059-008
IS66DP410001	E1001059-009
IS66DP410607	E1001059-010
IS66SD13	E1001059-011
IS66SD12	E1001059-012
IS66SD11	E1001059-013
IS66SD10	E1001059-014

IS66SD09	E1001059-015
IS66SD08	E1001059-016

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times
According to the chain of custody records, sampling was performed on 9/30/10 and 10/1/10. Samples were received at the laboratory on 10/2/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66EB01-100110	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin
IS66SD15	2,3,7,8-TCDD (dioxin)
IS66SD15	1,2,3,4,7,8,9-Heptachlorodibenzofuran
IS66SD14	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP400001	2,3,4,7,8-Pentachlorodibenzofuran
IS66DP400001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP400001	1,2,3,4,7,8,9-Heptachlorodibenzofuran
IS66DP400910	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP410001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP410001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP410001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP410607	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP410607	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66SD13	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66SD12	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66SD12	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66SD11	2,3,7,8-TCDD (dioxin)
IS66SD11	2,3,4,7,8-Pentachlorodibenzofuran
IS66SD11	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66SD11	1,2,3,4,7,8,9-Heptachlorodibenzofuran

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66SD15	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66SD15	1,2,3,7,8-Pentachlorodibenzofuran
IS66SD15	2,3,4,7,8-Pentachlorodibenzofuran
IS66DP400001	1,2,3,7,8-Pentachlorodibenzo-p-dioxin
IS66DP400001	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66DP400001	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66DP410001	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66DP410001	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66DP410001	1,2,3,4,6,7,8-Heptachlorodibenzofuran
IS66DP410607	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66SD13	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
IS66SD13	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66SD12	1,2,3,4,7,8,9-Heptachlorodibenzofuran
IS66SD10	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin
IS66SD10	1,2,3,4,7,8,9-Heptachlorodibenzofuran
IS66SD09	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66SD09	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66SD09	1,2,3,4,6,7,8-Heptachlorodibenzofuran
IS66SD08	1,2,3,4,7,8-Hexachlorodibenzofuran
IS66SD08	2,3,4,6,7,8-Hexachlorodibenzofuran

Blanks

Various compounds in were detected in the method blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Action Level
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.538	2.69
Method Blank	Octachlorodibenzo-p-dioxin	5.03	50.3
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.124	0.62
Method Blank	Octachlorodibenzofuran	0.215	1.075
Method Blank	Total heptachlorodibenzo-p-dioxin	1.34	6.7
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	61	305
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	56	280

Blank ID	Compound	Conc.	Action Level
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	67	335
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	60	300
Method Blank	Octachlorodibenzo-p-dioxin-C13	50	500
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	60	300
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	65	325
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	59	295
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	74	370
Method Blank	Octachlorodibenzo-p-dioxin	2.56	25.6
Method Blank	Total heptachlorodibenzo-p-dioxin	1.55	7.75
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	60	300
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	62	310
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	53	265
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	55	275
Method Blank	Octachlorodibenzo-p-dioxin-C13	51	510
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	70	350
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	56	280
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	59	295
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	77	385
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.178	0.89
Method Blank	Octachlorodibenzo-p-dioxin	0.653	6.53
Method Blank	Octachlorodibenzofuran	0.269	1.345
Method Blank	Total heptachlorodibenzo-p-dioxin	0.178	0.89
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-C13	60	300
Method Blank	1,2,3,7,8-Pentachlorodibenzo-p-dioxin-C13	63	315
Method Blank	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin-C13	68	340
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin-C13	72	360
Method Blank	Octachlorodibenzo-p-dioxin-C13	54	540
Method Blank	2,3,7,8-Tetrachlorodibenzofuran-C13	62	310
Method Blank	1,2,3,7,8-Pentachlorodibenzofuran-C13	67	335
Method Blank	1,2,3,4,7,8-Hexachlorodibenzofuran-C13	62	310
Method Blank	1,2,3,4,6,7,8-Heptachlorodibenzofuran-C13	72	360
Method Blank	2,3,7,8-Tetrachlorodibenzo-p-dioxin-Cl37	76	380

Linear Range
Octachlorodibenzo-p-dioxin was outside of linear range for the samples listed below. Data are summarized in **Attachment 1.**

Sample_Name
IS66DP400001
IS66DP410001
IS66DP410607

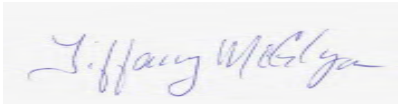
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
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CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	GW IS66MW020910	**Units:**	pg/L
Lab Code:	E1001049-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1925
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	920mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209773	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.375	10.9			1
1,2,3,7,8-PeCDD	ND	U	0.217	27.2			1
1,2,3,4,7,8-HxCDD	ND	U	0.372	27.2			1
1,2,3,6,7,8-HxCDD	ND	U	0.310	27.2			1
1,2,3,7,8,9-HxCDD	ND	U	0.375	27.2			1
1,2,3,4,6,7,8-HpCDD	**1.05**	JK	0.268	27.2	1.42	1.000	1
OCDD	**8.40**	BJK	0.549	54.3	1.03	1.000	1
2,3,7,8-TCDF	ND	U	0.473	10.9			1
1,2,3,7,8-PeCDF	ND	U	0.270	27.2			1
2,3,4,7,8-PeCDF	ND	U	0.248	27.2			1
1,2,3,4,7,8-HxCDF	ND	U	0.192	27.2			1
1,2,3,6,7,8-HxCDF	ND	U	0.178	27.2			1
1,2,3,7,8,9-HxCDF	ND	U	0.265	27.2			1
2,3,4,6,7,8-HxCDF	ND	U	0.212	27.2			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.436	27.2			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.578	27.2			1
OCDF	ND	U	0.593	54.3			1
Total Tetra-Dioxins	ND	U	0.375	10.9			1
Total Penta-Dioxins	ND	U	0.217	27.2			1
Total Hexa-Dioxins	ND	U	0.310	27.2			1
Total Hepta-Dioxins	ND	U	0.268	27.2			1
Total Tetra-Furans	ND	U	0.473	10.9			1
Total Penta-Furans	ND	U	0.248	27.2			1
Total Hexa-Furans	ND	U	0.178	27.2			1
Total Hepta-Furans	ND	U	0.436	27.2			1

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	GW IS66MW020910	**Units:**	Percent
Lab Code:	E1001049-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 1925
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	920mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209773	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	566.153	57		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	604.671	60		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1245.849	50		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1287.116	51		40-135	1.07	1.068
13C-OCDD	5000	2286.602	46		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	488.188	49		40-135	0.76	0.977
13C-1,2,3,7,8-PeCDF	1000	680.869	68		40-135	1.60	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1267.851	51		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1355.997	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	590.155	74		40-135	NA	1.009

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66MW020910 GW	**Units:**	pg/L
Lab Code:	E1001049-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.375	1	1	
1,2,3,7,8-PeCDD	ND	0.217	1	1	
1,2,3,4,7,8-HxCDD	ND	0.372	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.310	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.375	1	0.1	
1,2,3,4,6,7,8-HpCDD	**1.05**	0.268	1	0.01	0.0105
OCDD	**8.40**	0.549	1	0.0003	0.00252
2,3,7,8-TCDF	ND	0.473	1	0.1	
1,2,3,7,8-PeCDF	ND	0.270	1	0.03	
2,3,4,7,8-PeCDF	ND	0.248	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.192	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.178	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.265	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.212	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.436	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.578	1	0.01	
OCDF	ND	0.593	1	0.0003	
		Total TEQ			0.0130

2005 WHO TEFs, ND = 0

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1030
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB01-092910	**Units:**	pg/L
Lab Code:	E1001049-002	**Basis:**	NA

EB-01

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2014
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209774	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.351	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.332	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.275	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.230	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.278	25.5			1
1,2,3,4,6,7,8-HpCDD	**0.764**	JK	0.246	25.5	0.81	1.000	1
OCDD	**3.04**	BJK	0.622	51.0	0.63	1.000	1
2,3,7,8-TCDF	ND	U	0.276	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.260	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.239	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.295	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.275	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.409	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.328	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.354	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.467	25.5			1
OCDF	ND	U	0.474	51.0			1
Total Tetra-Dioxins	ND	U	0.351	10.2			1
Total Penta-Dioxins	ND	U	0.332	25.5			1
Total Hexa-Dioxins	ND	U	0.230	25.5			1
Total Hepta-Dioxins	ND	U	0.246	25.5			1
Total Tetra-Furans	ND	U	0.276	10.2			1
Total Penta-Furans	ND	U	0.239	25.5			1
Total Hexa-Furans	ND	U	0.275	25.5			1
Total Hepta-Furans	ND	U	0.354	25.5			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1030
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB01-092910	**Units:**	Percent
Lab Code:	E1001049-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2014
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209774	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	587.203	59		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	598.190	60		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1281.058	51		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1259.899	50		40-135	1.06	1.068
13C-OCDD	5000	2103.809	42		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	518.095	52		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	677.595	68		40-135	1.61	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1317.394	53		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1330.416	53		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	600.337	75		40-135	NA	1.010

EB-01

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1030
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB01-092910	**Units:**	pg/L
Lab Code:	E1001049-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.351	1	1	
1,2,3,7,8-PeCDD	ND	0.332	1	1	
1,2,3,4,7,8-HxCDD	ND	0.275	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.230	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.278	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.764**	0.246	1	0.01	0.00764
OCDD	**3.04**	0.622	1	0.0003	0.000912
2,3,7,8-TCDF	ND	0.276	1	0.1	
1,2,3,7,8-PeCDF	ND	0.260	1	0.03	
2,3,4,7,8-PeCDF	ND	0.239	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.295	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.275	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.409	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.328	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.354	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.467	1	0.01	
OCDF	ND	0.474	1	0.0003	
		Total TEQ			0.00855

2005 WHO TEFs, ND = 0

EB-02

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1410
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB02-092910	**Units:**	pg/L
Lab Code:	E1001049-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2102
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	990mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209775	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.490	10.1			1
1,2,3,7,8-PeCDD	ND	U	0.410	25.3			1
1,2,3,4,7,8-HxCDD	ND	U	0.456	25.3			1
1,2,3,6,7,8-HxCDD	ND	U	0.380	25.3			1
1,2,3,7,8,9-HxCDD	ND	U	0.460	25.3			1
1,2,3,4,6,7,8-HpCDD	**0.548**	JK	0.137	25.3	0.49	1.000	1
OCDD	**5.31**	BJ	0.581	50.5	0.78	1.000	1
2,3,7,8-TCDF	ND	U	0.377	10.1			1
1,2,3,7,8-PeCDF	ND	U	0.297	25.3			1
2,3,4,7,8-PeCDF	ND	U	0.273	25.3			1
1,2,3,4,7,8-HxCDF	ND	U	0.223	25.3			1
1,2,3,6,7,8-HxCDF	ND	U	0.208	25.3			1
1,2,3,7,8,9-HxCDF	ND	U	0.309	25.3			1
2,3,4,6,7,8-HxCDF	ND	U	0.247	25.3			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.526	25.3			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.694	25.3			1
OCDF	**1.84**	JK	0.664	50.5	0.75	1.004	1
Total Tetra-Dioxins	ND	U	0.490	10.1			1
Total Penta-Dioxins	ND	U	0.410	25.3			1
Total Hexa-Dioxins	ND	U	0.380	25.3			1
Total Hepta-Dioxins	ND	U	0.137	25.3			1
Total Tetra-Furans	ND	U	0.377	10.1			1
Total Penta-Furans	ND	U	0.273	25.3			1
Total Hexa-Furans	ND	U	0.208	25.3			1
Total Hepta-Furans	ND	U	0.526	25.3			1

EB-02

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1410
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB02-092910	**Units:**	Percent
Lab Code:	E1001049-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2102
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	990mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209775	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	506.875	51		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	504.799	50		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1171.334	47		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1129.060	45		40-135	1.07	1.068
13C-OCDD	5000	1784.646	36	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	429.930	43		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	564.520	56		40-135	1.61	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1186.064	47		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1225.567	49		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	547.792	68		40-135	NA	1.009

EB-02

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1410
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66EB02-092910	**Units:**	pg/L
Lab Code:	E1001049-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.490	1	1	
1,2,3,7,8-PeCDD	ND	0.410	1	1	
1,2,3,4,7,8-HxCDD	ND	0.456	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.380	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.460	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.548**	0.137	1	0.01	0.00548
OCDD	**5.31**	0.581	1	0.0003	0.00159
2,3,7,8-TCDF	ND	0.377	1	0.1	
1,2,3,7,8-PeCDF	ND	0.297	1	0.03	
2,3,4,7,8-PeCDF	ND	0.273	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.223	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.208	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.309	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.247	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.526	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.694	1	0.01	
OCDF	**1.84**	0.664	1	0.0003	0.000552
		Total TEQ			0.00762

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 66 386329	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	IS66FB092710	Units:	pg/L
Lab Code:	E1001042-009	Basis:	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	Date Analyzed:	10/5/10 1256
Prep Method:	Method	Date Extracted:	9/30/10
Sample Amount:	1020mL	Instrument Name:	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	Blank File Name:	P209714
ICAL Date:	08/01/08	Cal Ver. File Name:	P209713

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.271	9.80			1
1,2,3,7,8-PeCDD	ND	U	0.301	24.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.288	24.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.252	24.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.275	24.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.295	24.5			1
OCDD	3.54	B	0.421	49.0	0.98	1.000	1
2,3,7,8-TCDF	ND	U	0.411	9.80			1
1,2,3,7,8-PeCDF	ND	U	0.381	24.5			1
2,3,4,7,8-PeCDF	ND	U	0.377	24.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.110	24.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.105	24.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.137	24.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.117	24.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.228	24.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.309	24.5			1
OCDF	ND	U	0.568	49.0			1
Total Tetra-Dioxins	ND	U	0.271	9.80			1
Total Penta-Dioxins	ND	U	0.301	24.5			1
Total Hexa-Dioxins	ND	U	0.252	24.5			1
Total Hepta-Dioxins	ND	U	0.295	24.5			1
Total Tetra-Furans	ND	U	0.411	9.80			1
Total Penta-Furans	ND	U	0.377	24.5			1
Total Hexa-Furans	ND	U	0.105	24.5			1
Total Hepta-Furans	ND	U	0.228	24.5			1

Analytical Report

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 00386529	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	IS66FB092710	Units:	Percent
Lab Code:	E1001042-009	Basis:	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	Date Analyzed:	10/5/10 1256
Prep Method:	Method	Date Extracted:	9/30/10
Sample Amount:	1020mL	Instrument Name:	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209715	Blank File Name:	P209714
ICAL Date:	08/01/08	Cal Ver. File Name:	P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	641.773	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	747.011	75		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1812.083	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1602.195	64		40-135	1.06	1.068
13C-OCDD	5000	2165.257	43		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	607.162	61		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	697.334	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1658.315	66		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1484.918	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.137	81		40-135	NA	1.010

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 09.286329	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	IS66FB092710	Units:	pg/L
Lab Code:	E1001042-009	Basis:	NA

FB

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.271	1	1	
1,2,3,7,8-PeCDD	ND	0.301	1	1	
1,2,3,4,7,8-HxCDD	ND	0.288	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.252	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.275	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.295	1	0.01	
OCDD	3.54	0.421	1	0.0003	0.00106
2,3,7,8-TCDF	ND	0.411	1	0.1	
1,2,3,7,8-PeCDF	ND	0.381	1	0.03	
2,3,4,7,8-PeCDF	ND	0.377	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.117	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.228	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.309	1	0.01	
OCDF	ND	0.568	1	0.0003	
		Total TEQ			0.00106

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1210
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	GW IS66MW010910	**Units:**	pg/L
Lab Code:	E1001049-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2151
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209776	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.516	10.6			1
1,2,3,7,8-PeCDD	ND	U	0.277	26.6			1
1,2,3,4,7,8-HxCDD	ND	U	0.415	26.6			1
1,2,3,6,7,8-HxCDD	ND	U	0.346	26.6			1
1,2,3,7,8,9-HxCDD	ND	U	0.419	26.6			1
1,2,3,4,6,7,8-HpCDD	**0.855**	JK	0.122	26.6	0.81	1.000	1
OCDD	B-MBL **4.40**	BJK	0.545	53.2	1.15	1.001	1
2,3,7,8-TCDF	ND	U	0.320	10.6			1
1,2,3,7,8-PeCDF	ND	U	0.441	26.6			1
2,3,4,7,8-PeCDF	ND	U	0.406	26.6			1
1,2,3,4,7,8-HxCDF	ND	U	0.128	26.6			1
1,2,3,6,7,8-HxCDF	ND	U	0.120	26.6			1
1,2,3,7,8,9-HxCDF	ND	U	0.177	26.6			1
2,3,4,6,7,8-HxCDF	ND	U	0.142	26.6			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.229	26.6			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.303	26.6			1
OCDF	ND	U	0.476	53.2			1
Total Tetra-Dioxins	ND	U	0.516	10.6			1
Total Penta-Dioxins	ND	U	0.277	26.6			1
Total Hexa-Dioxins	ND	U	0.346	26.6			1
Total Hepta-Dioxins	ND	U	0.122	26.6			1
Total Tetra-Furans	ND	U	0.320	10.6			1
Total Penta-Furans	ND	U	0.406	26.6			1
Total Hexa-Furans	ND	U	0.120	26.6			1
Total Hepta-Furans	ND	U	0.229	26.6			1

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1210
Sample Matrix:	Water	**Date Received:**	9/30/10
Sample Name:	IS66~~MW~~GW010910	**Units:**	Percent
Lab Code:	E1001049-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2151
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	940mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209776	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	562.260	56		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	571.251	57		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1361.743	54		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1352.086	54		40-135	1.05	1.068
13C-OCDD	5000	2294.664	46		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	494.859	49		40-135	0.81	0.977
13C-1,2,3,7,8-PeCDF	1000	625.924	63		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1373.455	55		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1471.582	59		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	567.333	71		40-135	NA	1.010

TWD 12/22/2010

Client:	CH2M Hill		**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329		**Date Collected:**	9/29/10 1210
Sample Matrix:	Water		**Date Received:**	9/30/10
Sample Name:	IS66~~MW~~GW010910		**Units:**	pg/L
Lab Code:	E1001049-004		**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.516	1	1	
1,2,3,7,8-PeCDD	ND	0.277	1	1	
1,2,3,4,7,8-HxCDD	ND	0.415	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.346	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.419	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.855**	0.122	1	0.01	0.00855
OCDD	**4.40**	0.545	1	0.0003	0.00132
2,3,7,8-TCDF	ND	0.320	1	0.1	
1,2,3,7,8-PeCDF	ND	0.441	1	0.03	
2,3,4,7,8-PeCDF	ND	0.406	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.128	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.120	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.177	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.142	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.229	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.303	1	0.01	
OCDF	ND	0.476	1	0.0003	
		Total TEQ			0.00987

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1005
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS320001	**Units:**	ng/Kg
Lab Code:	E1001049-005	**Basis:**	Dry
		Percent Solids:	90.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 1904
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.217g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110926	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.120	1.08			1
1,2,3,7,8-PeCDD	ND	U	0.103	2.71			1
1,2,3,4,7,8-HxCDD	**0.233**	J	0.146	2.71	1.37	0.998	1
1,2,3,6,7,8-HxCDD	**0.691**	J	0.109	2.71	1.21	1.000	1
1,2,3,7,8,9-HxCDD	**0.889**	J	0.128	2.71	1.13	1.008	1
1,2,3,4,6,7,8-HpCDD	**65.1**	BJ	0.446	2.71	1.05	1.000	1
OCDD	**12500**	BE	0.147	5.42	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.171	1.08			1
1,2,3,7,8-PeCDF	ND	U	0.0788	2.71			1
2,3,4,7,8-PeCDF	ND	U	0.0738	2.71			1
1,2,3,4,7,8-HxCDF	ND	U	0.0624	2.71			1
1,2,3,6,7,8-HxCDF	ND	U	0.0493	2.71			1
1,2,3,7,8,9-HxCDF	ND	U	0.0740	2.71			1
2,3,4,6,7,8-HxCDF	ND	U	0.0615	2.71			1
1,2,3,4,6,7,8-HpCDF	**0.0938**	BJK	0.0684	2.71	1.56	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0916	2.71			1
OCDF	**0.639**	~~BJ~~ J	0.0914	5.42	0.92	1.003	1
Total Tetra-Dioxins	ND	U	0.120	1.08			1
Total Penta-Dioxins	**0.582**	J	0.103	2.71	1.71		1
Total Hexa-Dioxins	**10.2**		0.109	2.71	1.17		1
Total Hepta-Dioxins	**132**		0.446	2.71	1.04		1
Total Tetra-Furans	ND	U	0.171	1.08			1
Total Penta-Furans	ND	U	0.0738	2.71			1
Total Hexa-Furans	ND	U	0.0493	2.71			1
Total Hepta-Furans	ND	U	0.0684	2.71			1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1005
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS320001	**Units:**	Percent
Lab Code:	E1001049-005	**Basis:**	Dry
		Percent Solids:	90.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 1904
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.217g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110926	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	574.203	57		40-135	0.78	1.010
13C-1,2,3,7,8-PeCDD	1000	543.273	54		40-135	1.59	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1570.825	63		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1435.158	57		40-135	1.07	1.069
13C-OCDD	5000	2678.294	54		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	467.622	47		40-135	0.79	0.978
13C-1,2,3,7,8-PeCDF	1000	587.428	59		40-135	1.60	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1446.093	58		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1340.440	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	559.554	70		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1005
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP320001 SS	**Units:**	ng/Kg
Lab Code:	E1001049-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.120	1	1	
1,2,3,7,8-PeCDD	ND	0.103	1	1	
1,2,3,4,7,8-HxCDD	**0.233**	0.146	1	0.1	0.0233
1,2,3,6,7,8-HxCDD	**0.691**	0.109	1	0.1	0.0691
1,2,3,7,8,9-HxCDD	**0.889**	0.128	1	0.1	0.0889
1,2,3,4,6,7,8-HpCDD	**65.1**	0.446	1	0.01	0.651
OCDD	**12500**	0.147	1	0.0003	3.75
2,3,7,8-TCDF	ND	0.171	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0788	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0738	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0624	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0493	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0740	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0615	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.0938**	0.0684	1	0.01	0.000938
1,2,3,4,7,8,9-HpCDF	ND	0.0916	1	0.01	
OCDF	**0.639**	0.0914	1	0.0003	0.000192
		Total TEQ			4.58

2005 WHO TEFs, ND = 0

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1010
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~ SS 32P0001	**Units:**	ng/Kg
Lab Code:	E1001049-006	**Basis:**	Dry
		Percent Solids:	91.4

FA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 1952
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.912g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110927	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0861	1.00			1
1,2,3,7,8-PeCDD	ND	U	0.0980	2.51			1
1,2,3,4,7,8-HxCDD	ND	U	0.114	2.51			1
1,2,3,6,7,8-HxCDD	**0.312**	J	0.0847	2.51	1.16	1.000	1
1,2,3,7,8,9-HxCDD	**0.384**	J	0.0992	2.51	1.31	1.009	1
1,2,3,4,6,7,8-HpCDD	**21.5**	~~B~~ J-FD	0.150	2.51	1.04	1.000	1
OCDD	**4340**	~~BE~~ J-FD	0.120	5.01	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.113	1.00			1
1,2,3,7,8-PeCDF	ND	U	0.0889	2.51			1
2,3,4,7,8-PeCDF	ND	U	0.0832	2.51			1
1,2,3,4,7,8-HxCDF	**0.127**	J	0.0906	2.51	1.13	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0715	2.51			1
1,2,3,7,8,9-HxCDF	ND	U	0.108	2.51			1
2,3,4,6,7,8-HxCDF	ND	U	0.0894	2.51			1
1,2,3,4,6,7,8-HpCDF	U-MBL **0.296**	BJK	0.0767	2.51	1.35	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.103	2.51			1
OCDF	**0.700**	~~BJ~~ J	0.0828	5.01	0.84	1.004	1
Total Tetra-Dioxins	ND	U	0.0861	1.00			1
Total Penta-Dioxins	ND	U	0.0980	2.51			1
Total Hexa-Dioxins	**2.51**	J	0.0847	2.51	1.25		1
Total Hepta-Dioxins	**43.2**		0.150	2.51	1.06		1
Total Tetra-Furans	ND	U	0.113	1.00			1
Total Penta-Furans	**0.312**	J	0.0832	2.51	1.53		1
Total Hexa-Furans	**0.127**	J	0.0715	2.51	1.13		1
Total Hepta-Furans	ND	U	0.0767	2.51			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1010
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	SS IS66DP32P0001	**Units:**	Percent
Lab Code:	E1001049-006	**Basis:**	Dry
		Percent Solids:	91.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 1952
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.912g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110927	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	612.783	61		40-135	0.77	1.010
13C-1,2,3,7,8-PeCDD	1000	530.538	53		40-135	1.60	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1562.140	62		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1512.265	60		40-135	1.06	1.069
13C-OCDD	5000	2808.356	56		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	518.869	52		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	603.909	60		40-135	1.59	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1485.179	59		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1419.869	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	591.749	74		40-135	NA	1.010

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

32

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1010
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS32P0001	**Units:**	ng/Kg
Lab Code:	E1001049-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0861	1	1	
1,2,3,7,8-PeCDD	ND	0.0980	1	1	
1,2,3,4,7,8-HxCDD	ND	0.114	1	0.1	
1,2,3,6,7,8-HxCDD	**0.312**	0.0847	1	0.1	0.0312
1,2,3,7,8,9-HxCDD	**0.384**	0.0992	1	0.1	0.0384
1,2,3,4,6,7,8-HpCDD	**21.5**	0.150	1	0.01	0.215
OCDD	**4340**	0.120	1	0.0003	1.30
2,3,7,8-TCDF	ND	0.113	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0889	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0832	1	0.3	
1,2,3,4,7,8-HxCDF	**0.127**	0.0906	1	0.1	0.0127
1,2,3,6,7,8-HxCDF	ND	0.0715	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.108	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0894	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.296**	0.0767	1	0.01	0.00296
1,2,3,4,7,8,9-HpCDF	ND	0.103	1	0.01	
OCDF	**0.700**	0.0828	1	0.0003	0.000210
		Total TEQ			1.60

2005 WHO TEFs. ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	SB IS66DP320809	**Units:**	ng/Kg
Lab Code:	E1001049-007	**Basis:**	Dry
		Percent Solids:	81.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2040
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.154g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110928	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.111	1.10			1
1,2,3,7,8-PeCDD	ND	U	0.106	2.74			1
1,2,3,4,7,8-HxCDD	ND	U	0.131	2.74			1
1,2,3,6,7,8-HxCDD	**0.218**	J	0.0974	2.74	1.14	1.000	1
1,2,3,7,8,9-HxCDD	**0.566**	J	0.115	2.74	1.06	1.008	1
1,2,3,4,6,7,8-HpCDD	**12.8**	B J-MD	0.228	2.74	1.06	1.000	1
OCDD	**632**	B J-FD	0.208	5.48	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.126	1.10			1
1,2,3,7,8-PeCDF	ND	U	0.0893	2.74			1
2,3,4,7,8-PeCDF	ND	U	0.0835	2.74			1
1,2,3,4,7,8-HxCDF	ND	U	0.0671	2.74			1
1,2,3,6,7,8-HxCDF	ND	U	0.0530	2.74			1
1,2,3,7,8,9-HxCDF	ND	U	0.0795	2.74			1
2,3,4,6,7,8-HxCDF	ND	U	0.0662	2.74			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0690	2.74			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0922	2.74			1
OCDF	ND	U	0.0990	5.48			1
Total Tetra-Dioxins	ND	U	0.111	1.10			1
Total Penta-Dioxins	**0.526**	J	0.106	2.74	1.32		1
Total Hexa-Dioxins	**11.6**		0.0974	2.74	1.32		1
Total Hepta-Dioxins	**49.2**		0.228	2.74	1.08		1
Total Tetra-Furans	ND	U	0.126	1.10			1
Total Penta-Furans	ND	U	0.0835	2.74			1
Total Hexa-Furans	ND	U	0.0530	2.74			1
Total Hepta-Furans	ND	U	0.0690	2.74			1

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SB320809	**Units:**	Percent
Lab Code:	E1001049-007	**Basis:**	Dry
		Percent Solids:	81.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2040
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.154g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110928	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	620.206	62		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	631.823	63		40-135	1.60	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1553.870	62		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1450.023	58		40-135	1.09	1.069
13C-OCDD	5000	2611.437	52		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	549.905	55		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	672.793	67		40-135	1.60	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1463.297	59		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1376.396	55		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	607.111	76		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1020
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP320809 SB	**Units:**	ng/Kg
Lab Code:	E1001049-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.111	1	1	
1,2,3,7,8-PeCDD	ND	0.106	1	1	
1,2,3,4,7,8-HxCDD	ND	0.131	1	0.1	
1,2,3,6,7,8-HxCDD	**0.218**	0.0974	1	0.1	0.0218
1,2,3,7,8,9-HxCDD	**0.566**	0.115	1	0.1	0.0566
1,2,3,4,6,7,8-HpCDD	**12.8**	0.228	1	0.01	0.128
OCDD	**632**	0.208	1	0.0003	0.190
2,3,7,8-TCDF	ND	0.126	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0893	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0835	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0671	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0530	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0795	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0662	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0690	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0922	1	0.01	
OCDF	ND	0.0990	1	0.0003	
		Total TEQ			0.396

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1025
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP32P0809 SB	**Units:**	ng/Kg
Lab Code:	E1001049-008	**Basis:**	Dry
		Percent Solids:	80.2

FD

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2127
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.177g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110929	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.134	1.23			1
1,2,3,7,8-PeCDD	ND	U	0.113	3.06			1
1,2,3,4,7,8-HxCDD	ND	U	0.218	3.06			1
1,2,3,6,7,8-HxCDD	**0.319**	J	0.163	3.06	1.40	1.000	1
1,2,3,7,8,9-HxCDD	**0.623**	J	0.191	3.06	1.11	1.008	1
1,2,3,4,6,7,8-HpCDD	**19.0**	B J-FD	0.345	3.06	1.10	1.000	1
OCDD	**1200**	B J-FD	0.175	6.13	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.153	1.23			1
1,2,3,7,8-PeCDF	ND	U	0.0823	3.06			1
2,3,4,7,8-PeCDF	ND	U	0.0770	3.06			1
1,2,3,4,7,8-HxCDF	ND	U	0.0629	3.06			1
1,2,3,6,7,8-HxCDF	ND	U	0.0497	3.06			1
1,2,3,7,8,9-HxCDF	ND	U	0.0745	3.06			1
2,3,4,6,7,8-HxCDF	ND	U	0.0620	3.06			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0834	3.06			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.112	3.06			1
OCDF	ND	U	0.124	6.13			1
Total Tetra-Dioxins	ND	U	0.134	1.23			1
Total Penta-Dioxins	**0.949**	J	0.113	3.06	1.50		1
Total Hexa-Dioxins	**17.2**		0.163	3.06	1.28		1
Total Hepta-Dioxins	**69.7**		0.345	3.06	1.05		1
Total Tetra-Furans	ND	U	0.153	1.23			1
Total Penta-Furans	ND	U	0.0770	3.06			1
Total Hexa-Furans	ND	U	0.0497	3.06			1
Total Hepta-Furans	ND	U	0.0834	3.06			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1025
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	SB IS66DP32P0809	**Units:**	Percent
Lab Code:	E1001049-008	**Basis:**	Dry
		Percent Solids:	80.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2127
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.177g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110929	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	620.407	62		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	625.528	63		40-135	1.58	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1555.787	62		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1381.675	55		40-135	1.07	1.069
13C-OCDD	5000	2357.932	47		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	528.560	53		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	674.661	67		40-135	1.61	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1459.798	58		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1327.697	53		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	614.291	77		40-135	NA	1.010

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1025
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SB32P0809	**Units:**	ng/Kg
Lab Code:	E1001049-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.134	1	1	
1,2,3,7,8-PeCDD	ND	0.113	1	1	
1,2,3,4,7,8-HxCDD	ND	0.218	1	0.1	
1,2,3,6,7,8-HxCDD	**0.319**	0.163	1	0.1	0.0319
1,2,3,7,8,9-HxCDD	**0.623**	0.191	1	0.1	0.0623
1,2,3,4,6,7,8-HpCDD	**19.0**	0.345	1	0.01	0.190
OCDD	**1200**	0.175	1	0.0003	0.360
2,3,7,8-TCDF	ND	0.153	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0823	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0770	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0629	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0497	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0745	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0620	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0834	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.112	1	0.01	
OCDF	ND	0.124	1	0.0003	
		Total TEQ			0.644

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1300
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS350001	**Units:**	ng/Kg
Lab Code:	E1001049-009	**Basis:**	Dry
		Percent Solids:	89.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2303
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.043g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110931	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.128	1.11			1
1,2,3,7,8-PeCDD	**0.227**	J	0.0997	2.77	1.39	1.000	1
1,2,3,4,7,8-HxCDD	**0.308**	J	0.133	2.77	1.33	0.998	1
1,2,3,6,7,8-HxCDD	**0.464**	JK	0.0990	2.77	1.67	1.000	1
1,2,3,7,8,9-HxCDD	**0.695**	J	0.116	2.77	1.35	1.009	1
1,2,3,4,6,7,8-HpCDD	**22.8**	~~B~~	0.278	2.77	1.04	1.000	1
OCDD	**2360**	BEJ	0.177	5.54	0.91	1.000	1
2,3,7,8-TCDF	**0.770**	~~CJ~~	0.151	1.11	0.68	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0854	2.77			1
2,3,4,7,8-PeCDF	**0.341**	J	0.0800	2.77	1.34	1.025	1
1,2,3,4,7,8-HxCDF	**0.649**	J	0.112	2.77	1.18	1.000	1
1,2,3,6,7,8-HxCDF	**0.260**	JK	0.0882	2.77	1.47	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.133	2.77			1
2,3,4,6,7,8-HxCDF	**0.340**	J	0.111	2.77	1.41	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.61**	~~BJ~~ J	0.0757	2.77	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.102	2.77			1
OCDF	**3.06**	~~BJ~~ J	0.0965	5.54	0.97	1.004	1
Total Tetra-Dioxins	**0.407**	J	0.128	1.11	0.72		1
Total Penta-Dioxins	**1.97**	J	0.0997	2.77	1.61		1
Total Hexa-Dioxins	**5.69**		0.0990	2.77	1.31		1
Total Hepta-Dioxins	**51.6**		0.278	2.77	1.01		1
Total Tetra-Furans	**2.06**		0.151	1.11	0.73		1
Total Penta-Furans	**3.58**		0.0800	2.77	1.51		1
Total Hexa-Furans	**2.73**	J	0.0882	2.77	1.20		1
Total Hepta-Furans	**2.44**	J	0.0757	2.77	1.05		1

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1300
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS350001	**Units:**	Percent
Lab Code:	E1001049-009	**Basis:**	Dry
		Percent Solids:	89.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2303
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.043g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110931	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	566.230	57		40-135	0.79	1.010
13C-1,2,3,7,8-PeCDD	1000	544.495	54		40-135	1.62	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1515.402	61		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1469.498	59		40-135	1.07	1.069
13C-OCDD	5000	2684.137	54		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	497.978	50		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	599.652	60		40-135	1.60	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1434.412	57		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1367.852	55		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	558.167	70		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1300
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP350001 SS	**Units:**	ng/Kg
Lab Code:	E1001049-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.128	1	1	
1,2,3,7,8-PeCDD	**0.227**	0.0997	1	1	0.227
1,2,3,4,7,8-HxCDD	**0.308**	0.133	1	0.1	0.0308
1,2,3,6,7,8-HxCDD	**0.464**	0.0990	1	0.1	0.0464
1,2,3,7,8,9-HxCDD	**0.695**	0.116	1	0.1	0.0695
1,2,3,4,6,7,8-HpCDD	**22.8**	0.278	1	0.01	0.228
OCDD	**2360**	0.177	1	0.0003	0.708
2,3,7,8-TCDF	**0.584**	0.182	1	0.1	0.0584
1,2,3,7,8-PeCDF	ND	0.0854	1	0.03	
2,3,4,7,8-PeCDF	**0.341**	0.0800	1	0.3	0.102
1,2,3,4,7,8-HxCDF	**0.649**	0.112	1	0.1	0.0649
1,2,3,6,7,8-HxCDF	**0.260**	0.0882	1	0.1	0.0260
1,2,3,7,8,9-HxCDF	ND	0.133	1	0.1	
2,3,4,6,7,8-HxCDF	**0.340**	0.111	1	0.1	0.0340
1,2,3,4,6,7,8-HpCDF	**1.61**	0.0757	1	0.01	0.0161
1,2,3,4,7,8,9-HpCDF	ND	0.102	1	0.01	
OCDF	**3.06**	0.0965	1	0.0003	0.000918
		Total TEQ			1.61

2005 WHO TEFs, ND = 0

Revised E1001049

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1300
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SS350001	**Units:**	ng/Kg
Lab Code:	E1001049-009	**Basis:**	Dry
		Percent Solids:	89.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 0904
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.043g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137897	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.584**	J	0.182	1.11	0.78	1.000	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	507.227	51		40-135	0.81	1.060
37Cl-2,3,7,8-TCDD	800	591.728	74		40-135	NA	0.988

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1330
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP351415 SB	**Units:**	ng/Kg
Lab Code:	E1001049-010	**Basis:**	Dry
		Percent Solids:	81.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2215
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.021g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110930	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.102	1.11			1
1,2,3,7,8-PeCDD	ND	U	0.121	2.78			1
1,2,3,4,7,8-HxCDD	ND	U	0.0746	2.78			1
1,2,3,6,7,8-HxCDD	**0.567**	JK	0.0556	2.78	1.46	1.000	1
1,2,3,7,8,9-HxCDD	**1.30**	J	0.0652	2.78	1.22	1.008	1
1,2,3,4,6,7,8-HpCDD	**56.5**	B	0.0960	2.78	1.05	1.000	1
OCDD	**2590**	BE	0.157	5.56	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.110	1.11			1
1,2,3,7,8-PeCDF	ND	U	0.0671	2.78			1
2,3,4,7,8-PeCDF	ND	U	0.0628	2.78			1
1,2,3,4,7,8-HxCDF	ND	U	0.0520	2.78			1
1,2,3,6,7,8-HxCDF	ND	U	0.0410	2.78			1
1,2,3,7,8,9-HxCDF	ND	U	0.0615	2.78			1
2,3,4,6,7,8-HxCDF	ND	U	0.0513	2.78			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0499	2.78			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0668	2.78			1
OCDF	**0.261**	BJK	0.0896	5.56	0.73	1.004	1
Total Tetra-Dioxins	**17.4**		0.102	1.11	0.82		1
Total Penta-Dioxins	**24.0**		0.121	2.78	1.57		1
Total Hexa-Dioxins	**107**		0.0556	2.78	1.24		1
Total Hepta-Dioxins	**228**		0.0960	2.78	1.05		1
Total Tetra-Furans	ND	U	0.110	1.11			1
Total Penta-Furans	ND	U	0.0628	2.78			1
Total Hexa-Furans	ND	U	0.0410	2.78			1
Total Hepta-Furans	ND	U	0.0499	2.78			1

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1330
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66DP351415 SB	**Units:**	Percent
Lab Code:	E1001049-010	**Basis:**	Dry
		Percent Solids:	81.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2215
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.021g	**Instrument Name:**	E-HRMS-03
		GC Column:	db5
Data File Name:	P110930	**Blank File Name:**	P110925
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P110923

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	632.375	63		40-135	0.80	1.010
13C-1,2,3,7,8-PeCDD	1000	583.885	58		40-135	1.58	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1825.278	73		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1667.762	67		40-135	1.07	1.069
13C-OCDD	5000	2988.219	60		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	537.824	54		40-135	0.79	0.978
13C-1,2,3,7,8-PeCDF	1000	627.884	63		40-135	1.61	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1625.105	65		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1583.290	63		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	608.085	76		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001049
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/29/10 1330
Sample Matrix:	Soil	**Date Received:**	9/30/10
Sample Name:	IS66~~DP~~SB351415	**Units:**	ng/Kg
Lab Code:	E1001049-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.102	1	1	
1,2,3,7,8-PeCDD	ND	0.121	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0746	1	0.1	
1,2,3,6,7,8-HxCDD	**0.567**	0.0556	1	0.1	0.0567
1,2,3,7,8,9-HxCDD	**1.30**	0.0652	1	0.1	0.130
1,2,3,4,6,7,8-HpCDD	**56.5**	0.0960	1	0.01	0.565
OCDD	**2590**	0.157	1	0.0003	0.777
2,3,7,8-TCDF	ND	0.110	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0671	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0628	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0520	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0410	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0615	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0513	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0499	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0668	1	0.01	
OCDF	**0.261**	0.0896	1	0.0003	0.0000783
		Total TEQ			1.53

2005 WHO TEFs, ND = 0

MEMORANDUM CH2MHILL

Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 29th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Katahdin Analytical Services SDG JU04-5.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW6010/6020 Metals
- SW7470A/7471A Mercury
- SW8081A Pesticides
- SW8082 PCBs
- SW8260C Volatiles
- SW8270C and 8270C SIM Semivolatiles
- SW8330 Explosives
- 9012 Cyanide

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66DP250001	SD6083-001
IS66DP251011	SD6083-002
IS66DP240001	SD6083-003
IS66DP240708	SD6083-004
IS66EB01-100110	SD6083-007
IS66EB02-100110	SD6083-008
IS66SD13	SD6083-009
IS66SD12	SD6083-010
IS66SD11	SD6083-011
IS66SD10	SD6083-012
IS66SD09	SD6083-013
IS66SD08	SD6083-014
IS66SD07	SD6083-015
IS66SD06	SD6083-016
IS66SD06P	SD6083-017
IS66DP250001	SD6083-1
IS66DP251011	SD6083-2
IS66DP240001	SD6083-3
IS66DP240708	SD6083-4
IS66EB01-100110	SD6083-7
IS66EB02-100110	SD6083-8
IS66SD13	SD6083-9
IS66SD12	SD6083-10
IS66SD11	SD6083-11
IS66SD10	SD6083-12
IS66SD09	SD6083-13
IS66SD08	SD6083-14
IS66SD07	SD6083-15
IS66SD06	SD6083-16
IS66SD06P	SD6083-17
IS66TB01-100110	SD6083-18
IS66TB02-100110	SD6083-19
IS66SD13	SD6083-20
IS66SD12	SD6083-21
IS66SD11	SD6083-22
IS66SD10	SD6083-23

Sample Name	Lab Sample ID
IS66SD09	SD6083-24
IS66SD08	SD6083-25
IS66SD07	SD6083-26
IS66SD06	SD6083-27
IS66SD06P	SD6083-28

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008), National Functional Guidelines for Inorganic Methods Data Review (EPA 2004), Region III Modifications for Organic Data Review (EPA 1994), and Region III Modifications for Inorganic Data Review (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Serial Dilutions
- Dual Column Confirmation
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data that has been qualified are summarized in **Attachment 1.**

Attachment 2 lists the specific non-conformance issues, such as the %Difference, Relative Percent Differences (RPD) and recoveries for data in this SDG.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 10/1/10. Samples were received at the laboratory on 10/2/10. All sample preparation analysis was performed within holding time requirements with the exception of sample IS66SD07 for method 8082. All sample results were qualified for being outside of holding time. Data are summarized in **Attachment 1.**

Calibration

Initial, continuing calibration, and second source verification were outside of criteria for the compounds listed below in methods 8260B, 8270C, and 8270C SIM. Affected data are summarized in **Attachment 1**.

Sample ID	Compound	Calibration
IS66EB01-100110	Benzaldehyde	2nd source
IS66EB02-100110	Benzaldehyde	2nd source
IS66DP240001	2,4-Dichlorophenol	CC
IS66DP240001	4-Nitrophenol	IC
IS66DP240708	2,4-Dichlorophenol	CC
IS66DP240708	4-Nitrophenol	IC
IS66DP250001	2,4-Dichlorophenol	CC
IS66DP250001	4-Nitrophenol	IC
IS66DP251011	4-Nitrophenol	IC
IS66EB02-100110	2,4-Dinitrophenol	IC
IS66EB01-100110	2,4-Dinitrophenol	IC
IS66EB01-100110	4-Nitroaniline	2nd source

Sample ID	Compound	Calibration
IS66EB02-100110	4-Nitroaniline	2nd source
IS66EB01-100110	3,3'-Dichlorobenzidine	2nd source
IS66EB02-100110	3,3'-Dichlorobenzidine	2nd source
IS66SD06	4-Nitrophenol	IC
IS66SD07	4-Nitrophenol	IC
IS66SD08	2,4-Dichlorophenol	CC
IS66SD08	4-Nitrophenol	IC
IS66SD09	2,4-Dichlorophenol	CC
IS66SD09	4-Nitrophenol	IC
IS66SD10	4-Nitrophenol	IC
IS66SD11	2,4-Dichlorophenol	CC
IS66SD11	4-Nitrophenol	IC
IS66SD12	2,4-Dichlorophenol	CC
IS66SD12	4-Nitrophenol	IC
IS66SD13	2,4-Dichlorophenol	CC
IS66SD13	4-Nitrophenol	IC
IS66DP240708	2-Butanone	2nd source
IS66SD06	2-Butanone	2nd source
IS66SD06P	2-Butanone	2nd source
IS66SD08	Acetone	2nd source
IS66SD09	Acetone	2nd source
IS66SD11	Acetone	2nd source
IS66SD13	Acetone	2nd source
IS66TB02-100110	Acetone	2nd source
IS66TB02-100110	2-Butanone	2nd source
IS66DP240001	Acetone	2nd source

Blanks

Various compounds in methods 8260B, 8270C SIM, 6010B, and 6020 were detected in equipment blanks, field blanks, tripe blanks, method blanks, and/or calibration blanks as indicated below. Affected data are summarized in **Attachment 1.**

Blank ID	Compound	Conc.	Units	Action Level	Units
8260 - VOC					
IS66EB01-100110	Acetone	6.1	ug/L	61	ug/Kg

Blank ID	Compound	Conc.	Units	Action Level	Units
IS66EB02-100110	Acetone	4.7	ug/L	47	ug/Kg
IS66TB02-100110	Carbon Disulfide	1.7	ug/L	8.5	ug/Kg
	Tetrachloroethene	2.6	ug/L	13	ug/Kg
WG83107-2 – MB – 10/6	Carbon Disulfide	1.1	ug/Kg	5.5	ug/Kg
WG83197-2 – MB – 10/7	Carbon Disulfide	1.2	ug/Kg	6.0	ug/Kg
WG83397-2 – MB – 10/12	Carbon Disulfide	1.6	ug/Kg	8.0	ug/Kg
8270 SIM					
IS66FB092710	Naphthalene	0.16	ug/L	26.6	ug/L
WG82704-1 – MB –10/6	BEHP	4.8	ug/L	48	ug/L
WG83127-1 – MB –10/7	Dimethylphthalate	1.6	ug/Kg	532	ug/Kg
	Benzo(a)anthracene	4.4	ug/Kg	733	ug/Kg
	BEHP	66	ug/Kg	22,000	ug/Kg
Metals – 6010/6020 – Waters					
ISSFB01-092710	Arsenic - Total	2.4	ug/L	12	ug/L
	Zinc - Total	1.9	ug/L	9.5	ug/L
ISSEB02-092910	Arsenic - Total	1.6	ug/L	8.0	ug/L
	Calcium - Total	48.2	ug/L	241	ug/L
ISSEB02-092910	Arsenic - Dissolved	1.1	ug/L	5.5	ug/L
	Calcium - Dissolved	100	ug/L	500	ug/L
	Sodium - Dissolved	143	ug/L	715	ug/L
PBWAJ12ICW0 - PB	Copper	0.546	ug/L	2.73	ug/L
	Iron	18.820	ug/L	94.1	ug/L
	Magnesium	11.58	ug/L	57.9	ug/L
	Manganese	1.195	ug/L	5.975	ug/L
	Zinc	0.885	ug/L	4.425	ug/L
PBWAJ12IMW0 - PB	Chromium	1.575	ug/L	7.785	ug/L
CCB 101410 1921	Copper	0.63	ug/L	3.15	ug/L
	Iron	18.92	ug/L	94.6	ug/L
	Sodium	20.64	ug/L	103.2	ug/L
CCB 101410 2016	Manganese	1.58	ug/L	7.9	ug/L
	Nickel	0.65	ug/L	3.25	ug/L
CCB 101410 2111	Barium	0.35	ug/L	1.75	ug/L
	Beryllium	0.29	ug/L	1.45	ug/L
	Cadmium	0.42	ug/L	2.1	ug/L

Blank ID	Compound	Conc.	Units	Action Level	Units
	Zinc	0.36	ug/L	1.8	ug/L
CCB 101510 1751	Magnesium	10.05	ug/L	50.25	ug/L
CCB 101510 1250	Antimony	0.01	ug/L	0.05	ug/L
	Thallium	0.01	ug/L	0.05	ug/L
Metals – 6010/6020 – Soils					
ISSFB01-092710 (soil)	Arsenic	2.4	ug/L	1.2	mg/Kg
	Zinc	1.9	ug/L	0.95	mg/Kg
ISSEB01-092910	Arsenic	1.5	ug/L	0.75	mg/Kg
	Calcium	26.2	ug/L	13.1	mg/Kg
ISSEB01-093010 - Sediment	Arsenic	2.4	ug/L	1.2	mg/Kg
	Calcium	32.9	ug/L	16.45	mg/Kg
ISSEB02-093010	Arsenic	0.8	ug/L	0.4	mg/Kg
	Calcium	42.2	ug/L	21.1	mg/Kg
	Lead	0.8	ug/L	0.4	mg/Kg
PBSAJ13ICS0 - PB	Barium	0.047	mg/Kg	0.235	mg/Kg
	Calcium	7.007	mg/Kg	35.035	mg/Kg
	Copper	0.078	mg/Kg	0.39	mg/Kg
	Iron	3.348	mg/Kg	16.74	mg/Kg
	Magnesium	3.295	mg/Kg	16.475	mg/Kg
	Sodium	6.814	mg/Kg	34.070	mg/Kg
	Zinc	0.093	mg/Kg	0.465	mg/Kg
PBSAJ13IMS0 - PB	Chromium	0.356	mg/Kg	1.78	mg/Kg
	Vanadium	0.174	mg/Kg	0.870	mg/Kg
CCB 101410 2111	Sodium	16.48	ug/L	8.24	mg/Kg
	Zinc	0.36	ug/L	0.18	mg/Kg
CCB 101410 2205	Barium	0.4	ug/L	0.2	mg/Kg
	Beryllium	0.36	ug/L	0.18	mg/Kg
	Cadmium	0.42	ug/L	0.21	mg/Kg
	Copper	0.73	ug/L	0.037	mg/Kg
	Iron	23.12	ug/L	11.56	mg/Kg
CCB 101510 2039	Magnesium	14.54	ug/L	7.27	mg/Kg
CCB 101810 1905	Iron	12.09	ug/L	6.045	mg/Kg

Lab Control Sample/Lab Control Duplicate

Several compounds were below the lower control limits for LCS/LCSD in methods 8270C and 8270CSIM. Affected samples and compounds are listed below and are summarized in **Attachment 1.**

Several compounds also exhibited recoveries less than 10% in the LCS/LCSD and were therefore rejected. These are listed below in the second table. Please see **Attachment 2** for specific failing percent recoveries.

Sample ID	Compound
IS66EB01-100110	2-Nitrophenol
IS66EB02-100110	2-Nitrophenol
IS66DP240001	2-Methylnaphthalene
IS66DP240001	Pentachlorophenol
IS66DP240708	Naphthalene
IS66DP240708	2-Methylnaphthalene
IS66DP240708	Pentachlorophenol
IS66DP250001	Naphthalene
IS66DP250001	2-Methylnaphthalene
IS66DP250001	Pentachlorophenol
IS66DP251011	Naphthalene
IS66DP251011	2-Methylnaphthalene
IS66DP251011	Pentachlorophenol
IS66EB01-100110	bis(2-Chloroethyl)ether
IS66EB02-100110	bis(2-Chloroethyl)ether
IS66SD06	Naphthalene
IS66SD06	2-Methylnaphthalene
IS66SD06	Pentachlorophenol
IS66SD06P	Naphthalene
IS66SD06P	2-Methylnaphthalene
IS66SD06P	Pentachlorophenol
IS66SD07	Naphthalene
IS66SD07	2-Methylnaphthalene
IS66SD07	Pentachlorophenol
IS66SD08	Naphthalene
IS66SD08	2-Methylnaphthalene
IS66SD08	Pentachlorophenol
IS66SD09	2-Methylnaphthalene
IS66SD09	Pentachlorophenol
IS66SD09	3,3'-Dichlorobenzidine
IS66SD09	bis(2-Ethylhexyl)phthalate
IS66SD09	Di-n-octylphthalate
IS66SD10	2-Methylnaphthalene

Sample ID	Compound
IS66SD10	Pentachlorophenol
IS66SD11	2-Methylnaphthalene
IS66SD11	Pentachlorophenol
IS66SD12	Naphthalene
IS66SD12	2-Methylnaphthalene
IS66SD12	Pentachlorophenol
IS66SD13	Naphthalene
IS66SD13	2-Methylnaphthalene
IS66SD13	Pentachlorophenol

Rejected Results due to LCS/LCSD failure	
Sample ID	**Compound**
IS66DP240001	Benzaldehyde
IS66DP240708	Benzaldehyde
IS66DP250001	Benzaldehyde
IS66DP251011	Benzaldehyde
IS66EB01-100110	Hexachlorocyclopentadiene
IS66EB02-100110	Hexachlorocyclopentadiene
IS66SD06	Benzaldehyde
IS66SD06P	Benzaldehyde
IS66SD07	Benzaldehyde
IS66SD08	Benzaldehyde
IS66SD09	Benzaldehyde
IS66SD10	Benzaldehyde
IS66SD11	Benzaldehyde
IS66SD12	Benzaldehyde
IS66SD13	Benzaldehyde
IS66DP240001	2,4-Dimethylphenol
IS66DP240001	3,3'-Dichlorobenzidine
IS66DP240708	2,4-Dimethylphenol
IS66DP240708	3,3'-Dichlorobenzidine
IS66DP250001	2,4-Dimethylphenol
IS66DP250001	3,3'-Dichlorobenzidine
IS66DP251011	2,4-Dimethylphenol
IS66DP251011	3,3'-Dichlorobenzidine
IS66SD06	2,4-Dimethylphenol
IS66SD06	3,3'-Dichlorobenzidine
IS66SD06P	2,4-Dimethylphenol

Rejected Results due to LCS/LCSD failure	
Sample ID	**Compound**
IS66SD06P	3,3'-Dichlorobenzidine
IS66SD07	2,4-Dimethylphenol
IS66SD07	3,3'-Dichlorobenzidine
IS66SD08	2,4-Dimethylphenol
IS66SD08	3,3'-Dichlorobenzidine
IS66SD09	2,4-Dimethylphenol
IS66SD09	3,3'-Dichlorobenzidine
IS66SD10	2,4-Dimethylphenol
IS66SD10	3,3'-Dichlorobenzidine
IS66SD11	2,4-Dimethylphenol
IS66SD11	3,3'-Dichlorobenzidine
IS66SD12	2,4-Dimethylphenol
IS66SD12	3,3'-Dichlorobenzidine
IS66SD13	2,4-Dimethylphenol
IS66SD13	3,3'-Dichlorobenzidine

Matrix Spike/Spike Duplicate

The compounds below exhibited low recoveries in the MS/MSD for sample IS66SD07.

Compound
Antimony
Hexachlorocyclopentadiene
Carbon disulfide
Methyl acetate

Calcium, Magnesium, and Potassium exhibited high recoveries in the MS/MSD for sample IS66SD07.

Affected data are summarized in **Attachment 1.**

Surrogates

Surrogates for the samples listed below exhibited recoveries below the lower control limits for methods 8081A and 8082. Affected data are summarized in **Attachment 1.**

Sample ID
IS66DP240001
IS66DP250001
IS66DP251011
IS66SD07

IS66SD08
IS66SD09
IS66SD10
IS66SD11
IS66SD13

Internal Standards
Internal standards were out low for the samples listed below. The compounds affected by the low internal standards are summarized in **Attachment 1.**

Sample ID
IS66DP240001
IS66DP250001
IS66DP251011
IS66SD07
IS66SD10
IS66SD11
IS66SD13

Other Quality Control Issues
From the Case Narrative – "All of the soil samples had concentrations of Tetrachloroethene above the MDL. Upon investigation, Katahdin found that the freezer blank stored in the freezer at the same time as these samples had a Tetrachloroethene concentration of 15 ug/kg. Upon further investigation, Katahdin discovered that another client's sample which was also stored in the same freezer had an extremely high concentration of Tetrachloroethene. It is believed that this sample is the source of contamination. The sample was removed from the storage freezer and the subsequent freezer storage blank had no detection of Tetrachloroethene above the MDL." Therefore, qualify all detected Tetrachloroethene results as "J-OT".

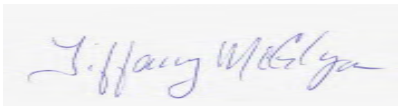
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation

Value	Description
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-1
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66DP250001	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.48 mg/Kgdrywt	0.60	0.48	SW846 M9012A	WG83521	14-OCT-10 15:57:35	SW846 M9012	14-OCT-10	
Total Solids	76. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:20:00	ASTM D2216	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-2
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66DP251011 SB	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83521	14-OCT-10 12:51:38	SW846 M9012	14-OCT-10	
Total Solids	83. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:21:00	ASTM D2216	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-3
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SP240001	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.44 mg/Kgdrywt	0.55	0.44	SW846 M9012A	WG83521	14-OCT-10 15:57:36	SW846 M9012	14-OCT-10	
Total Solids	82. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:22:00	ASTM D2216	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-4
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66DP240708	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U0.40 mg/Kgdrywt	0.50	0.40	SW846 M9012A	WG83521	14-OCT-10 12:51:39	SW846 M9012	14-OCT-10	
Total Solids	95.%	1	N/A	SM2540G	WG83310	11-OCT-10 10:25:00	ASTM D2216	08-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-5
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66-WS-100110	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U0.80 mg/Kg	1.0	0.80	SW846 7.3.3	WG83186	06-OCT-10 16:04:48	SW846 7.3.4	06-OCT-10	
Ignitability	>71. Deg. C	71.	N/A	SW846 1010	WG83401	12-OCT-10 16:25:00	N/A	N/A	
Sulfide,Reactive	U20 mg/Kg	27	20	SW846 7.3.4	WG83168	06-OCT-10 15:46:00	SW846 7.3.4	06-OCT-10	
Total Solids	77. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:26:00	ASTM D2216	08-OCT-10	
pH(Soil)	5.3 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:06:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-6
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66-WW-100110	AQ	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Cyanide, Reactive	U0.80 mg/Kg	1.0	0.80	SW846 7.3.3	WG83186	06-OCT-10 16:04:48	SW846 7.3.4	06-OCT-10	
Ignitability	>71. Deg. C	71.	N/A	SW846 1010	WG83401	12-OCT-10 14:10:00	N/A	N/A	
Sulfide,Reactive	U20 mg/Kg	27	20	SW846 7.3.4	WG83168	06-OCT-10 15:54:00	SW846 7.3.4	06-OCT-10	
pH(Laboratory)	6.1 pH	0.10	N/A	SW846 9040B	WG83014	04-OCT-10 13:10:00	N/A	N/A	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-7
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66EB01-100110	AQ	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83522	14-OCT-10 15:57:37	SW846 M9012	14-OCT-10	
Total Organic Carbon	J0.37 mg/L	1.0	N/A	EPA 415.1	WG83440	12-OCT-10 18:02:58	N/A	N/A	
pH(Laboratory)	5.5 pH	0.10	N/A	SW846 9040B	WG83014	04-OCT-10 13:04:00	N/A	N/A	

Report of Analytical Results

Client: Hillary Oh
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-8
Report Date: 03-NOV-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66EB02-100110	AQ	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
Total Cyanide	U8.0 ug/L	10.	8.0	SW846 M9012A	WG83522	14-OCT-10 15:57:38	SW846 M9012	14-OCT-10	
Total Organic Carbon	J0.33 mg/L	1.0	N/A	EPA 415.1	WG83440	12-OCT-10 18:24:03	N/A	N/A	
pH(Laboratory)	5.1 pH	0.10	N/A	SW846 9040B	WG83014	04-OCT-10 13:08:00	N/A	N/A	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-9
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
1S66SD13	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	63000 ug/gdrywt	800	600	LLOYDKAHN	WG83637	14-OCT-10 12:54:02	N/A	N/A	
Total Cyanide	U0.76 mg/Kgdrywt	0.95	0.76	SW846 M9012A	WG83521	14-OCT-10 15:57:39	SW846 M9012	14-OCT-10	
Total Solids	50. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:27:00	ASTM D2216	08-OCT-10	
pH(Soil)	6.6 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:08:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-10
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
1S66SD12	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	18000 ug/gdrywt	570	430	LLOYDKAHN	WG83637	14-OCT-10 13:07:12	N/A	N/A	
Total Cyanide	U0.56 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG83521	14-OCT-10 17:54:46	SW846 M9012	14-OCT-10	
Total Solids	70. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:28:00	ASTM D2216	08-OCT-10	
pH(Soil)	8.1 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:10:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-11
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD11	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	18000 ug/gdrywt	580	440	LLOYDKAHN	WG83637	14-OCT-10 13:31:04	N/A	N/A	
Total Cyanide	J0.35 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG83521	14-OCT-10 15:57:40	SW846 M9012	14-OCT-10	
Total Solids	69. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:29:00	ASTM D2216	08-OCT-10	
pH(Soil)	7.0 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:12:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-12
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD10	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	34000 ug/gdrywt	760	570	LLOYDKAHN	WG83637	14-OCT-10 14:09:47	N/A	N/A	
Total Cyanide	U0.72 mg/Kgdrywt	0.90	0.72	SW846 M9012A	WG83521	14-OCT-10 15:57:41	SW846 M9012	14-OCT-10	
Total Solids	53. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:30:00	ASTM D2216	08-OCT-10	
pH(Soil)	7.0 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:14:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly, VA 20151

Lab Sample ID: SD6083-13
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD09	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	2400 ug/gdrywt	540	400	LLOYDKAHN	WG83637	14-OCT-10 14:18:26	N/A	N/A	
Total Cyanide	J0.51 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG83521	14-OCT-10 15:57:42	SW846 M9012	14-OCT-10	
Total Solids	74. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:31:00	ASTM D2216	08-OCT-10	
pH(Soil)	7.3 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:16:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-14
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD08	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	51000 ug/gdrywt	870	650	LLOYDKAHN	WG83637	14-OCT-10 14:30:28	N/A	N/A	
Total Cyanide	U0.88 mg/Kgdrywt	1.1	0.88	SW846 M9012A	WG83521	14-OCT-10 15:59:59	SW846 M9012	14-OCT-10	
Total Solids	46. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:32:00	ASTM D2216	08-OCT-10	
pH(Soil)	6.6 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:18:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-15
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD07	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC,In Soil	16000 ug/gdrywt	550	420	LLOYDKAHN	WG83637	14-OCT-10 14:49:41	N/A	N/A	
Total Cyanide	U0.56 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG83521	14-OCT-10 17:51:52	SW846 M9012	14-OCT-10	
Total Solids	72. %	1	N/A	SM2540G	WG83310	11-OCT-10 10:23:00	ASTM D2216	08-OCT-10	
pH(Soil)	6.7 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:02:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-16
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD06	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	16000 ug/gdrywt	600	450	LLOYDKAHN	WG83637	14-OCT-10 17:11:57	N/A	N/A	
Total Cyanide	U0.56 mg/Kgdrywt	0.70	0.56	SW846 M9012A	WG83521	14-OCT-10 11:54:27	SW846 M9012	14-OCT-10	
Total Solids	66. %	1	N/A	SM2540G	WG83313	11-OCT-10 10:35:00	ASTM D2216	08-OCT-10	
pH(Soil)	7.9 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:20:00	SW846 9045C	05-OCT-10	

Report of Analytical Results

Client: Hillary Ott
CH2M Hill
15010 Conference Center Drive
Chantilly,VA 20151

Lab Sample ID: SD6083-17
Report Date: 20-OCT-10
Client PO: 935177 386329 N62470
Project: CTO-JU04 Indian Head
SDG: JU04-5

Sample Description	Matrix	Date Sampled	Date Received
IS66SD06P	SL	01-OCT-10	02-OCT-10

Parameter	Result	Adj LOQ	Adj LOD	Anal. Method	QC.Batch	Anal. Date	Prep. Method	Prep. Date	Footnotes
TOC In Soil	3300 ug/gdrywt	550	410	LLOYDKAHN	WG83637	14-OCT-10 17:29:24	N/A	N/A	
Total Cyanide	U0.52 mg/Kgdrywt	0.65	0.52	SW846 M9012A	WG83521	14-OCT-10 11:54:28	SW846 M9012	14-OCT-10	
Total Solids	73. %	1	N/A	SM2540G	WG83313	11-OCT-10 10:37:00	ASTM D2216	08-OCT-10	
pH(Soil)	7.6 pH	0.10	N/A	SW846 9045C	WG83058	05-OCT-10 12:22:00	SW846 9045C	05-OCT-10	

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66SP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 76.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	60.	ug/Kgdrywt	1	100	120	10.	60.
RDX	U	60.	ug/Kgdrywt	1	100	120	8.2	60.
1,3,5-Trinitrobenzene	U	60.	ug/Kgdrywt	1	100	120	8.0	60.
1,3-Dinitrobenzene	U	60.	ug/Kgdrywt	1	100	120	7.4	60.
Tetryl	U	60.	ug/Kgdrywt	1	100	120	6.5	60.
Nitrobenzene	EXCLUDE-RE U	60.	ug/Kgdrywt	1	100	120	26.	60.
Nitroglycerin	U	480	ug/Kgdrywt	1	800	960	150	480
2,4,6-Trinitrotoluene	U	60.	ug/Kgdrywt	1	100	120	8.0	60.
4-Am-DNT	U	60.	ug/Kgdrywt	1	100	120	20.	60.
2-Am-DNT	U	60.	ug/Kgdrywt	1	100	120	25.	60.
2,6-Dinitrotoluene	U	60.	ug/Kgdrywt	1	100	120	32.	60.
2,4-Dinitrotoluene	EXCLUDE-RE U	60.	ug/Kgdrywt	1	100	120	18.	60.
2-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	14.	60.
4-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	32.	60.
3-Nitrotoluene	U	60.	ug/Kgdrywt	1	100	120	9.5	60.
1,2-Dinitrobenzene		94.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: 1S66DP251011 (SS)
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 83.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	58.	ug/Kgdrywt	1	100	120	10.	58.
RDX	U	58.	ug/Kgdrywt	1	100	120	8.0	58.
1,3,5-Trinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
1,3-Dinitrobenzene	U	58.	ug/Kgdrywt	1	100	120	7.2	58.
Tetryl	U	58.	ug/Kgdrywt	1	100	120	6.3	58.
Nitrobenzene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	26.	58.
Nitroglycerin	U	470	ug/Kgdrywt	1	800	940	140	470
2,4,6-Trinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	7.8	58.
4-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	20.	58.
2-Am-DNT	U	58.	ug/Kgdrywt	1	100	120	24.	58.
2,6-Dinitrotoluene	U	58.	ug/Kgdrywt	1	100	120	32.	58.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	58.	ug/Kgdrywt	1	100	120	18.	58.
2-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	14.	58.
4-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	32.	58.
3-Nitrotoluene	U	58.	ug/Kgdrywt	1	100	120	9.2	58.
1,2-Dinitrobenzene		92.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 82.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	53.	ug/Kgdrywt	1	100	110	9.2	53.
RDX	U	53.	ug/Kgdrywt	1	100	110	7.2	53.
1,3,5-Trinitrobenzene	U	53.	ug/Kgdrywt	1	100	110	7.2	53.
1,3-Dinitrobenzene	U	53.	ug/Kgdrywt	1	100	110	6.6	53.
Tetryl	U	53.	ug/Kgdrywt	1	100	110	5.8	53.
Nitrobenzene	EXCLUDE-RE U	53.	ug/Kgdrywt	1	100	110	23.	53.
Nitroglycerin	U	430	ug/Kgdrywt	1	800	850	130	430
2,4,6-Trinitrotoluene	U	53.	ug/Kgdrywt	1	100	110	7.2	53.
4-Am-DNT	U	53.	ug/Kgdrywt	1	100	110	18.	53.
2-Am-DNT	U	53.	ug/Kgdrywt	1	100	110	22.	53.
2,6-Dinitrotoluene	U	53.	ug/Kgdrywt	1	100	110	29.	53.
2,4-Dinitrotoluene	EXCLUDE-RE U	53.	ug/Kgdrywt	1	100	110	16.	53.
2-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	13.	53.
4-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	29.	53.
3-Nitrotoluene	U	53.	ug/Kgdrywt	1	100	110	8.4	53.
1,2-Dinitrobenzene		91.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 95.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	47.	ug/Kgdrywt	1	100	94.	8.0	47.
RDX	U	47.	ug/Kgdrywt	1	100	94.	6.4	47.
1,3,5-Trinitrobenzene	U	47.	ug/Kgdrywt	1	100	94.	6.3	47.
1,3-Dinitrobenzene	U	47.	ug/Kgdrywt	1	100	94.	5.8	47.
Tetryl	U	47.	ug/Kgdrywt	1	100	94.	5.1	47.
Nitrobenzene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	94.	20.	47.
Nitroglycerin	U	370	ug/Kgdrywt	1	800	750	120	370
2,4,6-Trinitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	6.3	47.
4-Am-DNT	U	47.	ug/Kgdrywt	1	100	94.	16.	47.
2-Am-DNT	U	47.	ug/Kgdrywt	1	100	94.	20.	47.
2,6-Dinitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	25.	47.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	47.	ug/Kgdrywt	1	100	94.	14.	47.
2-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	11.	47.
4-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	25.	47.
3-Nitrotoluene	U	47.	ug/Kgdrywt	1	100	94.	7.4	47.
1,2-Dinitrobenzene		96.4	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	232.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: RCT
Extraction Method: SW846 8330
Lab Prep Batch: WG83076

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	0.12	ug/L	1	.25	0.25	0.043	0.12
RDX	U	0.12	ug/L	1	.25	0.25	0.046	0.12
1,3,5-Trinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.040	0.12
1,3-Dinitrobenzene	U	0.12	ug/L	1	.25	0.25	0.045	0.12
Tetryl	U	0.12	ug/L	1	.25	0.25	0.060	0.12
Nitrobenzene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
Nitroglycerin	U	2.0	ug/L	1	4	4.0	0.67	2.0
2,4,6-Trinitrotoluene	U	0.12	ug/L	1	.25	0.25	0.064	0.12
4-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.053	0.12
2-Am-DNT	U	0.12	ug/L	1	.25	0.25	0.038	0.12
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.056	0.12
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	0.12	ug/L	1	.25	0.25	0.052	0.12
2-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.071	0.12
4-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.060	0.12
3-Nitrotoluene	U	0.12	ug/L	1	.25	0.25	0.063	0.12
1,2-Dinitrobenzene	*	210.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9RE
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 50.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	84.	ug/Kgdrywt	1	100	170	14.	84.
RDX	U	84.	ug/Kgdrywt	1	100	170	11.	84.
1,3,5-Trinitrobenzene	U	84.	ug/Kgdrywt	1	100	170	11.	84.
1,3-Dinitrobenzene	U	84.	ug/Kgdrywt	1	100	170	10.	84.
Tetryl	U	84.	ug/Kgdrywt	1	100	170	9.1	84.
Nitrobenzene	EXCLUDE-RE ~~U~~	84.	ug/Kgdrywt	1	100	170	37.	84.
Nitroglycerin	U	670	ug/Kgdrywt	1	800	1300	210	670
2,4,6-Trinitrotoluene	U	84.	ug/Kgdrywt	1	100	170	11.	84.
4-Am-DNT	U	84.	ug/Kgdrywt	1	100	170	29.	84.
2-Am-DNT	U	84.	ug/Kgdrywt	1	100	170	35.	84.
2,6-Dinitrotoluene	U	84.	ug/Kgdrywt	1	100	170	46.	84.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	84.	ug/Kgdrywt	1	100	170	25.	84.
2-Nitrotoluene	U	84.	ug/Kgdrywt	1	100	170	20.	84.
4-Nitrotoluene	U	84.	ug/Kgdrywt	1	100	170	46.	84.
3-Nitrotoluene	U	84.	ug/Kgdrywt	1	100	170	13.	84.
1,2-Dinitrobenzene		91.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 70.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	64.	ug/Kgdrywt	1	100	130	11.	64.
RDX	U	64.	ug/Kgdrywt	1	100	130	8.6	64.
1,3,5-Trinitrobenzene	U	64.	ug/Kgdrywt	1	100	130	8.5	64.
1,3-Dinitrobenzene	U	64.	ug/Kgdrywt	1	100	130	7.9	64.
Tetryl	U	64.	ug/Kgdrywt	1	100	130	6.9	64.
Nitrobenzene	EXCLUDE-RE ~~U~~	64.	ug/Kgdrywt	1	100	130	28.	64.
Nitroglycerin	U	510	ug/Kgdrywt	1	800	1000	160	510
2,4,6-Trinitrotoluene	U	64.	ug/Kgdrywt	1	100	130	8.5	64.
4-Am-DNT	U	64.	ug/Kgdrywt	1	100	130	22.	64.
2-Am-DNT	U	64.	ug/Kgdrywt	1	100	130	27.	64.
2,6-Dinitrotoluene	U	64.	ug/Kgdrywt	1	100	130	34.	64.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	64.	ug/Kgdrywt	1	100	130	19.	64.
2-Nitrotoluene	U	64.	ug/Kgdrywt	1	100	130	15.	64.
4-Nitrotoluene	U	64.	ug/Kgdrywt	1	100	130	34.	64.
3-Nitrotoluene	U	64.	ug/Kgdrywt	1	100	130	10.	64.
1,2-Dinitrobenzene		64.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 69.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	65.	ug/Kgdrywt	1	100	130	11.	65.
RDX	U	65.	ug/Kgdrywt	1	100	130	8.8	65.
1,3,5-Trinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
1,3-Dinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.0	65.
Tetryl	U	65.	ug/Kgdrywt	1	100	130	7.0	65.
Nitrobenzene	EXCLUDE-RE ~~U~~	65.	ug/Kgdrywt	1	100	130	28.	65.
Nitroglycerin	U	520	ug/Kgdrywt	1	800	1000	160	520
2,4,6-Trinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
4-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	22.	65.
2-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	27.	65.
2,6-Dinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	65.	ug/Kgdrywt	1	100	130	19.	65.
2-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	16.	65.
4-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
3-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	10.	65.
1,2-Dinitrobenzene		75.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12RE
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 53.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	89.	ug/Kgdrywt	1	100	180	15.	89.
RDX	U	89.	ug/Kgdrywt	1	100	180	12.	89.
1,3,5-Trinitrobenzene	U	89.	ug/Kgdrywt	1	100	180	12.	89.
1,3-Dinitrobenzene	U	89.	ug/Kgdrywt	1	100	180	11.	89.
Tetryl	U	89.	ug/Kgdrywt	1	100	180	9.6	89.
Nitrobenzene	EXCLUDE-RE ~~U~~	89.	ug/Kgdrywt	1	100	180	39.	89.
Nitroglycerin	U	710	ug/Kgdrywt	1	800	1400	220	710
2,4,6-Trinitrotoluene	U	89.	ug/Kgdrywt	1	100	180	12.	89.
4-Am-DNT	U	89.	ug/Kgdrywt	1	100	180	30.	89.
2-Am-DNT	U	89.	ug/Kgdrywt	1	100	180	37.	89.
2,6-Dinitrotoluene	U	89.	ug/Kgdrywt	1	100	180	48.	89.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	89.	ug/Kgdrywt	1	100	180	27.	89.
2-Nitrotoluene	U	89.	ug/Kgdrywt	1	100	180	21.	89.
4-Nitrotoluene	U	89.	ug/Kgdrywt	1	100	180	48.	89.
3-Nitrotoluene	U	89.	ug/Kgdrywt	1	100	180	14.	89.
1,2-Dinitrobenzene		114.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 08-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 74.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	65.	ug/Kgdrywt	1	100	130	11.	65.
RDX	U	65.	ug/Kgdrywt	1	100	130	8.8	65.
1,3,5-Trinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
1,3-Dinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.0	65.
Tetryl	U	65.	ug/Kgdrywt	1	100	130	7.0	65.
Nitrobenzene	EXCLUDE-RE U	65.	ug/Kgdrywt	1	100	130	28.	65.
Nitroglycerin	U	520	ug/Kgdrywt	1	800	1000	160	520
2,4,6-Trinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
4-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	22.	65.
2-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	27.	65.
2,6-Dinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
2,4-Dinitrotoluene	EXCLUDE-RE U	65.	ug/Kgdrywt	1	100	130	19.	65.
2-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	16.	65.
4-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
3-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	10.	65.
1,2-Dinitrobenzene		57.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14RE
Client ID: 1S66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 46.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	98.	ug/Kgdrywt	1	100	200	17.	98.
RDX	U	98.	ug/Kgdrywt	1	100	200	13.	98.
1,3,5-Trinitrobenzene	U	98.	ug/Kgdrywt	1	100	200	13.	98.
1,3-Dinitrobenzene	U	98.	ug/Kgdrywt	1	100	200	12.	98.
Tetryl	U	98.	ug/Kgdrywt	1	100	200	11.	98.
Nitrobenzene	EXCLUDE-RE ~~U~~	98.	ug/Kgdrywt	1	100	200	43.	98.
Nitroglycerin	U	790	ug/Kgdrywt	1	800	1600	240	790
2,4,6-Trinitrotoluene	U	98.	ug/Kgdrywt	1	100	200	13.	98.
4-Am-DNT	U	98.	ug/Kgdrywt	1	100	200	33.	98.
2-Am-DNT	U	98.	ug/Kgdrywt	1	100	200	41.	98.
2,6-Dinitrotoluene	U	98.	ug/Kgdrywt	1	100	200	53.	98.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	98.	ug/Kgdrywt	1	100	200	30.	98.
2-Nitrotoluene	U	98.	ug/Kgdrywt	1	100	200	24.	98.
4-Nitrotoluene	U	98.	ug/Kgdrywt	1	100	200	53.	98.
3-Nitrotoluene	U	98.	ug/Kgdrywt	1	100	200	16.	98.
1,2-Dinitrobenzene		94.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 72.
Report Date: 24-OCT-10

Compound		Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX		U UL-SSL	68.	ug/Kgdrywt	1	100	140	12.	68.
RDX		U	68.	ug/Kgdrywt	1	100	140	9.2	68.
1,3,5-Trinitrobenzene		U	68.	ug/Kgdrywt	1	100	140	9.1	68.
1,3-Dinitrobenzene		U	68.	ug/Kgdrywt	1	100	140	8.4	68.
Tetryl		U	68.	ug/Kgdrywt	1	100	140	7.4	68.
Nitrobenzene	EXCLUDE-RE	U	68.	ug/Kgdrywt	1	100	140	30.	68.
Nitroglycerin		U	540	ug/Kgdrywt	1	800	1100	170	540
2,4,6-Trinitrotoluene		U	68.	ug/Kgdrywt	1	100	140	9.1	68.
4-Am-DNT		U	68.	ug/Kgdrywt	1	100	140	23.	68.
2-Am-DNT		U	68.	ug/Kgdrywt	1	100	140	28.	68.
2,6-Dinitrotoluene		U	68.	ug/Kgdrywt	1	100	140	37.	68.
2,4-Dinitrotoluene	EXCLUDE-RE	U	68.	ug/Kgdrywt	1	100	140	20.	68.
2-Nitrotoluene		U	68.	ug/Kgdrywt	1	100	140	16.	68.
4-Nitrotoluene		U	68.	ug/Kgdrywt	1	100	140	37.	68.
3-Nitrotoluene		U	68.	ug/Kgdrywt	1	100	140	11.	68.
1,2-Dinitrobenzene		*	35.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16RE
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 13-OCT-10
Extracted By: CB
Extraction Method: SW846 8330
Lab Prep Batch: WG83441

Analysis Date: 15-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 66.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	66.	ug/Kgdrywt	1	100	130	11.	66.
RDX	U	66.	ug/Kgdrywt	1	100	130	9.0	66.
1,3,5-Trinitrobenzene	U	66.	ug/Kgdrywt	1	100	130	8.9	66.
1,3-Dinitrobenzene	U	66.	ug/Kgdrywt	1	100	130	8.2	66.
Tetryl	U	66.	ug/Kgdrywt	1	100	130	7.2	66.
Nitrobenzene	EXCLUDE-RE ~~U~~	66.	ug/Kgdrywt	1	100	130	29.	66.
Nitroglycerin	U	530	ug/Kgdrywt	1	800	1100	160	530
2,4,6-Trinitrotoluene	U	66.	ug/Kgdrywt	1	100	130	8.9	66.
4-Am-DNT	U	66.	ug/Kgdrywt	1	100	130	22.	66.
2-Am-DNT	U	66.	ug/Kgdrywt	1	100	130	28.	66.
2,6-Dinitrotoluene	U	66.	ug/Kgdrywt	1	100	130	36.	66.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	66.	ug/Kgdrywt	1	100	130	20.	66.
2-Nitrotoluene	U	66.	ug/Kgdrywt	1	100	130	16.	66.
4-Nitrotoluene	U	66.	ug/Kgdrywt	1	100	130	36.	66.
3-Nitrotoluene	U	66.	ug/Kgdrywt	1	100	130	10.	66.
1,2-Dinitrobenzene		102.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 05-OCT-10
Extracted By: AC
Extraction Method: SW846 8330
Lab Prep Batch: WG83029

Analysis Date: 09-OCT-10
Analyst: AC
Analysis Method: SW846 8330
Matrix: SL
% Solids: 73.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
HMX	U	65.	ug/Kgdrywt	1	100	130	11.	65.
RDX	U	65.	ug/Kgdrywt	1	100	130	8.9	65.
1,3,5-Trinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
1,3-Dinitrobenzene	U	65.	ug/Kgdrywt	1	100	130	8.1	65.
Tetryl	U	65.	ug/Kgdrywt	1	100	130	7.1	65.
Nitrobenzene	EXCLUDE-RE ~~U~~	65.	ug/Kgdrywt	1	100	130	29.	65.
Nitroglycerin		1400	ug/Kgdrywt	1	800	1000	160	520
2,4,6-Trinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	8.7	65.
4-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	22.	65.
2-Am-DNT	U	65.	ug/Kgdrywt	1	100	130	27.	65.
2,6-Dinitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
2,4-Dinitrotoluene	EXCLUDE-RE ~~U~~	65.	ug/Kgdrywt	1	100	130	20.	65.
2-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	16.	65.
4-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	35.	65.
3-Nitrotoluene	U	65.	ug/Kgdrywt	1	100	130	10.	65.
1,2-Dinitrobenzene		60.7	%					

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66~~DP~~SS250001
Matrix: SOIL
SDG Name: JU04-5
Percent Solids: 76.4
Lab Sample ID: SD6083-001

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	5770			P	1	30	1.56	10
7440-36-0	ANTIMONY, TOTAL	0.50	U	~~N~~	P	1	0.80	0.11	0.50
7440-38-2	ARSENIC, TOTAL	2.1			MS	5	0.50	0.12	0.40
7440-39-3	BARIUM, TOTAL	33.4			P	1	0.50	0.03	0.30
7440-41-7	BERYLLIUM, TOTAL	0.26	J		P	1	0.50	0.009	0.050
7440-43-9	CADMIUM, TOTAL B-CCBL	0.02	~~J~~		P	1	1.0	0.008	0.30
7440-70-2	CALCIUM, TOTAL	129		~~N~~	P	1	10	1.07	8.0
7440-47-3	CHROMIUM, TOTAL	6.8			MS	5	0.50	0.06	0.20
7440-48-4	COBALT, TOTAL	3.2			MS	5	0.10	0.004	0.030
7440-50-8	COPPER, TOTAL	28.0			P	1	2.5	0.07	1.0
7439-89-6	IRON, TOTAL	4730			P	1	10	0.32	8.0
7439-92-1	LEAD, TOTAL	30.8			P	1	0.50	0.10	0.40
7439-95-4	MAGNESIUM, TOTAL	400		~~N~~	P	1	10	0.37	8.0
7439-96-5	MANGANESE, TOTAL	37.1		~~N~~	P	1	0.50	0.06	0.40
7439-97-6	MERCURY, TOTAL	0.06			CV	1	0.044	0.002	0.022
7440-02-0	NICKEL, TOTAL	6.1			P	1	4.0	0.05	0.40
7440-09-7	POTASSIUM, TOTAL	371		~~N~~	P	1	100	10.37	50
7782-49-2	SELENIUM, TOTAL	0.46	J		MS	5	0.50	0.04	0.30
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.10	0.01	0.040
7440-23-5	SODIUM, TOTAL	29.4	J		P	1	100	1.68	50
7440-28-0	THALLIUM, TOTAL	0.1	J		MS	5	0.20	0.005	0.040
7440-62-2	VANADIUM, TOTAL	29.0			MS	5	0.50	0.08	0.40
7440-66-6	ZINC, TOTAL	18.9			P	1	2.5	0.06	1.0

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66DP251011 SB

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 83.0 **Lab Sample ID:** SD6083-002

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	16100			P	2	57	2.94	19
7440-36-0	ANTIMONY, TOTAL	0.28	J	~~N~~	P	2	1.5	0.21	0.95
7440-38-2	ARSENIC, TOTAL B-FBL	0.76	—		MS	5	0.47	0.11	0.38
7440-39-3	BARIUM, TOTAL	103			P	2	0.95	0.05	0.57
7440-41-7	BERYLLIUM, TOTAL	0.90	J		P	2	0.95	0.02	0.095
7440-43-9	CADMIUM, TOTAL	0.57	U		P	2	1.9	0.02	0.57
7440-70-2	CALCIUM, TOTAL	532		~~N~~	P	2	19	2.01	15
7440-47-3	CHROMIUM, TOTAL	24.0			MS	5	0.47	0.06	0.19
7440-48-4	COBALT, TOTAL	16.6			MS	5	0.095	0.004	0.028
7440-50-8	COPPER, TOTAL	14.0			P	2	4.7	0.14	1.9
7439-89-6	IRON, TOTAL	31000			P	2	19	0.61	15
7439-92-1	LEAD, TOTAL	12.3			P	2	0.95	0.20	0.76
7439-95-4	MAGNESIUM, TOTAL	2230		~~N~~	P	2	19	0.69	15
7439-96-5	MANGANESE, TOTAL	53.2		~~N~~	P	2	0.95	0.11	0.76
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.040	0.001	0.020
7440-02-0	NICKEL, TOTAL	22.7			P	2	7.6	0.10	0.76
7440-09-7	POTASSIUM, TOTAL	1370		~~N~~	P	2	190	19.55	95
7782-49-2	SELENIUM, TOTAL	0.65			MS	5	0.47	0.03	0.28
7440-22-4	SILVER, TOTAL	0.01	J		MS	5	0.095	0.009	0.038
7440-23-5	SODIUM, TOTAL	248			P	2	190	3.17	95
7440-28-0	THALLIUM, TOTAL	0.20			MS	5	0.19	0.005	0.038
7440-62-2	VANADIUM, TOTAL	30.9			MS	5	0.47	0.07	0.38
7440-66-6	ZINC, TOTAL	59.1			P	2	4.7	0.12	1.9

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SSDP240001

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 82.2 **Lab Sample ID:** SD6083-003

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9280			P	1	29	1.51	9.7
7440-36-0	ANTIMONY, TOTAL	0.15	J	N	P	1	0.78	0.11	0.49
7440-38-2	ARSENIC, TOTAL	1.8			MS	5	0.49	0.11	0.39
7440-39-3	BARIUM, TOTAL	39.4			P	1	0.49	0.03	0.29
7440-41-7	BERYLLIUM, TOTAL	0.28	J		P	1	0.49	0.009	0.049
7440-43-9	CADMIUM, TOTAL	0.29	U		P	1	0.97	0.008	0.29
7440-70-2	CALCIUM, TOTAL	162		N	P	1	9.7	1.03	7.8
7440-47-3	CHROMIUM, TOTAL	12.2			MS	5	0.49	0.06	0.19
7440-48-4	COBALT, TOTAL	4.0			MS	5	0.097	0.004	0.029
7440-50-8	COPPER, TOTAL	17.7			P	1	2.4	0.07	0.97
7439-89-6	IRON, TOTAL	7850			P	1	9.7	0.31	7.8
7439-92-1	LEAD, TOTAL	24.6			P	1	0.49	0.10	0.39
7439-95-4	MAGNESIUM, TOTAL	678		N	P	1	9.7	0.35	7.8
7439-96-5	MANGANESE, TOTAL	72.4		N	P	1	0.49	0.06	0.39
7439-97-6	MERCURY, TOTAL	0.04			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	6.2			P	1	3.9	0.05	0.39
7440-09-7	POTASSIUM, TOTAL	652		N	P	1	97	10.03	49
7782-49-2	SELENIUM, TOTAL	0.30	J		MS	5	0.49	0.03	0.29
7440-22-4	SILVER, TOTAL	0.04	J		MS	5	0.097	0.010	0.039
7440-23-5	SODIUM, TOTAL	37.2	J		P	1	97	1.62	49
7440-28-0	THALLIUM, TOTAL	0.13	J		MS	5	0.19	0.005	0.039
7440-62-2	VANADIUM, TOTAL	36.7			MS	5	0.49	0.07	0.39
7440-66-6	ZINC, TOTAL	23.9			P	1	2.4	0.06	0.97

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** SB IS66DP240708

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 95.4 **Lab Sample ID:** SD6083-004

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	5860			P	1	20	1.04	6.7
7440-36-0	ANTIMONY, TOTAL	0.34	U	N	P	1	0.54	0.08	0.34
7440-38-2	ARSENIC, TOTAL	3.5			MS	5	0.34	0.08	0.27
7440-39-3	BARIUM, TOTAL	45.2			P	1	0.34	0.02	0.20
7440-41-7	BERYLLIUM, TOTAL	0.31	J		P	1	0.34	0.006	0.034
7440-43-9	CADMIUM, TOTAL	0.20	U		P	1	0.67	0.005	0.20
7440-70-2	CALCIUM, TOTAL	58.5		N	P	1	6.7	0.71	5.4
7440-47-3	CHROMIUM, TOTAL	11.2			MS	5	0.34	0.04	0.13
7440-48-4	COBALT, TOTAL	2.8			MS	5	0.067	0.003	0.020
7440-50-8	COPPER, TOTAL	4.4			P	1	1.7	0.05	0.67
7439-89-6	IRON, TOTAL	6110			P	1	6.7	0.22	5.4
7439-92-1	LEAD, TOTAL	5.8			P	1	0.34	0.07	0.27
7439-95-4	MAGNESIUM, TOTAL	666		N	P	1	6.7	0.24	5.4
7439-96-5	MANGANESE, TOTAL	17.2		N	P	1	0.34	0.04	0.27
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.030	0.001	0.015
7440-02-0	NICKEL, TOTAL	3.8			P	1	2.7	0.04	0.27
7440-09-7	POTASSIUM, TOTAL	649		N	P	1	67	6.92	34
7782-49-2	SELENIUM, TOTAL	0.28	J		MS	5	0.34	0.02	0.20
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.067	0.007	0.027
7440-23-5	SODIUM, TOTAL	71.9			P	1	67	1.12	34
7440-28-0	THALLIUM, TOTAL	0.07	J		MS	5	0.13	0.003	0.027
7440-62-2	VANADIUM, TOTAL	17.6			MS	5	0.34	0.05	0.27
7440-66-6	ZINC, TOTAL	13.1			P	1	1.7	0.04	0.67

Comments:

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INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB01-100110

Matrix: WATER | SDG Name: JU04-5

Percent Solids: 0.00 | Lab Sample ID: SD6083-007

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	100	U		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL	1.2	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	3.0	U		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL B-MBL	0.03	~~J~~		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	12.4	J		P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL B-MBL	2.3	~~J~~		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.30	U		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL	10	U		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	80	U		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	1.1	J		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL B-MBL	8.4	~~J~~		P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	4.0	U		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	500	U		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL B-CCBL	86.5	~~J~~		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL B-MBL	1.7	~~J~~		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	10	U		P	1	25	0.50	10

Bottle ID: D

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services | Client Field ID: IS66EB02-100110

Matrix: WATER | SDG Name: JU04-5

Percent Solids: 0.00 | Lab Sample ID: SD6083-008

Concentration Units : ug/L

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	76.8	J		P	1	300	15.20	100
7440-36-0	ANTIMONY, TOTAL	0.50	U		MS	5	1.0	0.10	0.50
7440-38-2	ARSENIC, TOTAL B-FBL	1.6	J		MS	5	5.0	0.80	4.0
7440-39-3	BARIUM, TOTAL	0.95	J		P	1	5.0	0.44	3.0
7440-41-7	BERYLLIUM, TOTAL	0.20	U		MS	5	1.0	0.05	0.20
7440-43-9	CADMIUM, TOTAL B-CCBL	0.04	J		MS	5	1.0	0.03	0.20
7440-70-2	CALCIUM, TOTAL	318			P	1	100	5.79	80
7440-47-3	CHROMIUM, TOTAL B-MBL	2.7	J		MS	5	5.0	0.30	2.0
7440-48-4	COBALT, TOTAL	0.04	J		MS	5	1.0	0.04	0.30
7440-50-8	COPPER, TOTAL B-MBC	0.59	J		P	1	25	0.48	10
7439-89-6	IRON, TOTAL	79.6	J		P	1	100	6.27	80
7439-92-1	LEAD, TOTAL	1.0	J		P	1	5.0	0.73	4.0
7439-95-4	MAGNESIUM, TOTAL	183			P	1	100	4.83	80
7439-96-5	MANGANESE, TOTAL	2.2	J		P	1	5.0	0.37	4.0
7439-97-6	MERCURY, TOTAL	0.10	U		CV	1	0.20	0.04	0.10
7440-02-0	NICKEL, TOTAL	4.0	U		P	1	40	0.29	4.0
7440-09-7	POTASSIUM, TOTAL	158	J		P	1	1000	105.00	500
7782-49-2	SELENIUM, TOTAL	7.0	U		P	1	10	3.67	7.0
7440-22-4	SILVER, TOTAL	4.0	U		P	1	15	0.48	4.0
7440-23-5	SODIUM, TOTAL	658	J		P	1	1000	34.40	500
7440-28-0	THALLIUM, TOTAL	0.40	U		MS	5	2.0	0.05	0.40
7440-62-2	VANADIUM, TOTAL	1.8	J		MS	5	5.0	0.60	4.0
7440-66-6	ZINC, TOTAL	3.0	J		P	1	25	0.50	10

Bottle ID: D

Comments:

I

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD13

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 49.8 **Lab Sample ID:** SD6083-009

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	10600			P	1	34	1.78	11
7440-36-0	ANTIMONY, TOTAL	0.35	J	N	P	1	0.92	0.13	0.57
7440-38-2	ARSENIC, TOTAL	5.6			MS	5	0.57	0.13	0.46
7440-39-3	BARIUM, TOTAL	89.4			P	1	0.57	0.03	0.34
7440-41-7	BERYLLIUM, TOTAL	0.84			P	1	0.57	0.01	0.057
7440-43-9	CADMIUM, TOTAL	0.81	J		P	1	1.1	0.009	0.34
7440-70-2	CALCIUM, TOTAL	1320		~~N~~	P	1	11	1.22	9.2
7440-47-3	CHROMIUM, TOTAL	16.2			MS	5	0.57	0.07	0.23
7440-48-4	COBALT, TOTAL	12.5			MS	5	0.11	0.005	0.034
7440-50-8	COPPER, TOTAL	26.2			P	1	2.9	0.08	1.1
7439-89-6	IRON, TOTAL	19900			P	1	11	0.37	9.2
7439-92-1	LEAD, TOTAL	63.2			P	1	0.57	0.12	0.46
7439-95-4	MAGNESIUM, TOTAL	1060		~~N~~	P	1	11	0.42	9.2
7439-96-5	MANGANESE, TOTAL	110		~~N~~	P	1	0.57	0.07	0.46
7439-97-6	MERCURY, TOTAL	0.15			CV	1	0.060	0.002	0.030
7440-02-0	NICKEL, TOTAL	17.6			P	1	4.6	0.06	0.46
7440-09-7	POTASSIUM, TOTAL	777		N	P	1	110	11.81	57
7782-49-2	SELENIUM, TOTAL	0.62			MS	5	0.57	0.04	0.34
7440-22-4	SILVER, TOTAL	0.30			MS	5	0.11	0.01	0.046
7440-23-5	SODIUM, TOTAL B-GBL	305	—		P	1	110	1.91	57
7440-28-0	THALLIUM, TOTAL	0.23			MS	5	0.23	0.006	0.046
7440-62-2	VANADIUM, TOTAL	39.4			MS	5	0.57	0.09	0.46
7440-66-6	ZINC, TOTAL	127			P	1	2.9	0.07	1.1

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD12

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 69.6 **Lab Sample ID:** SD6083-010

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	2790			P	1	24	1.26	8.1
7440-36-0	ANTIMONY, TOTAL	0.18	J	~~N~~	P	1	0.65	0.09	0.40
7440-38-2	ARSENIC, TOTAL	3.3			MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	41.4			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL	0.30	J		P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL	0.29	J		P	1	0.81	0.006	0.24
7440-70-2	CALCIUM, TOTAL	856		~~N~~	P	1	8.1	0.86	6.5
7440-47-3	CHROMIUM, TOTAL	6.7			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	6.4			MS	5	0.081	0.003	0.024
7440-50-8	COPPER, TOTAL	8.4			P	1	2.0	0.06	0.81
7439-89-6	IRON, TOTAL	10800			P	1	8.1	0.26	6.5
7439-92-1	LEAD, TOTAL	17.4			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	323		~~N~~	P	1	8.1	0.29	6.5
7439-96-5	MANGANESE, TOTAL	379		~~N~~	P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.03	J		CV	1	0.042	0.001	0.021
7440-02-0	NICKEL, TOTAL	6.8			P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	279		~~N~~	P	1	81	8.36	40
7782-49-2	SELENIUM, TOTAL	0.19	J		MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.081	0.008	0.032
7440-23-5	SODIUM, TOTAL B-EBL	53.7	J		P	1	81	1.36	40
7440-28-0	THALLIUM, TOTAL	0.07	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	16.2			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	39.8			P	1	2.0	0.05	0.81

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD11

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 68.8 **Lab Sample ID:** SD6083-011

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	3400			P	1	28	1.44	9.3
7440-36-0	ANTIMONY, TOTAL	0.15	J	~~N~~	P	1	0.74	0.10	0.46
7440-38-2	ARSENIC, TOTAL	2.9			MS	5	0.46	0.11	0.37
7440-39-3	BARIUM, TOTAL	28.3			P	1	0.46	0.02	0.28
7440-41-7	BERYLLIUM, TOTAL	0.32	J		P	1	0.46	0.008	0.046
7440-43-9	CADMIUM, TOTAL	0.24	J		P	1	0.93	0.007	0.28
7440-70-2	CALCIUM, TOTAL	435		~~N~~	P	1	9.3	0.99	7.4
7440-47-3	CHROMIUM, TOTAL	8.6			MS	5	0.46	0.06	0.19
7440-48-4	COBALT, TOTAL	5.8			MS	5	0.093	0.004	0.028
7440-50-8	COPPER, TOTAL	12.3			P	1	2.3	0.07	0.93
7439-89-6	IRON, TOTAL	15600			P	1	9.3	0.30	7.4
7439-92-1	LEAD, TOTAL	21.8			P	1	0.46	0.10	0.37
7439-95-4	MAGNESIUM, TOTAL	300		~~N~~	P	1	9.3	0.34	7.4
7439-96-5	MANGANESE, TOTAL	71.2		~~N~~	P	1	0.46	0.05	0.37
7439-97-6	MERCURY, TOTAL	0.04	J		CV	1	0.048	0.002	0.025
7440-02-0	NICKEL, TOTAL	9.4			P	1	3.7	0.05	0.37
7440-09-7	POTASSIUM, TOTAL	360		~~N~~	P	1	93	9.59	46
7782-49-2	SELENIUM, TOTAL	0.24	J		MS	5	0.46	0.03	0.28
7440-22-4	SILVER, TOTAL	0.05	J		MS	5	0.093	0.009	0.037
7440-23-5	SODIUM, TOTAL B-EBL	94.1	—		P	1	93	1.55	46
7440-28-0	THALLIUM, TOTAL	0.12	J		MS	5	0.19	0.005	0.037
7440-62-2	VANADIUM, TOTAL	18.4			MS	5	0.46	0.07	0.37
7440-66-6	ZINC, TOTAL	35.4			P	1	2.3	0.06	0.93

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD10

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 52.8 **Lab Sample ID:** SD6083-012

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9240			P	1	32	1.63	10
7440-36-0	ANTIMONY, TOTAL	0.19	J	~~N~~	P	1	0.84	0.12	0.52
7440-38-2	ARSENIC, TOTAL	8.8			MS	5	0.52	0.12	0.42
7440-39-3	BARIUM, TOTAL	83.7			P	1	0.52	0.03	0.32
7440-41-7	BERYLLIUM, TOTAL	0.81			P	1	0.52	0.009	0.052
7440-43-9	CADMIUM, TOTAL	0.80	J		P	1	1.0	0.008	0.32
7440-70-2	CALCIUM, TOTAL	1260		~~N~~	P	1	10	1.11	8.4
7440-47-3	CHROMIUM, TOTAL	14.6			MS	5	0.52	0.06	0.21
7440-48-4	COBALT, TOTAL	21.0			MS	5	0.10	0.004	0.032
7440-50-8	COPPER, TOTAL	25.8			P	1	2.6	0.08	1.0
7439-89-6	IRON, TOTAL	23100			P	1	10	0.34	8.4
7439-92-1	LEAD, TOTAL	36.0			P	1	0.52	0.11	0.42
7439-95-4	MAGNESIUM, TOTAL	763		~~N~~	P	1	10	0.38	8.4
7439-96-5	MANGANESE, TOTAL	461		~~N~~	P	1	0.52	0.06	0.42
7439-97-6	MERCURY, TOTAL	0.08			CV	1	0.056	0.002	0.029
7440-02-0	NICKEL, TOTAL	16.6			P	1	4.2	0.06	0.42
7440-09-7	POTASSIUM, TOTAL	840		~~N~~	P	1	100	10.83	52
7782-49-2	SELENIUM, TOTAL	0.51	J		MS	5	0.52	0.04	0.32
7440-22-4	SILVER, TOTAL	0.15			MS	5	0.10	0.01	0.042
7440-23-5	SODIUM, TOTAL	320			P	1	100	1.75	52
7440-28-0	THALLIUM, TOTAL	0.22			MS	5	0.21	0.005	0.042
7440-62-2	VANADIUM, TOTAL	37.8			MS	5	0.52	0.08	0.42
7440-66-6	ZINC, TOTAL	88.3			P	1	2.6	0.07	1.0

B- EBL

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD09

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 74.3 **Lab Sample ID:** SD6083-013

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	1450			P	1	24	1.23	8.0
7440-36-0	ANTIMONY, TOTAL	0.40	U	N	P	1	0.64	0.09	0.40
7440-38-2	ARSENIC, TOTAL B-FBE	0.54			MS	5	0.40	0.09	0.32
7440-39-3	BARIUM, TOTAL	10			P	1	0.40	0.02	0.24
7440-41-7	BERYLLIUM, TOTAL B-CCBE	0.14	J		P	1	0.40	0.007	0.040
7440-43-9	CADMIUM, TOTAL B-CCBE	0.12	J		P	1	0.80	0.006	0.24
7440-70-2	CALCIUM, TOTAL B-EBL	159		N	P	1	8.0	0.84	6.4
7440-47-3	CHROMIUM, TOTAL	4.0			MS	5	0.40	0.05	0.16
7440-48-4	COBALT, TOTAL	2.7			MS	5	0.080	0.003	0.024
7440-50-8	COPPER, TOTAL	5.6			P	1	2.0	0.06	0.80
7439-89-6	IRON, TOTAL	3220			P	1	8.0	0.26	6.4
7439-92-1	LEAD, TOTAL	7.0			P	1	0.40	0.08	0.32
7439-95-4	MAGNESIUM, TOTAL	155		N	P	1	8.0	0.29	6.4
7439-96-5	MANGANESE, TOTAL	27.2		N	P	1	0.40	0.05	0.32
7439-97-6	MERCURY, TOTAL	0.01	J		CV	1	0.041	0.001	0.021
7440-02-0	NICKEL, TOTAL	2.2	J		P	1	3.2	0.04	0.32
7440-09-7	POTASSIUM, TOTAL	180		N	P	1	80	8.20	40
7782-49-2	SELENIUM, TOTAL	0.04	J		MS	5	0.40	0.03	0.24
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.080	0.008	0.032
7440-23-5	SODIUM, TOTAL B-EBL	50.7	J		P	1	80	1.33	40
7440-28-0	THALLIUM, TOTAL	0.02	J		MS	5	0.16	0.004	0.032
7440-62-2	VANADIUM, TOTAL	5.8			MS	5	0.40	0.06	0.32
7440-66-6	ZINC, TOTAL	13.7			P	1	2.0	0.05	0.80

Bottle ID: E

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD08

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 46.1 **Lab Sample ID:** SD6083-014

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	9690			P	1	42	2.20	14
7440-36-0	ANTIMONY, TOTAL	0.71	U	N	P	1	1.1	0.16	0.71
7440-38-2	ARSENIC, TOTAL	5.2			MS	5	0.71	0.16	0.57
7440-39-3	BARIUM, TOTAL	92.2			P	1	0.71	0.04	0.42
7440-41-7	BERYLLIUM, TOTAL	0.81			P	1	0.71	0.01	0.071
7440-43-9	CADMIUM, TOTAL	0.96	J		P	1	1.4	0.01	0.42
7440-70-2	CALCIUM, TOTAL	730		N	P	1	14	1.50	11
7440-47-3	CHROMIUM, TOTAL	15.4			MS	5	0.71	0.08	0.28
7440-48-4	COBALT, TOTAL	24.5			MS	5	0.14	0.006	0.042
7440-50-8	COPPER, TOTAL	33.1			P	1	3.5	0.10	1.4
7439-89-6	IRON, TOTAL	14900			P	1	14	0.46	11
7439-92-1	LEAD, TOTAL	29.9			P	1	0.71	0.15	0.57
7439-95-4	MAGNESIUM, TOTAL	852		N	P	1	14	0.51	11
7439-96-5	MANGANESE, TOTAL	244		N	P	1	0.71	0.08	0.57
7439-97-6	MERCURY, TOTAL	0.06	J		CV	1	0.064	0.002	0.032
7440-02-0	NICKEL, TOTAL	15.5			P	1	5.7	0.08	0.57
7440-09-7	POTASSIUM, TOTAL	803		N	P	1	140	14.59	71
7782-49-2	SELENIUM, TOTAL	0.36	J		MS	5	0.71	0.05	0.42
7440-22-4	SILVER, TOTAL	0.11	J		MS	5	0.14	0.01	0.057
7440-23-5	SODIUM, TOTAL B-EBL	230	—		P	1	140	2.36	71
7440-28-0	THALLIUM, TOTAL	0.14	J		MS	5	0.28	0.007	0.057
7440-62-2	VANADIUM, TOTAL	39.3			MS	5	0.71	0.11	0.57
7440-66-6	ZINC, TOTAL	89.3			P	1	3.5	0.09	1.4

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD07

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 72.2 **Lab Sample ID:** SD6083-015

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	ADJUSTED MDL	ADJUSTED LOD
7429-90-5	ALUMINUM, TOTAL	3160			P	1	26	1.34	8.7
7440-36-0	ANTIMONY, TOTAL	0.43	~~U~~	~~N~~	P	1	0.69	0.10	0.43
7440-38-2	ARSENIC, TOTAL	3.5			MS	5	0.43	0.10	0.35
7440-39-3	BARIUM, TOTAL	34.0			P	1	0.43	0.02	0.26
7440-41-7	BERYLLIUM, TOTAL	0.30	J		P	1	0.43	0.008	0.043
7440-43-9	CADMIUM, TOTAL	0.20	J		P	1	0.87	0.007	0.26
7440-70-2	CALCIUM, TOTAL	239		~~N~~	P	1	8.7	0.92	6.9
7440-47-3	CHROMIUM, TOTAL	5.9			MS	5	0.43	0.05	0.17
7440-48-4	COBALT, TOTAL	9.3			MS	5	0.087	0.003	0.026
7440-50-8	COPPER, TOTAL	7.8			P	1	2.2	0.06	0.87
7439-89-6	IRON, TOTAL	8680			P	1	8.7	0.28	6.9
7439-92-1	LEAD, TOTAL	10.5			P	1	0.43	0.09	0.35
7439-95-4	MAGNESIUM, TOTAL	256		~~N~~	P	1	8.7	0.31	6.9
7439-96-5	MANGANESE, TOTAL	118		~~N~~	P	1	0.43	0.05	0.35
7439-97-6	MERCURY, TOTAL	0.02	J		CV	1	0.045	0.002	0.023
7440-02-0	NICKEL, TOTAL	4.7			P	1	3.5	0.05	0.35
7440-09-7	POTASSIUM, TOTAL	275		~~N~~	P	1	87	8.92	43
7782-49-2	SELENIUM, TOTAL	0.1	J		MS	5	0.43	0.03	0.26
7440-22-4	SILVER, TOTAL	0.03	J		MS	5	0.087	0.009	0.035
7440-23-5	SODIUM, TOTAL	101		—	P	1	87	1.45	43
7440-28-0	THALLIUM, TOTAL	0.04	J		MS	5	0.17	0.004	0.035
7440-62-2	VANADIUM, TOTAL	12.6			MS	5	0.43	0.06	0.35
7440-66-6	ZINC, TOTAL	30.3			P	1	2.2	0.05	0.87

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services **Client Field ID:** IS66SD06

Matrix: SOIL **SDG Name:** JU04-5

Percent Solids: 66.2 **Lab Sample ID:** SD6083-016

Concentration Units : mg/Kgdrywt

CAS No.	Analyte		Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL	J-FD	4590			P	1	36	1.86	12
7440-36-0	ANTIMONY, TOTAL		0.60	U	N	P	1	0.96	0.13	0.60
7440-38-2	ARSENIC, TOTAL	B-FBL	1.1			MS	5	0.60	0.14	0.48
7440-39-3	BARIUM, TOTAL		30.7			P	1	0.60	0.03	0.36
7440-41-7	BERYLLIUM, TOTAL		0.28	J		P	1	0.60	0.01	0.060
7440-43-9	CADMIUM, TOTAL		0.82	J		P	1	1.2	0.010	0.36
7440-70-2	CALCIUM, TOTAL		454		N	P	1	12	1.27	9.6
7440-47-3	CHROMIUM, TOTAL		7.4			MS	5	0.60	0.07	0.24
7440-48-4	COBALT, TOTAL		6.7			MS	5	0.12	0.005	0.036
7440-50-8	COPPER, TOTAL		10.7			P	1	3.0	0.09	1.2
7439-89-6	IRON, TOTAL		4730			P	1	12	0.39	9.6
7439-92-1	LEAD, TOTAL		13.6			P	1	0.60	0.12	0.48
7439-95-4	MAGNESIUM, TOTAL		440		N	P	1	12	0.44	9.6
7439-96-5	MANGANESE, TOTAL		80.0		N	P	1	0.60	0.07	0.48
7439-97-6	MERCURY, TOTAL		0.02	J		CV	1	0.039	0.001	0.020
7440-02-0	NICKEL, TOTAL		5.3			P	1	4.8	0.06	0.48
7440-09-7	POTASSIUM, TOTAL	J-FD	508		N	P	1	120	12.35	60
7782-49-2	SELENIUM, TOTAL		0.16	J		MS	5	0.60	0.04	0.36
7440-22-4	SILVER, TOTAL		0.03	J		MS	5	0.12	0.01	0.048
7440-23-5	SODIUM, TOTAL	B-EBL	115	J		P	1	120	2.00	60
7440-28-0	THALLIUM, TOTAL		0.06	J		MS	5	0.24	0.006	0.048
7440-62-2	VANADIUM, TOTAL		11.2			MS	5	0.60	0.09	0.48
7440-66-6	ZINC, TOTAL		53.7			P	1	3.0	0.08	1.2

Comments:

INORGANIC ANALYSIS DATA SHEET

Lab Name: Katahdin Analytical Services
Client Field ID: IS66SD06P
Matrix: SOIL
SDG Name: JU04-5
Percent Solids: 73.0
Lab Sample ID: SD6083-017

Concentration Units : mg/Kgdrywt

CAS No.	Analyte	Concentration	C	Q	M	DF	ADJUSTED LOQ	MDL	LOD
7429-90-5	ALUMINUM, TOTAL J-FA	2840			P	1	29	1.50	9.6
7440-36-0	ANTIMONY, TOTAL	0.48	U	N	P	1	0.77	0.11	0.48
7440-38-2	ARSENIC, TOTAL B-FBL	1.1			MS	5	0.48	0.11	0.39
7440-39-3	BARIUM, TOTAL	23.6			P	1	0.48	0.03	0.29
7440-41-7	BERYLLIUM, TOTAL	0.23	J		P	1	0.48	0.009	0.048
7440-43-9	CADMIUM, TOTAL	0.64	J		P	1	0.96	0.008	0.29
7440-70-2	CALCIUM, TOTAL	458		N	P	1	9.6	1.02	7.7
7440-47-3	CHROMIUM, TOTAL	5.3			MS	5	0.48	0.06	0.19
7440-48-4	COBALT, TOTAL	6.7			MS	5	0.096	0.004	0.029
7440-50-8	COPPER, TOTAL	9.0			P	1	2.4	0.07	0.96
7439-89-6	IRON, TOTAL	4100			P	1	9.6	0.31	7.7
7439-92-1	LEAD, TOTAL	10.4			P	1	0.48	0.10	0.39
7439-95-4	MAGNESIUM, TOTAL	302		N	P	1	9.6	0.35	7.7
7439-96-5	MANGANESE, TOTAL	77.9		N	P	1	0.48	0.06	0.39
7439-97-6	MERCURY, TOTAL	0.04			CV	1	0.036	0.001	0.018
7440-02-0	NICKEL, TOTAL	4.4			P	1	3.9	0.05	0.39
7440-09-7	POTASSIUM, TOTAL J-FA	264		N	P	1	96	9.94	48
7782-49-2	SELENIUM, TOTAL	0.08	J		MS	5	0.48	0.03	0.29
7440-22-4	SILVER, TOTAL	0.02	J		MS	5	0.096	0.010	0.039
7440-23-5	SODIUM, TOTAL B-EBL	85.8	J		P	1	96	1.61	48
7440-28-0	THALLIUM, TOTAL	0.03	J		MS	5	0.19	0.005	0.039
7440-62-2	VANADIUM, TOTAL	7.8			MS	5	0.48	0.07	0.39
7440-66-6	ZINC, TOTAL	47.4			P	1	2.4	0.06	0.96

Comments:

Katahdin Analytical Services

Client Sample ID: IS66DP250001

HPLC

Lot-Sample #...:	G0J050523-001	**Work Order #...:**	L713E1AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.97				
% Moisture.....:	30	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.019**

Katahdin Analytical Services

Client Sample ID: IS66DP251011

HPLC

Lot-Sample #...:	G0J050523-002	Work Order #...:	L714M1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	1.02				
% Moisture.....:	19	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.041 U	0.26	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66DP240001 SS

HPLC

Lot-Sample #...:	G0J050523-003	Work Order #...:	L714N1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.96				
% Moisture.....:	18	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.038 U	0.24	mg/kg	0.019

HK 12/27/2010

Katahdin Analytical Services

Client Sample ID: IS66SB240708

HPLC

Lot-Sample #...:	G0J050523-004	Work Order #...:	L714P1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.98				
% Moisture.....:	4.2	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SD13

HPLC

Lot-Sample #...:	G0J050523-005	Work Order #...:	L714R1AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	1.01				
% Moisture.....:	39	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SD12

HPLC

Lot-Sample #...:	G0J050523-006	**Work Order #...:**	L714W1AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	1				
% Moisture.....:	26	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.040 U**	**0.25**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66SD11

HPLC

Lot-Sample #...:	G0J050523-007	**Work Order #...:**	L71401AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.98				
% Moisture.....:	26	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66SD10

HPLC

Lot-Sample #...:	G0J050523-008	Work Order #...:	L71411AD	Matrix.....: SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10	
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10	
Prep Batch #...:	0281246			
Dilution Factor:	1			
% Moisture.....:	31	Method.....:	SW846 8330 (Modif	

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SD09

HPLC

Lot-Sample #...:	G0J050523-009	**Work Order #...:**	L71431AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.97				
% Moisture.....:	24	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.019**

Katahdin Analytical Services

Client Sample ID: IS66SD08

HPLC

Lot-Sample #...:	G0J050523-010	**Work Order #...:**	L71451AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.99				
% Moisture.....:	45	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.040 U**	**0.25**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66SD07

HPLC

Lot-Sample #...:	G0J050523-011	Work Order #...:	L71461AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	1				
% Moisture.....:	26	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.040 U	0.25	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66SD06

HPLC

Lot-Sample #...:	G0J050523-012	**Work Order #...:**	L71471AD	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/08/10	**Analysis Date..:**	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.98				
% Moisture.....:	24	**Method.....:**	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	**0.039 U**	**0.24**	**mg/kg**	**0.020**

Katahdin Analytical Services

Client Sample ID: IS66SD06P

HPLC

Lot-Sample #...:	G0J050523-013	Work Order #...:	L71481AD	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/08/10	Analysis Date..:	10/20/10		
Prep Batch #...:	0281246				
Dilution Factor:	0.98				
% Moisture.....:	22	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	0.039 U	0.24	mg/kg	0.020

Katahdin Analytical Services

Client Sample ID: IS66EB01-100110

Dissolved HPLC

Lot-Sample #...:	G0J050523-014	Work Order #...:	L71491AC	Matrix.....:	WATER
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280331				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin Analytical Services

Client Sample ID: IS66EB02-100110

Dissolved HPLC

Lot-Sample #...:	G0J050523-015	Work Order #...:	L715A1AC	Matrix.....:	WATER
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280331				
Dilution Factor:	1	Method.....:	SW846 8330 (Modif		

PARAMETER	RESULT	LOQ	UNITS	DL
Nitroguanidine	6.0 U	20	ug/L	2.4

Katahdin
ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: 1S66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.4	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.0	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.7	11.
Tetrachloro-M-Xylene		64.6	%					
Decachlorobiphenyl		70.5	%					

600 Technology Way
P.O. Box 540, Scarborough, ME 04070
Tel:(207) 874-2400 Fax:(207) 775-4029
http://www.katahdinlab.com

HK 12/26/2010

Katahdin
ANALYTICAL SERVICES

ACCREDITED IN ACCORDANCE WITH nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 83.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Aroclor-1221	U	9.2	ug/Kgdrywt	1	17	18.	8.6	9.2
Aroclor-1232	U	11.	ug/Kgdrywt	1	17	18.	10.	11.
Aroclor-1242	U	9.2	ug/Kgdrywt	1	17	18.	6.3	9.2
Aroclor-1248	U	9.2	ug/Kgdrywt	1	17	18.	6.6	9.2
Aroclor-1254	U	9.2	ug/Kgdrywt	1	17	18.	5.1	9.2
Aroclor-1260	U	9.2	ug/Kgdrywt	1	17	18.	6.5	9.2
Tetrachloro-M-Xylene		61.2	%					
Decachlorobiphenyl		70.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66SP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Aroclor-1221	U	10.	ug/Kgdrywt	1	17	20.	9.6	10.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	20.	11.	12.
Aroclor-1242	U	10.	ug/Kgdrywt	1	17	20.	7.0	10.
Aroclor-1248	U	10.	ug/Kgdrywt	1	17	20.	7.4	10.
Aroclor-1254	U	10.	ug/Kgdrywt	1	17	20.	5.7	10.
Aroclor-1260	U	10.	ug/Kgdrywt	1	17	20.	7.2	10.
Tetrachloro-M-Xylene	*	51.5	%					
Decachlorobiphenyl		62.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66SP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	8.7	ug/Kgdrywt	1	17	17.	6.2	8.7
Aroclor-1221	U	8.7	ug/Kgdrywt	1	17	17.	8.1	8.7
Aroclor-1232	U	10.	ug/Kgdrywt	1	17	17.	9.6	10.
Aroclor-1242	U	8.7	ug/Kgdrywt	1	17	17.	6.0	8.7
Aroclor-1248	U	8.7	ug/Kgdrywt	1	17	17.	6.3	8.7
Aroclor-1254	U	8.7	ug/Kgdrywt	1	17	17.	4.8	8.7
Aroclor-1260	U	8.7	ug/Kgdrywt	1	17	17.	6.2	8.7
Tetrachloro-M-Xylene		83.3	%					
Decachlorobiphenyl		80.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 08-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG83203

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.52	0.16	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.52	0.093	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.52	0.19	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.52	0.21	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.52	0.085	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.52	0.18	0.26
Tetrachloro-M-Xylene		82.9	%					
Decachlorobiphenyl		58.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 08-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG83203

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	0.26	ug/L	1	.5	0.51	0.15	0.26
Aroclor-1221	U	0.26	ug/L	1	.5	0.51	0.20	0.26
Aroclor-1232	U	0.26	ug/L	1	.5	0.51	0.091	0.26
Aroclor-1242	U	0.26	ug/L	1	.5	0.51	0.18	0.26
Aroclor-1248	U	0.26	ug/L	1	.5	0.51	0.20	0.26
Aroclor-1254	U	0.26	ug/L	1	.5	0.51	0.084	0.26
Aroclor-1260	U	0.26	ug/L	1	.5	0.51	0.17	0.26
Tetrachloro-M-Xylene		78.3	%					
Decachlorobiphenyl		57.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 50.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	33.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	33.	18.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	33.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Aroclor-1254	U	16.	ug/Kgdrywt	1	17	33.	9.1	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	33.	12.	16.
Tetrachloro-M-Xylene		65.1	%					
Decachlorobiphenyl		63.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 70.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.1	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.5	12.
Aroclor-1254	U	12.	ug/Kgdrywt	1	17	24.	6.5	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Tetrachloro-M-Xylene		76.9	%					
Decachlorobiphenyl		75.4	%					

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Client: CH2MHill
Lab ID: SD6083-11
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 69.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	24.	11.	12.
Aroclor-1232	U	14.	ug/Kgdrywt	1	17	24.	13.	14.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	24.	8.3	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	24.	8.7	12.
Aroclor-1254	U	12.	ug/Kgdrywt	1	17	24.	6.7	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	24.	8.6	12.
Tetrachloro-M-Xylene		74.0	%					
Decachlorobiphenyl		65.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12RA
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 53.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1221	U	16.	ug/Kgdrywt	1	17	32.	15.	16.
Aroclor-1232	U	19.	ug/Kgdrywt	1	17	32.	17.	19.
Aroclor-1242	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1248	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Aroclor-1254	U	16.	ug/Kgdrywt	1	17	32.	8.7	16.
Aroclor-1260	U	16.	ug/Kgdrywt	1	17	32.	11.	16.
Tetrachloro-M-Xylene		60.0	%					
Decachlorobiphenyl		64.5	%					

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Client: CH2MHill
Lab ID: SD6083-13RA
Client ID: 1S66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 18-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 74.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	UL-SSL	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.5	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.1	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Tetrachloro-M-Xylene	*	46.2	%					
Decachlorobiphenyl		61.0	%					

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Client: CH2MHill
Lab ID: SD6083-14
Client ID: 1S66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 15-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 46.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	17.	ug/Kgdrywt	1	17	33.	12.	17.
Aroclor-1221	U	17.	ug/Kgdrywt	1	17	33.	16.	17.
Aroclor-1232	U	20.	ug/Kgdrywt	1	17	33.	18.	20.
Aroclor-1242	U	17.	ug/Kgdrywt	1	17	33.	11.	17.
Aroclor-1248	U	17.	ug/Kgdrywt	1	17	33.	12.	17.
Aroclor-1254	U	17.	ug/Kgdrywt	1	17	33.	9.2	17.
Aroclor-1260	U	17.	ug/Kgdrywt	1	17	33.	12.	17.
Tetrachloro-M-Xylene		77.7	%					
Decachlorobiphenyl		75.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 16-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 72.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U Exclude-PE	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	21.	10.	11.
Aroclor-1232	U	12.	ug/Kgdrywt	1	17	21.	12.	12.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	21.	7.3	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	21.	7.7	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	21.	5.9	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	21.	7.6	11.
Tetrachloro-M-Xylene	*	37.1	%					
Decachlorobiphenyl	*	54.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15RE
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83707

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 72.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U UJ-HT	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	22.	10.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	22.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	22.	7.5	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	22.	7.9	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	22.	6.1	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	22.	7.8	11.
Tetrachloro-M-Xylene		65.0	%					
Decachlorobiphenyl		64.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 16-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 66.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	12.	ug/Kgdrywt	1	17	25.	8.9	12.
Aroclor-1221	U	12.	ug/Kgdrywt	1	17	25.	12.	12.
Aroclor-1232	U	15.	ug/Kgdrywt	1	17	25.	14.	15.
Aroclor-1242	U	12.	ug/Kgdrywt	1	17	25.	8.6	12.
Aroclor-1248	U	12.	ug/Kgdrywt	1	17	25.	9.0	12.
Aroclor-1254	U	12.	ug/Kgdrywt	1	17	25.	6.9	12.
Aroclor-1260	U	12.	ug/Kgdrywt	1	17	25.	8.9	12.
Tetrachloro-M-Xylene		96.3	%					
Decachlorobiphenyl		97.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83138

Analysis Date: 16-OCT-10
Analyst: RCT
Analysis Method: SW846 8082
Matrix: SL
% Solids: 73.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Aroclor-1016	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Aroclor-1221	U	11.	ug/Kgdrywt	1	17	23.	11.	11.
Aroclor-1232	U	13.	ug/Kgdrywt	1	17	23.	12.	13.
Aroclor-1242	U	11.	ug/Kgdrywt	1	17	23.	7.8	11.
Aroclor-1248	U	11.	ug/Kgdrywt	1	17	23.	8.2	11.
Aroclor-1254	U	11.	ug/Kgdrywt	1	17	23.	6.3	11.
Aroclor-1260	U	11.	ug/Kgdrywt	1	17	23.	8.1	11.
Tetrachloro-M-Xylene		70.9	%					
Decachlorobiphenyl		74.7	%					

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Tel:(207) 874-2400 Fax:(207) 775-4029

Katahdin Analytical Services

Client Sample ID: IS66DP250001

HPLC

Lot-Sample #...:	G0J050523-001	**Work Order #...:**	L713E1AC	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/07/10	**Analysis Date..:**	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.99				
% Moisture.....:	30	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**1.5 J**	**7.0**	**ug/kg**	**0.37**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: IS66DP251011 SB

HPLC

Lot-Sample #...:	G0J050523-002	Work Order #...:	L714M1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	19	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.49 U	6.1	ug/kg	0.32

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66DP240001 SS

HPLC

Lot-Sample #...:	G0J050523-003	Work Order #...:	L714N1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	18	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.61 J	6.1	ug/kg	0.32

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Katahdin Analytical Services

Client Sample ID: SB IS66DP240708

HPLC

Lot-Sample #...:	G0J050523-004	Work Order #...:	L714P1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	4.2	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.42 U	5.2	ug/kg	0.27

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD13

HPLC

Lot-Sample #...:	G0J050523-005	Work Order #...:	L714R1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	39	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.65 U	8.2	ug/kg	0.42

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD12

HPLC

Lot-Sample #...:	G0J050523-006	Work Order #...:	L714W1AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.99				
% Moisture.....:	26	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.54 U	6.7	ug/kg	0.35

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD11

HPLC

Lot-Sample #...:	G0J050523-007	Work Order #...:	L71401AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.99				
% Moisture.....:	26	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.54 U	6.7	ug/kg	0.35

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD10

HPLC

Lot-Sample #...:	G0J050523-008	Work Order #...:	L71411AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.99				
% Moisture.....:	31	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.57 U	7.2	ug/kg	0.37

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD09

HPLC

Lot-Sample #...:	G0J050523-009	Work Order #...:	L71431AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	24	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.53 U	6.6	ug/kg	0.34

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD08

HPLC

Lot-Sample #...:	G0J050523-010	Work Order #...:	L71451AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.99				
% Moisture.....:	45	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.72 U	9.0	ug/kg	0.47

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD07

HPLC

Lot-Sample #...:	G0J050523-011	Work Order #...:	L71461AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	0.98				
% Moisture.....:	26	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.53 U	6.6	ug/kg	0.35

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD06

HPLC

Lot-Sample #...:	G0J050523-012	Work Order #...:	L71471AC	Matrix.....:	SOLID
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1.01				
% Moisture.....:	24	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.53 U	6.6	ug/kg	0.35

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66SD06P

HPLC

Lot-Sample #...:	G0J050523-013	**Work Order #...:**	L71481AC	**Matrix.....:**	SOLID
Date Sampled...:	10/01/10	**Date Received..:**	10/05/10		
Prep Date.....:	10/07/10	**Analysis Date..:**	10/25/10		
Prep Batch #...:	0280288				
Dilution Factor:	1				
% Moisture.....:	22	**Method.....:**	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	**0.51 U**	**6.4**	**ug/kg**	**0.33**

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Katahdin Analytical Services

Client Sample ID: IS66EB01-100110

Dissolved HPLC

Lot-Sample #...: G0J050523-014	Work Order #...: L71491AA	Matrix.....: WATER	
Date Sampled...: 10/01/10	Date Received..: 10/05/10		
Prep Date.....: 10/07/10	Analysis Date..: 10/25/10		
Prep Batch #...: 0280401			
Dilution Factor: 1	Method.....: SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

Katahdin Analytical Services

Client Sample ID: IS66EB02-100110

Dissolved HPLC

Lot-Sample #...:	G0J050523-015	Work Order #...:	L715A1AA	Matrix.....:	WATER
Date Sampled...:	10/01/10	Date Received..:	10/05/10		
Prep Date.....:	10/07/10	Analysis Date..:	10/25/10		
Prep Batch #...:	0280401				
Dilution Factor:	1	Method.....:	SW846 6850_DOD Ha		

PARAMETER	RESULT	LOQ	UNITS	DL
Perchlorate	0.25 U	0.50	ug/L	0.082

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 76.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	J J-SSL	1.3	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	J J-SSL	1.4	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.44	2.1
4,4'-DDT	J J-SSL	1.3	ug/Kgdrywt	1	3.3	4.2	0.40	2.1
Endrin Aldehyde	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.74	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.64	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.51	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	9.0	20.
Tetrachloro-M-Xylene	*	65.1	%					
Decachlorobiphenyl		75.4	%					

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Katahdin
ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1RE
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 76.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U EXCLUDE-RE	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	J	2.0	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.38	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	J	1.9	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	J	1.5	ug/Kgdrywt	1	3.3	4.3	0.25	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.3	1.1	2.1
4,4'-DDD	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.44	2.1
4,4'-DDT	J	1.4	ug/Kgdrywt	1	3.3	4.3	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.64	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.65	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	43.	9.1	21.
Tetrachloro-M-Xylene	*	59.4	%					
Decachlorobiphenyl		72.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 83.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	0.92	ug/Kgdrywt	1	1.7	1.8	0.37	0.92
gamma-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.29	0.92
Heptachlor	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.32	0.92
Aldrin	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.30	0.92
beta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.36	0.92
delta-BHC	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.35	0.92
Heptachlor Epoxide	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.24	0.92
Endosulfan I	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.26	0.92
Gamma-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.25	0.92
Alpha-Chlordane	U	0.92	ug/Kgdrywt	1	1.7	1.8	0.23	0.92
4,4'-DDE	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.21	1.8
Dieldrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.24	1.8
Endrin	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.92	1.8
4,4'-DDD	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.22	1.8
Endosulfan II	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.37	1.8
4,4'-DDT	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.34	1.8
Endrin Aldehyde	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.53	1.8
Endosulfan Sulfate	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.63	1.8
Methoxychlor	U	9.2	ug/Kgdrywt	1	17	18.	0.54	9.2
Endrin Ketone	U	1.8	ug/Kgdrywt	1	3.3	3.6	0.44	1.8
Toxaphene	U	17.	ug/Kgdrywt	1	33	36.	7.6	17.
Tetrachloro-M-Xylene	*	60.9	%					
Decachlorobiphenyl		75.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2RE
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 83.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
gamma-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.27	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.22	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	3.9	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.40	2.0
4,4'-DDT	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.58	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.69	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.59	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	3.9	0.47	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	39.	8.3	19.
Tetrachloro-M-Xylene	*	54.2	%					
Decachlorobiphenyl		69.9	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	J-SSL	2.1	ug/Kgdrywt	1	1.7	2.0	0.41	1.0
gamma-BHC	U UJ-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.33	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.39	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	JJ J-SSL	1.8	ug/Kgdrywt	1	1.7	2.0	0.29	1.0
Gamma-Chlordane	U UJ-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Alpha-Chlordane	U UJ-SSL	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	J J-SSL	1.5	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	4.0	0.26	2.0
Endrin	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	JJ J-SSL	0.66	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U UJ-SSL	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	J J-SSL	1.9	ug/Kgdrywt	1	3.3	4.0	0.37	2.0
Endrin Aldehyde	UUJ-SSL	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.60	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.5	19.
Tetrachloro-M-Xylene	*	45.0	%					
Decachlorobiphenyl		70.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3RE
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 82.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC		2.4	ug/Kgdrywt	1	1.7	2.0	0.41	1.0
gamma-BHC	J	0.74	ug/Kgdrywt	1	1.7	2.0	0.32	1.0
Heptachlor	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.35	1.0
Aldrin	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.34	1.0
beta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.40	1.0
delta-BHC	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.38	1.0
Heptachlor Epoxide	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.26	1.0
Endosulfan I	JJ	0.92	ug/Kgdrywt	1	1.7	2.0	0.29	1.0
Gamma-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.28	1.0
Alpha-Chlordane	U	1.0	ug/Kgdrywt	1	1.7	2.0	0.25	1.0
4,4'-DDE	J	1.5	ug/Kgdrywt	1	3.3	4.0	0.23	2.0
Dieldrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.26	2.0
Endrin	U	2.0	ug/Kgdrywt	1	3.3	4.0	1.0	2.0
4,4'-DDD	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.24	2.0
Endosulfan II	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.41	2.0
4,4'-DDT	J	2.1	ug/Kgdrywt	1	3.3	4.0	0.37	2.0
Endrin Aldehyde	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.59	2.0
Endosulfan Sulfate	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.70	2.0
Methoxychlor	U	10.	ug/Kgdrywt	1	17	20.	0.60	10.
Endrin Ketone	U	2.0	ug/Kgdrywt	1	3.3	4.0	0.48	2.0
Toxaphene	U	19.	ug/Kgdrywt	1	33	40.	8.4	19.
Tetrachloro-M-Xylene	*	54.2	%					
Decachlorobiphenyl		70.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 95.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.35	0.87
gamma-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.28	0.87
Heptachlor	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.30	0.87
Aldrin	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.29	0.87
beta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.34	0.87
delta-BHC	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.33	0.87
Heptachlor Epoxide	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.23	0.87
Endosulfan I	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.25	0.87
Gamma-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.24	0.87
Alpha-Chlordane	U	0.87	ug/Kgdrywt	1	1.7	1.7	0.22	0.87
4,4'-DDE	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Dieldrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.23	1.7
Endrin	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.87	1.7
4,4'-DDD	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.20	1.7
Endosulfan II	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.35	1.7
4,4'-DDT	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.32	1.7
Endrin Aldehyde	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.50	1.7
Endosulfan Sulfate	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.60	1.7
Methoxychlor	U	8.7	ug/Kgdrywt	1	17	17.	0.51	8.7
Endrin Ketone	U	1.7	ug/Kgdrywt	1	3.3	3.4	0.41	1.7
Toxaphene	U	16.	ug/Kgdrywt	1	33	34.	7.2	16.
Tetrachloro-M-Xylene		71.6	%					
Decachlorobiphenyl		80.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 08-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG83201

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.052	0.0072	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.052	0.0075	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.052	0.0083	0.026
Aldrin	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.052	0.0066	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.052	0.014	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.052	0.0077	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.052	0.0067	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0062	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.052	0.0079	0.026
4,4'-DDE	U	0.052	ug/L	1	.1	0.10	0.0051	0.052
Dieldrin	U	0.052	ug/L	1	.1	0.10	0.0068	0.052
Endrin	U	0.052	ug/L	1	.1	0.10	0.0088	0.052
4,4'-DDD	U	0.052	ug/L	1	.1	0.10	0.0094	0.052
Endosulfan II	U	0.052	ug/L	1	.1	0.10	0.0059	0.052
4,4'-DDT	U	0.052	ug/L	1	.1	0.10	0.0093	0.052
Endrin Aldehyde	U	0.052	ug/L	1	.1	0.10	0.0064	0.052
Endosulfan Sulfate	U	0.052	ug/L	1	.1	0.10	0.0070	0.052
Methoxychlor	U	0.26	ug/L	1	.5	0.52	0.0088	0.26
Endrin Ketone	U	0.052	ug/L	1	.1	0.10	0.0081	0.052
Toxaphene	U	0.52	ug/L	1	1	1.0	0.18	0.52
Tetrachloro-M-Xylene		72.9	%					
Decachlorobiphenyl		59.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 08-OCT-10
Extracted By: KF
Extraction Method: SW846 3510
Lab Prep Batch: WG83201

Analysis Date: 11-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	0.026	ug/L	1	.05	0.051	0.0070	0.026
Gamma-BHC	U	0.026	ug/L	1	.05	0.051	0.0073	0.026
Heptachlor	U	0.026	ug/L	1	.05	0.051	0.0082	0.026
Aldrin	U	0.026	ug/L	1	.05	0.051	0.0076	0.026
beta-BHC	U	0.026	ug/L	1	.05	0.051	0.0064	0.026
delta-BHC	U	0.026	ug/L	1	.05	0.051	0.013	0.026
Heptachlor Epoxide	U	0.026	ug/L	1	.05	0.051	0.0076	0.026
Endosulfan I	U	0.026	ug/L	1	.05	0.051	0.0065	0.026
Gamma-Chlordane	U	0.026	ug/L	1	.05	0.051	0.0061	0.026
Alpha-Chlordane	U	0.026	ug/L	1	.05	0.051	0.0078	0.026
4,4'-DDE	U	0.051	ug/L	1	.1	0.10	0.0050	0.051
Dieldrin	U	0.051	ug/L	1	.1	0.10	0.0066	0.051
Endrin	U	0.051	ug/L	1	.1	0.10	0.0086	0.051
4,4'-DDD	U	0.051	ug/L	1	.1	0.10	0.0092	0.051
Endosulfan II	U	0.051	ug/L	1	.1	0.10	0.0058	0.051
4,4'-DDT	U	0.051	ug/L	1	.1	0.10	0.0091	0.051
Endrin Aldehyde	U	0.051	ug/L	1	.1	0.10	0.0063	0.051
Endosulfan Sulfate	U	0.051	ug/L	1	.1	0.10	0.0068	0.051
Methoxychlor	U	0.26	ug/L	1	.5	0.51	0.0086	0.26
Endrin Ketone	U	0.051	ug/L	1	.1	0.10	0.0080	0.051
Toxaphene	U	0.51	ug/L	1	1	1.0	0.17	0.51
Tetrachloro-M-Xylene		66.2	%					
Decachlorobiphenyl		58.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 50.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.6	ug/Kgdrywt	1	1.7	3.3	0.66	1.6
gamma-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.52	1.6
Heptachlor	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.56	1.6
Aldrin	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.54	1.6
beta-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.64	1.6
delta-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.62	1.6
Heptachlor Epoxide	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.43	1.6
Endosulfan I	JJ J-SSL	3.2	ug/Kgdrywt	1	1.7	3.3	0.47	1.6
Gamma-Chlordane	U UJ SSL	1.6	ug/Kgdrywt	1	1.7	3.3	0.45	1.6
Alpha-Chlordane	U	1.6	ug/Kgdrywt	1	1.7	3.3	0.41	1.6
4,4'-DDE	J SSL	13.	ug/Kgdrywt	1	3.3	6.4	0.37	3.2
Dieldrin	U UJ SSL	3.2	ug/Kgdrywt	1	3.3	6.4	0.43	3.2
Endrin	U UJ SSL	3.2	ug/Kgdrywt	1	3.3	6.4	1.6	3.2
4,4'-DDD	J SSL	42.	ug/Kgdrywt	1	3.3	6.4	0.39	3.2
Endosulfan II	U UJ SSL	3.2	ug/Kgdrywt	1	3.3	6.4	0.66	3.2
4,4'-DDT	JJ J-SSL	4.0	ug/Kgdrywt	1	3.3	6.4	0.60	3.2
Endrin Aldehyde	U UJ SSL	3.2	ug/Kgdrywt	1	3.3	6.4	0.95	3.2
Endosulfan Sulfate	U	3.2	ug/Kgdrywt	1	3.3	6.4	1.1	3.2
Methoxychlor	U	16.	ug/Kgdrywt	1	17	33.	0.97	16.
Endrin Ketone	U	3.2	ug/Kgdrywt	1	3.3	6.4	0.78	3.2
Toxaphene	U	31.	ug/Kgdrywt	1	33	64.	14.	31.
Tetrachloro-M-Xylene	*	59.2	%					
Decachlorobiphenyl		66.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9RE
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 50.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.7	ug/Kgdrywt	1	1.7	3.4	0.68	1.7
gamma-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.54	1.7
Heptachlor	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.58	1.7
Aldrin	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.56	1.7
beta-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.66	1.7
delta-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.64	1.7
Heptachlor Epoxide	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.44	1.7
Endosulfan I	JJ	2.4	ug/Kgdrywt	1	1.7	3.4	0.48	1.7
Gamma-Chlordane	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.46	1.7
Alpha-Chlordane	U	1.7	ug/Kgdrywt	1	1.7	3.4	0.42	1.7
4,4'-DDE		15.	ug/Kgdrywt	1	3.3	6.6	0.38	3.3
Dieldrin	U	3.3	ug/Kgdrywt	1	3.3	6.6	0.44	3.3
Endrin	U	3.3	ug/Kgdrywt	1	3.3	6.6	1.7	3.3
4,4'-DDD		60.	ug/Kgdrywt	1	3.3	6.6	0.40	3.3
Endosulfan II	U	3.3	ug/Kgdrywt	1	3.3	6.6	0.68	3.3
4,4'-DDT	J	5.8	ug/Kgdrywt	1	3.3	6.6	0.62	3.3
Endrin Aldehyde	U	3.3	ug/Kgdrywt	1	3.3	6.6	0.98	3.3
Endosulfan Sulfate	U	3.3	ug/Kgdrywt	1	3.3	6.6	1.2	3.3
Methoxychlor	U	17.	ug/Kgdrywt	1	17	34.	1.0	17.
Endrin Ketone	U	3.3	ug/Kgdrywt	1	3.3	6.6	0.80	3.3
Toxaphene	U	32.	ug/Kgdrywt	1	33	66.	14.	32.
Tetrachloro-M-Xylene	*	46.5	%					
Decachlorobiphenyl		62.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 70.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.47	1.2
gamma-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.38	1.2
Heptachlor	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.40	1.2
Aldrin	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.39	1.2
beta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.46	1.2
delta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.44	1.2
Heptachlor Epoxide	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.30	1.2
Endosulfan I	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.33	1.2
Gamma-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.32	1.2
Alpha-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.29	1.2
4,4'-DDE		7.5	ug/Kgdrywt	1	3.3	4.6	0.26	2.3
Dieldrin	U	2.3	ug/Kgdrywt	1	3.3	4.6	0.30	2.3
Endrin	U	2.3	ug/Kgdrywt	1	3.3	4.6	1.2	2.3
4,4'-DDD		52.	ug/Kgdrywt	1	3.3	4.6	0.28	2.3
Endosulfan II	U	2.3	ug/Kgdrywt	1	3.3	4.6	0.47	2.3
4,4'-DDT	J	3.2	ug/Kgdrywt	1	3.3	4.6	0.43	2.3
Endrin Aldehyde	U	2.3	ug/Kgdrywt	1	3.3	4.6	0.68	2.3
Endosulfan Sulfate	U	2.3	ug/Kgdrywt	1	3.3	4.6	0.81	2.3
Methoxychlor	U	12.	ug/Kgdrywt	1	17	24.	0.70	12.
Endrin Ketone	U	2.3	ug/Kgdrywt	1	3.3	4.6	0.56	2.3
Toxaphene	U	22.	ug/Kgdrywt	1	33	46.	9.7	22.
Tetrachloro-M-Xylene		70.8	%					
Decachlorobiphenyl		77.5	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 69.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.2	ug/Kgdrywt	1	1.7	2.4	0.49	1.2
gamma-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.39	1.2
Heptachlor	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.42	1.2
Aldrin	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.40	1.2
beta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.47	1.2
delta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.46	1.2
Heptachlor Epoxide	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.32	1.2
Endosulfan I	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.34	1.2
Gamma-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.33	1.2
Alpha-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.30	1.2
4,4'-DDE	J J-SSL	4.7	ug/Kgdrywt	1	3.3	4.7	0.27	2.4
Dieldrin	U UJ-SSL	2.4	ug/Kgdrywt	1	3.3	4.7	0.32	2.4
Endrin	U UJ-SSL	2.4	ug/Kgdrywt	1	3.3	4.7	1.2	2.4
4,4'-DDD	J-SSL	44.	ug/Kgdrywt	1	3.3	4.7	0.29	2.4
Endosulfan II	U UJ-SSL	2.4	ug/Kgdrywt	1	3.3	4.7	0.49	2.4
4,4'-DDT	J J-SSL	2.7	ug/Kgdrywt	1	3.3	4.7	0.44	2.4
Endrin Aldehyde	U UJ-SSL	2.4	ug/Kgdrywt	1	3.3	4.7	0.70	2.4
Endosulfan Sulfate	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.83	2.4
Methoxychlor	U	12.	ug/Kgdrywt	1	17	24.	0.72	12.
Endrin Ketone	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.57	2.4
Toxaphene	U	23.	ug/Kgdrywt	1	33	47.	10.	23.
Tetrachloro-M-Xylene	*	66.3	%					
Decachlorobiphenyl		75.1	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11RE
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 69.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.2	ug/Kgdrywt	1	1.7	2.4	0.48	1.2
gamma-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.38	1.2
Heptachlor	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.41	1.2
Aldrin	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.40	1.2
beta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.47	1.2
delta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.46	1.2
Heptachlor Epoxide	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.31	1.2
Endosulfan I	JJ	1.7	ug/Kgdrywt	1	1.7	2.4	0.34	1.2
Gamma-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.33	1.2
Alpha-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.4	0.30	1.2
4,4'-DDE	J	2.6	ug/Kgdrywt	1	3.3	4.7	0.27	2.4
Dieldrin	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.31	2.4
Endrin	U	2.4	ug/Kgdrywt	1	3.3	4.7	1.2	2.4
4,4'-DDD		20.	ug/Kgdrywt	1	3.3	4.7	0.28	2.4
Endosulfan II	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.48	2.4
4,4'-DDT	J	1.7	ug/Kgdrywt	1	3.3	4.7	0.44	2.4
Endrin Aldehyde	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.70	2.4
Endosulfan Sulfate	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.83	2.4
Methoxychlor	U	12.	ug/Kgdrywt	1	17	24.	0.71	12.
Endrin Ketone	U	2.4	ug/Kgdrywt	1	3.3	4.7	0.57	2.4
Toxaphene	U	23.	ug/Kgdrywt	1	33	47.	10.	23.
Tetrachloro-M-Xylene		71.9	%					
Decachlorobiphenyl		82.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 53.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	UJ-SSL	1.6	ug/Kgdrywt	1	1.7	3.2	0.63	1.6
gamma-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.50	1.6
Heptachlor	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.54	1.6
Aldrin	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.52	1.6
beta-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.61	1.6
delta-BHC	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.60	1.6
Heptachlor Epoxide	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.41	1.6
Endosulfan I	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.45	1.6
Gamma-Chlordane	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.43	1.6
Alpha-Chlordane	U	1.6	ug/Kgdrywt	1	1.7	3.2	0.39	1.6
4,4'-DDE	J SSL	9.3	ug/Kgdrywt	1	3.3	6.1	0.35	3.1
Dieldrin	UJ SSL	3.1	ug/Kgdrywt	1	3.3	6.1	0.41	3.1
Endrin	UJ-SSL	3.1	ug/Kgdrywt	1	3.3	6.1	1.6	3.1
4,4'-DDD	J-SSL	29.	ug/Kgdrywt	1	3.3	6.1	0.37	3.1
Endosulfan II	UJ-SSL	3.1	ug/Kgdrywt	1	3.3	6.1	0.63	3.1
4,4'-DDT	J-SSL	6.1	ug/Kgdrywt	1	3.3	6.1	0.58	3.1
Endrin Aldehyde	UJ-SSL	3.1	ug/Kgdrywt	1	3.3	6.1	0.91	3.1
Endosulfan Sulfate	U	3.1	ug/Kgdrywt	1	3.3	6.1	1.1	3.1
Methoxychlor	U	16.	ug/Kgdrywt	1	17	32.	0.93	16.
Endrin Ketone	U	3.1	ug/Kgdrywt	1	3.3	6.1	0.74	3.1
Toxaphene	U	30.	ug/Kgdrywt	1	33	61.	13.	30.
Tetrachloro-M-Xylene	*	60.0	%					
Decachlorobiphenyl		68.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12RE
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 53.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.5	ug/Kgdrywt	1	1.7	3.0	0.61	1.5
gamma-BHC	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.48	1.5
Heptachlor	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.52	1.5
Aldrin	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.50	1.5
beta-BHC	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.59	1.5
delta-BHC	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.57	1.5
Heptachlor Epoxide	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.39	1.5
Endosulfan I	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.43	1.5
Gamma-Chlordane	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.41	1.5
Alpha-Chlordane	U	1.5	ug/Kgdrywt	1	1.7	3.0	0.37	1.5
4,4'-DDE	J	4.2	ug/Kgdrywt	1	3.3	5.9	0.34	2.9
Dieldrin	U	2.9	ug/Kgdrywt	1	3.3	5.9	0.39	2.9
Endrin	U	2.9	ug/Kgdrywt	1	3.3	5.9	1.5	2.9
4,4'-DDD		9.9	ug/Kgdrywt	1	3.3	5.9	0.36	2.9
Endosulfan II	U	2.9	ug/Kgdrywt	1	3.3	5.9	0.61	2.9
4,4'-DDT	J	2.8	ug/Kgdrywt	1	3.3	5.9	0.55	2.9
Endrin Aldehyde	U	2.9	ug/Kgdrywt	1	3.3	5.9	0.87	2.9
Endosulfan Sulfate	U	2.9	ug/Kgdrywt	1	3.3	5.9	1.0	2.9
Methoxychlor	U	15.	ug/Kgdrywt	1	17	30.	0.89	15.
Endrin Ketone	U	2.9	ug/Kgdrywt	1	3.3	5.9	0.71	2.9
Toxaphene	U	28.	ug/Kgdrywt	1	33	59.	12.	28.
Tetrachloro-M-Xylene	*	56.1	%					
Decachlorobiphenyl		70.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 74.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.38	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	JJ J-SSL	1.5	ug/Kgdrywt	1	3.3	4.3	0.24	2.1
Dieldrin	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.3	0.28	2.1
Endrin	U J	2.1	ug/Kgdrywt	1	3.3	4.3	1.1	2.1
4,4'-DDD	J J SSL	2.4	ug/Kgdrywt	1	3.3	4.3	0.26	2.1
Endosulfan II	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.3	0.44	2.1
4,4'-DDT	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.65	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	43.	9.0	21.
Tetrachloro-M-Xylene	*	42.2	%					
Decachlorobiphenyl		61.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13RE
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 74.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.34	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.37	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.40	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	J	0.93	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.29	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.26	1.1
4,4'-DDE	J	1.0	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	J	2.1	ug/Kgdrywt	1	3.3	4.2	0.25	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.43	2.1
4,4'-DDT	J	1.2	ug/Kgdrywt	1	3.3	4.2	0.39	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.62	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.73	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.63	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.51	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	8.8	20.
Tetrachloro-M-Xylene	*	57.0	%					
Decachlorobiphenyl		71.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 46.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.7	ug/Kgdrywt	1	1.7	3.3	0.67	1.7
gamma-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.53	1.7
Heptachlor	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.57	1.7
Aldrin	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.55	1.7
beta-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.65	1.7
delta-BHC	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.63	1.7
Heptachlor Epoxide	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.43	1.7
Endosulfan I	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.47	1.7
Gamma-Chlordane	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.45	1.7
Alpha-Chlordane	U	1.7	ug/Kgdrywt	1	1.7	3.3	0.41	1.7
4,4'-DDE	J-SSL	29.	ug/Kgdrywt	1	3.3	6.5	0.37	3.2
Dieldrin		8.3	ug/Kgdrywt	1	3.3	6.5	0.43	3.2
Endrin	U UJ-SSL	3.2	ug/Kgdrywt	1	3.3	6.5	1.7	3.2
4,4'-DDD	J-SSL	57.	ug/Kgdrywt	1	3.3	6.5	0.39	3.2
Endosulfan II	U UJ-SSL	3.2	ug/Kgdrywt	1	3.3	6.5	0.67	3.2
4,4'-DDT	J-SSL	9.2	ug/Kgdrywt	1	3.3	6.5	0.61	3.2
Endrin Aldehyde	U UJ-SSL	3.2	ug/Kgdrywt	1	3.3	6.5	0.96	3.2
Endosulfan Sulfate	U	3.2	ug/Kgdrywt	1	3.3	6.5	1.1	3.2
Methoxychlor	U	17.	ug/Kgdrywt	1	17	33.	0.98	17.
Endrin Ketone	U	3.2	ug/Kgdrywt	1	3.3	6.5	0.78	3.2
Toxaphene	U	31.	ug/Kgdrywt	1	33	65.	14.	31.
Tetrachloro-M-Xylene	*	65.7	%					
Decachlorobiphenyl		82.7	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14RE
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 46.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude RE	1.8	ug/Kgdrywt	1	1.7	3.5	0.70	1.8
gamma-BHC	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.56	1.8
Heptachlor	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.60	1.8
Aldrin	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.58	1.8
beta-BHC	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.68	1.8
delta-BHC	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.66	1.8
Heptachlor Epoxide	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.45	1.8
Endosulfan I	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.50	1.8
Gamma-Chlordane	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.47	1.8
Alpha-Chlordane	U	1.8	ug/Kgdrywt	1	1.7	3.5	0.43	1.8
4,4'-DDE		24.	ug/Kgdrywt	1	3.3	6.8	0.39	3.4
Dieldrin		7.6	ug/Kgdrywt	1	3.3	6.8	0.45	3.4
Endrin	U	3.4	ug/Kgdrywt	1	3.3	6.8	1.8	3.4
4,4'-DDD		49.	ug/Kgdrywt	1	3.3	6.8	0.41	3.4
Endosulfan II	U	3.4	ug/Kgdrywt	1	3.3	6.8	0.70	3.4
4,4'-DDT	JJ	5.2	ug/Kgdrywt	1	3.3	6.8	0.64	3.4
Endrin Aldehyde	U	3.4	ug/Kgdrywt	1	3.3	6.8	1.0	3.4
Endosulfan Sulfate	U	3.4	ug/Kgdrywt	1	3.3	6.8	1.2	3.4
Methoxychlor	U	18.	ug/Kgdrywt	1	17	35.	1.0	18.
Endrin Ketone	U	3.4	ug/Kgdrywt	1	3.3	6.8	0.82	3.4
Toxaphene	U	33.	ug/Kgdrywt	1	33	68.	14.	33.
Tetrachloro-M-Xylene	*	64.8	%					
Decachlorobiphenyl		73.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: 1S66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 72.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U UJ-SSL	1.1	ug/Kgdrywt	1	1.7	2.1	0.43	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.34	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.36	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.35	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.42	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.40	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.30	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.29	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.1	0.26	1.1
4,4'-DDE	J J-SSL	2.8	ug/Kgdrywt	1	3.3	4.2	0.24	2.1
Dieldrin	J J-SSL	1.6	ug/Kgdrywt	1	3.3	4.2	0.28	2.1
Endrin	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	1.1	2.1
4,4'-DDD	J-SSL	6.7	ug/Kgdrywt	1	3.3	4.2	0.25	2.1
Endosulfan II	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.43	2.1
4,4'-DDT	J J-SSL	2.3	ug/Kgdrywt	1	3.3	4.2	0.39	2.1
Endrin Aldehyde	U UJ-SSL	2.1	ug/Kgdrywt	1	3.3	4.2	0.62	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.73	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	21.	0.63	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.2	0.50	2.1
Toxaphene	U	20.	ug/Kgdrywt	1	33	42.	8.8	20.
Tetrachloro-M-Xylene	*	35.5	%					
Decachlorobiphenyl		61.0	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15RE
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 19-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83706

Analysis Date: 22-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 72.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U Exclude-RE	1.1	ug/Kgdrywt	1	1.7	2.2	0.44	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.35	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.38	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.36	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.43	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.41	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.28	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.31	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.30	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.2	0.27	1.1
4,4'-DDE	J	3.5	ug/Kgdrywt	1	3.3	4.3	0.25	2.1
Dieldrin	J	1.9	ug/Kgdrywt	1	3.3	4.3	0.28	2.1
Endrin	U	2.1	ug/Kgdrywt	1	3.3	4.3	1.1	2.1
4,4'-DDD		9.6	ug/Kgdrywt	1	3.3	4.3	0.26	2.1
Endosulfan II	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.44	2.1
4,4'-DDT	J	3.6	ug/Kgdrywt	1	3.3	4.3	0.40	2.1
Endrin Aldehyde	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.63	2.1
Endosulfan Sulfate	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.75	2.1
Methoxychlor	U	11.	ug/Kgdrywt	1	17	22.	0.65	11.
Endrin Ketone	U	2.1	ug/Kgdrywt	1	3.3	4.3	0.52	2.1
Toxaphene	U	21.	ug/Kgdrywt	1	33	43.	9.1	21.
Tetrachloro-M-Xylene	*	59.4	%					
Decachlorobiphenyl		73.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 66.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.50	1.2
gamma-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.40	1.2
Heptachlor	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.43	1.2
Aldrin	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.41	1.2
beta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.49	1.2
delta-BHC	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.47	1.2
Heptachlor Epoxide	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.32	1.2
Endosulfan I	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.35	1.2
Gamma-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.34	1.2
Alpha-Chlordane	U	1.2	ug/Kgdrywt	1	1.7	2.5	0.31	1.2
4,4'-DDE	J	1.4	ug/Kgdrywt	1	3.3	4.9	0.28	2.4
Dieldrin	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.32	2.4
Endrin	U	2.4	ug/Kgdrywt	1	3.3	4.9	1.2	2.4
4,4'-DDD	J	1.9	ug/Kgdrywt	1	3.3	4.9	0.30	2.4
Endosulfan II	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.50	2.4
4,4'-DDT	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.46	2.4
Endrin Aldehyde	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.72	2.4
Endosulfan Sulfate	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.86	2.4
Methoxychlor	U	12.	ug/Kgdrywt	1	17	25.	0.74	12.
Endrin Ketone	U	2.4	ug/Kgdrywt	1	3.3	4.9	0.59	2.4
Toxaphene	U	24.	ug/Kgdrywt	1	33	49.	10.	24.
Tetrachloro-M-Xylene		95.3	%					
Decachlorobiphenyl		108.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83139

Analysis Date: 20-OCT-10
Analyst: RCT
Analysis Method: SW846 8081A
Matrix: SL
% Solids: 73.
Report Date: 24-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
alpha-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.46	1.1
gamma-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.36	1.1
Heptachlor	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.39	1.1
Aldrin	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.38	1.1
beta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.44	1.1
delta-BHC	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.43	1.1
Heptachlor Epoxide	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.30	1.1
Endosulfan I	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.32	1.1
Gamma-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.31	1.1
Alpha-Chlordane	U	1.1	ug/Kgdrywt	1	1.7	2.3	0.28	1.1
4,4'-DDE	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.26	2.2
Dieldrin	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.30	2.2
Endrin	U	2.2	ug/Kgdrywt	1	3.3	4.4	1.1	2.2
4,4'-DDD	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.27	2.2
Endosulfan II	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.46	2.2
4,4'-DDT	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.42	2.2
Endrin Aldehyde	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.66	2.2
Endosulfan Sulfate	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.78	2.2
Methoxychlor	U	11.	ug/Kgdrywt	1	17	23.	0.67	11.
Endrin Ketone	U	2.2	ug/Kgdrywt	1	3.3	4.4	0.54	2.2
Toxaphene	U	21.	ug/Kgdrywt	1	33	44.	9.4	21.
Tetrachloro-M-Xylene		71.1	%					
Decachlorobiphenyl		81.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	63.	ug/Kgdrywt	1	100	120	7.7	63.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	25.	2.1	12.
2-Chlorophenol	U	63.	ug/Kgdrywt	1	100	120	6.7	63.
2-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	11.	63.
3&4-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	12.	63.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	25.	2.4	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	25.	6.0	12.
2,4-Dimethylphenol	UR-BSL	12.	ug/Kgdrywt	1	20	25.	4.0	12.
2,4-Dichlorophenol	J-S-CCL	14.	ug/Kgdrywt	1	20	25.	2.8	12.
Naphthalene	L-BSL	45.	ug/Kgdrywt	1	20	25.	3.3	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	25.	2.9	12.
2-Methylnaphthalene	J L-BSL	7.8	ug/Kgdrywt	1	20	25.	2.8	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	25.	1.9	12.
2,4,6-Trichlorophenol	J	15.	ug/Kgdrywt	1	100	120	4.2	63.
2,4,5-Trichlorophenol	U	63.	ug/Kgdrywt	1	100	120	3.1	63.
Dimethyl phthalate	B-MBL	47.	ug/Kgdrywt	1	20	25.	1.8	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene		110	ug/Kgdrywt	1	20	25.	1.9	12.
4-Nitrophenol	UJF-ICB	63.	ug/Kgdrywt	1	100	120	10.	63.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	25.	8.8	12.
Fluorene		73.	ug/Kgdrywt	1	20	25.	4.0	12.
4,6-Dinitro-2-methylphenol	U	190	ug/Kgdrywt	1	310	390	120	190
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	25.	2.3	12.
Atrazine	U	12.	ug/Kgdrywt	1	20	25.	1.2	12.
Pentachlorophenol	UL-BSL	63.	ug/Kgdrywt	1	100	120	18.	63.
Phenanthrene	E Exclude-LR	700	ug/Kgdrywt	1	20	25.	2.3	12.
Anthracene		120	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	E Exclude-LR	870	ug/Kgdrywt	1	20	25.	2.3	12.
Pyrene	E	830	ug/Kgdrywt	1	20	25.	2.6	12.
3,3'-Dichlorobenzidine	UR-BSL	12.	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo (a) anthracene	E Exclude-LR	420	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene		260	ug/Kgdrywt	1	20	25.	2.1	12.
bis(2-Ethylhexyl)phthalate	J B-MBL	60.	ug/Kgdrywt	1	100	120	40.	63.
Di-n-octylphthalate	U	63.	ug/Kgdrywt	1	100	120	58.	63.
Benzo (b) Fluoranthene	E Exclude-LR	410	ug/Kgdrywt	1	20	25.	3.0	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		160	ug/Kgdrywt	1	20	25.	3.9	12.
Benzo(a)pyrene		330	ug/Kgdrywt	1	20	25.	4.2	12.
Indeno (1,2,3-cd) pyrene		210	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo (a,h) anthracene		71.	ug/Kgdrywt	1	20	25.	2.3	12.
Benzo(g,h,i)perylene		200	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		67.2	%					
Fluorene-D10		51.2	%					
Pyrene-D10		93.9	%					
2,4-Dibromophenol		66.1	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1DL
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	310	ug/Kgdrywt	5	100	630	38.	310
bis(2-Chloroethyl)ether	U	63.	ug/Kgdrywt	5	20	120	11.	63.
2-Chlorophenol	U	310	ug/Kgdrywt	5	100	630	33.	310
2-Methylphenol	U	310	ug/Kgdrywt	5	100	630	53.	310
3&4-Methylphenol	U	310	ug/Kgdrywt	5	100	630	62.	310
n-Nitroso-di-n-propylamine	U	63.	ug/Kgdrywt	5	20	120	12.	63.
Nitrobenzene	U	63.	ug/Kgdrywt	5	20	120	30.	63.
2,4-Dimethylphenol	U	63.	ug/Kgdrywt	5	20	120	20.	63.
2,4-Dichlorophenol	U	63.	ug/Kgdrywt	5	20	120	14.	63.
Naphthalene	U	63.	ug/Kgdrywt	5	20	120	16.	63.
Hexachlorobutadiene	U	63.	ug/Kgdrywt	5	20	120	14.	63.
2-Methylnaphthalene	U	63.	ug/Kgdrywt	5	20	120	14.	63.
Hexachlorocyclopentadiene	U	63.	ug/Kgdrywt	5	20	120	9.4	63.
2,4,6-Trichlorophenol	U	310	ug/Kgdrywt	5	100	630	21.	310
2,4,5-Trichlorophenol	U	310	ug/Kgdrywt	5	100	630	16.	310
Dimethyl phthalate	J	41.	ug/Kgdrywt	5	20	120	8.8	63.
Acenaphthylene	U	63.	ug/Kgdrywt	5	20	120	7.5	63.
Acenaphthene	J	72.	ug/Kgdrywt	5	20	120	9.4	63.
4-Nitrophenol	U	310	ug/Kgdrywt	5	100	630	50.	310
2,4-Dinitrotoluene	U	63.	ug/Kgdrywt	5	20	120	44.	63.
Fluorene	J	49.	ug/Kgdrywt	5	20	120	20.	63.
4,6-Dinitro-2-methylphenol	U	940	ug/Kgdrywt	5	310	1900	630	940
Hexachlorobenzene	U	63.	ug/Kgdrywt	5	20	120	11.	63.
Atrazine	J	30.	ug/Kgdrywt	5	20	120	6.3	63.
Pentachlorophenol	U	310	ug/Kgdrywt	5	100	630	88.	310
Phenanthrene		640	ug/Kgdrywt	5	20	120	11.	63.
Anthracene		140	ug/Kgdrywt	5	20	120	7.5	63.
Fluoranthene		840	ug/Kgdrywt	5	20	120	11.	63.
Pyrene		590	ug/Kgdrywt	5	20	120	13.	63.
3,3'-Dichlorobenzidine		63.	ug/Kgdrywt	5	20	120	19.	63.
Benzo (a) anthracene		390	ug/Kgdrywt	5	20	120	12.	63.
Chrysene		310	ug/Kgdrywt	5	20	120	11.	63.
bis(2-Ethylhexyl)phthalate	U	310	ug/Kgdrywt	5	100	630	200	310
Di-n-octylphthalate	U	310	ug/Kgdrywt	5	100	630	290	310
Benzo (b) Fluoranthene		480	ug/Kgdrywt	5	20	120	15.	63.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1DL
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 76.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-DL	140	ug/Kgdrywt	5	20	120	19.	63.
Benzo(a)pyrene		290	ug/Kgdrywt	5	20	120	21.	63.
Indeno (1,2,3-cd) pyrene		160	ug/Kgdrywt	5	20	120	12.	63.
Dibenzo (a,h) anthracene	J	51.	ug/Kgdrywt	5	20	120	11.	63.
Benzo(g,h,i)perylene		160	ug/Kgdrywt	5	20	120	12.	63.
2-Methylnaphthalene-D10		78.3	%					
Fluorene-D10		23.0	%					
Pyrene-D10		63.6	%					
2,4-Dibromophenol		47.1	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2RA
Client ID: IS66DP251011 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 83.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	59.	ug/Kgdrywt	1	100	120	7.2	59.
bis(2-Chloroethyl)ether	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
2-Chlorophenol	U	59.	ug/Kgdrywt	1	100	120	6.3	59.
2-Methylphenol	U	59.	ug/Kgdrywt	1	100	120	10.	59.
3&4-Methylphenol	J	16.	ug/Kgdrywt	1	100	120	12.	59.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	24.	5.7	12.
2,4-Dimethylphenol	UR-BSL	12.	ug/Kgdrywt	1	20	24.	3.8	12.
2,4-Dichlorophenol	U	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Naphthalene	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	3.1	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	24.	2.7	12.
2-Methylnaphthalene	UUL-BSL	12.	ug/Kgdrywt	1	20	24.	2.6	12.
Hexachlorocyclopentadiene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
2,4,6-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.9	59.
2,4,5-Trichlorophenol	U	59.	ug/Kgdrywt	1	100	120	3.0	59.
Dimethyl phthalate	JB-MBL	2.5	ug/Kgdrywt	1	20	24.	1.6	12.
Acenaphthylene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Acenaphthene	U	12.	ug/Kgdrywt	1	20	24.	1.8	12.
4-Nitrophenol	UUJ-ICB	59.	ug/Kgdrywt	1	100	120	9.4	59.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	24.	8.3	12.
Fluorene	U	12.	ug/Kgdrywt	1	20	24.	3.8	12.
4,6-Dinitro-2-methylphenol	U	180	ug/Kgdrywt	1	310	370	120	180
Hexachlorobenzene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Atrazine	J	1.5	ug/Kgdrywt	1	20	24.	1.2	12.
Pentachlorophenol	UUL-BSL	59.	ug/Kgdrywt	1	100	120	16.	59.
Phenanthrene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Anthracene	U	12.	ug/Kgdrywt	1	20	24.	1.4	12.
Fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.5	12.
3,3'-Dichlorobenzidine	UR-BSL	12.	ug/Kgdrywt	1	20	24.	3.5	12.
Benzo (a) anthracene	JB-MBL	5.4	ug/Kgdrywt	1	20	24.	2.2	12.
Chrysene	U	12.	ug/Kgdrywt	1	20	24.	2.0	12.
bis(2-Ethylhexyl)phthalate	B-MBL	190	ug/Kgdrywt	1	100	120	38.	59.
Di-n-octylphthalate	U	59.	ug/Kgdrywt	1	100	120	54.	59.
Benzo (b) Fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	2.8	12.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2RA
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 83.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	12.	ug/Kgdrywt	1	20	24.	3.7	12.
Benzo(a)pyrene	U	12.	ug/Kgdrywt	1	20	24.	3.9	12.
Indeno (1,2,3-cd) pyrene	U	12.	ug/Kgdrywt	1	20	24.	2.2	12.
Dibenzo (a,h) anthracene	U	12.	ug/Kgdrywt	1	20	24.	2.1	12.
Benzo(g,h,i)perylene	U	12.	ug/Kgdrywt	1	20	24.	2.4	12.
2-Methylnaphthalene-D10		55.3	%					
Fluorene-D10		26.3	%					
Pyrene-D10		70.2	%					
2,4-Dibromophenol		45.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	57.	ug/Kgdrywt	1	100	110	7.0	57.
bis(2-Chloroethyl)ether	U	11.	ug/Kgdrywt	1	20	23.	1.9	11.
2-Chlorophenol	U	57.	ug/Kgdrywt	1	100	110	6.0	57.
2-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	9.7	57.
3&4-Methylphenol	U	57.	ug/Kgdrywt	1	100	110	11.	57.
n-Nitroso-di-n-propylamine	U	11.	ug/Kgdrywt	1	20	23.	2.2	11.
Nitrobenzene	U	11.	ug/Kgdrywt	1	20	23.	5.5	11.
2,4-Dimethylphenol	UHR-BSL	11.	ug/Kgdrywt	1	20	23.	3.6	11.
2,4-Dichlorophenol	JJ-CCL	14.	ug/Kgdrywt	1	20	23.	2.5	11.
Naphthalene	JB-FBL	5.9	ug/Kgdrywt	1	20	23.	3.0	11.
Hexachlorobutadiene	U	11.	ug/Kgdrywt	1	20	23.	2.6	11.
2-Methylnaphthalene	JL-BSL	4.6	ug/Kgdrywt	1	20	23.	2.5	11.
Hexachlorocyclopentadiene	U	11.	ug/Kgdrywt	1	20	23.	1.7	11.
2,4,6-Trichlorophenol	J	16.	ug/Kgdrywt	1	100	110	3.8	57.
2,4,5-Trichlorophenol	J	3.9	ug/Kgdrywt	1	100	110	2.8	57.
Dimethyl phthalate	JB-MBL	3.9	ug/Kgdrywt	1	20	23.	1.6	11.
Acenaphthylene	U	11.	ug/Kgdrywt	1	20	23.	1.4	11.
Acenaphthene		37.	ug/Kgdrywt	1	20	23.	1.7	11.
4-Nitrophenol	U-UJ-ICB	57.	ug/Kgdrywt	1	100	110	9.1	57.
2,4-Dinitrotoluene	U	11.	ug/Kgdrywt	1	20	23.	8.0	11.
Fluorene		29.	ug/Kgdrywt	1	20	23.	3.6	11.
4,6-Dinitro-2-methylphenol	U	170	ug/Kgdrywt	1	310	350	110	170
Hexachlorobenzene	U	11.	ug/Kgdrywt	1	20	23.	2.0	11.
Atrazine	J	1.2	ug/Kgdrywt	1	20	23.	1.1	11.
Pentachlorophenol	UUL-BSL	57.	ug/Kgdrywt	1	100	110	16.	57.
Phenanthrene	EExclude-LR	350	ug/Kgdrywt	1	20	23.	2.0	11.
Anthracene		56.	ug/Kgdrywt	1	20	23.	1.4	11.
Fluoranthene	EExclude-LR	480	ug/Kgdrywt	1	20	23.	2.0	11.
Pyrene	E	540	ug/Kgdrywt	1	20	23.	2.4	11.
3,3'-Dichlorobenzidine	UR-BSL	11.	ug/Kgdrywt	1	20	23.	3.4	11.
Benzo (a) anthracene	B-MBL	250	ug/Kgdrywt	1	20	23.	2.2	11.
Chrysene		170	ug/Kgdrywt	1	20	23.	1.9	11.
bis(2-Ethylhexyl)phthalate	EExclude-LR	500	ug/Kgdrywt	1	100	110	36.	57.
Di-n-octylphthalate	U	57.	ug/Kgdrywt	1	100	110	52.	57.
Benzo (b) Fluoranthene		290	ug/Kgdrywt	1	20	23.	2.7	11.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		110	ug/Kgdrywt	1	20	23.	3.5	11.
Benzo(a)pyrene		240	ug/Kgdrywt	1	20	23.	3.8	11.
Indeno (1,2,3-cd) pyrene		170	ug/Kgdrywt	1	20	23.	2.2	11.
Dibenzo (a,h) anthracene		53.	ug/Kgdrywt	1	20	23.	2.0	11.
Benzo(g,h,i)perylene		180	ug/Kgdrywt	1	20	23.	2.3	11.
2-Methylnaphthalene-D10		82.0	%					
Fluorene-D10		49.5	%					
Pyrene-D10		102.	%					
2,4-Dibromophenol		64.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3DL
Client ID: IS66DP240001 SS
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude DL	170	ug/Kgdrywt	3	100	340	21.	170
bis(2-Chloroethyl)ether	U	34.	ug/Kgdrywt	3	20	68.	5.8	34.
2-Chlorophenol	U	170	ug/Kgdrywt	3	100	340	18.	170
2-Methylphenol	U	170	ug/Kgdrywt	3	100	340	29.	170
3&4-Methylphenol	U	170	ug/Kgdrywt	3	100	340	34.	170
n-Nitroso-di-n-propylamine	U	34.	ug/Kgdrywt	3	20	68.	6.5	34.
Nitrobenzene	U	34.	ug/Kgdrywt	3	20	68.	16.	34.
2,4-Dimethylphenol	U	34.	ug/Kgdrywt	3	20	68.	11.	34.
2,4-Dichlorophenol	U	34.	ug/Kgdrywt	3	20	68.	7.5	34.
Naphthalene	U	34.	ug/Kgdrywt	3	20	68.	8.9	34.
Hexachlorobutadiene	U	34.	ug/Kgdrywt	3	20	68.	7.9	34.
2-Methylnaphthalene	U	34.	ug/Kgdrywt	3	20	68.	7.5	34.
Hexachlorocyclopentadiene	U	34.	ug/Kgdrywt	3	20	68.	5.1	34.
2,4,6-Trichlorophenol	U	170	ug/Kgdrywt	3	100	340	11.	170
2,4,5-Trichlorophenol	U	170	ug/Kgdrywt	3	100	340	8.6	170
Dimethyl phthalate	U	34.	ug/Kgdrywt	3	20	68.	4.8	34.
Acenaphthylene	U	34.	ug/Kgdrywt	3	20	68.	4.1	34.
Acenaphthene	J	22.	ug/Kgdrywt	3	20	68.	5.1	34.
4-Nitrophenol	U	170	ug/Kgdrywt	3	100	340	27.	170
2,4-Dinitrotoluene	U	34.	ug/Kgdrywt	3	20	68.	24.	34.
Fluorene	J	17.	ug/Kgdrywt	3	20	68.	11.	34.
4,6-Dinitro-2-methylphenol	U	510	ug/Kgdrywt	3	310	1100	340	510
Hexachlorobenzene	U	34.	ug/Kgdrywt	3	20	68.	6.2	34.
Atrazine	J	17.	ug/Kgdrywt	3	20	68.	3.4	34.
Pentachlorophenol	U	170	ug/Kgdrywt	3	100	340	48.	170
Phenanthrene		330	ug/Kgdrywt	3	20	68.	6.2	34.
Anthracene	J Exclude DL	56.	ug/Kgdrywt	3	20	68.	4.1	34.
Fluoranthene		470	ug/Kgdrywt	3	20	68.	6.2	34.
Pyrene		420	ug/Kgdrywt	3	20	68.	7.2	34.
3,3'-Dichlorobenzidine	U Exclude DL	34.	ug/Kgdrywt	3	20	68.	10.	34.
Benzo (a) anthracene		240	ug/Kgdrywt	3	20	68.	6.5	34.
Chrysene		220	ug/Kgdrywt	3	20	68.	5.8	34.
bis(2-Ethylhexyl)phthalate	B-MBL	440	ug/Kgdrywt	3	100	340	110	170
Di-n-octylphthalate	U Exclude DL	170	ug/Kgdrywt	3	100	340	160	170
Benzo (b) Fluoranthene		350	ug/Kgdrywt	3	20	68.	8.2	34.

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3DL
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 82.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-DL	120	ug/Kgdrywt	3	20	68.	11.	34.
Benzo(a)pyrene		210	ug/Kgdrywt	3	20	68.	11.	34.
Indeno (1,2,3-cd) pyrene		110	ug/Kgdrywt	3	20	68.	6.5	34.
Dibenzo (a,h) anthracene	J	30.	ug/Kgdrywt	3	20	68.	6.2	34.
Benzo(g,h,i)perylene		120	ug/Kgdrywt	3	20	68.	6.8	34.
2-Methylnaphthalene-D10		69.4	%					
Fluorene-D10		23.2	%					
Pyrene-D10		77.9	%					
2,4-Dibromophenol		48.6	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: 1S66DP240708 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	46.	ug/Kgdrywt	1	100	93.	5.7	46.
bis(2-Chloroethyl)ether	U	9.3	ug/Kgdrywt	1	20	19.	1.6	9.3
2-Chlorophenol	U	46.	ug/Kgdrywt	1	100	93.	4.9	46.
2-Methylphenol	U	46.	ug/Kgdrywt	1	100	93.	7.9	46.
3&4-Methylphenol	U	46.	ug/Kgdrywt	1	100	93.	9.2	46.
n-Nitroso-di-n-propylamine	U	9.3	ug/Kgdrywt	1	20	19.	1.8	9.3
Nitrobenzene	U	9.3	ug/Kgdrywt	1	20	19.	4.5	9.3
2,4-Dimethylphenol	UR-BSL	9.3	ug/Kgdrywt	1	20	19.	3.0	9.3
2,4-Dichlorophenol	J-CCL	12.	ug/Kgdrywt	1	20	19.	2.0	9.3
Naphthalene	UHL-BSL	9.3	ug/Kgdrywt	1	20	19.	2.4	9.3
Hexachlorobutadiene	U	9.3	ug/Kgdrywt	1	20	19.	2.1	9.3
2-Methylnaphthalene	JL-BSL	2.8	ug/Kgdrywt	1	20	19.	2.0	9.3
Hexachlorocyclopentadiene	U	9.3	ug/Kgdrywt	1	20	19.	1.4	9.3
2,4,6-Trichlorophenol	J	13.	ug/Kgdrywt	1	100	93.	3.1	46.
2,4,5-Trichlorophenol	J	2.9	ug/Kgdrywt	1	100	93.	2.3	46.
Dimethyl phthalate	J-B-MBL	2.8	ug/Kgdrywt	1	20	19.	1.3	9.3
Acenaphthylene	J	3.4	ug/Kgdrywt	1	20	19.	1.1	9.3
Acenaphthene	U	9.3	ug/Kgdrywt	1	20	19.	1.4	9.3
4-Nitrophenol	UHS-ICB	46.	ug/Kgdrywt	1	100	93.	7.4	46.
2,4-Dinitrotoluene	U	9.3	ug/Kgdrywt	1	20	19.	6.5	9.3
Fluorene	U	9.3	ug/Kgdrywt	1	20	19.	3.0	9.3
4,6-Dinitro-2-methylphenol	U	140	ug/Kgdrywt	1	310	290	93.	140
Hexachlorobenzene	U	9.3	ug/Kgdrywt	1	20	19.	1.7	9.3
Atrazine	J	2.2	ug/Kgdrywt	1	20	19.	0.93	9.3
Pentachlorophenol	UHL-BSL	46.	ug/Kgdrywt	1	100	93.	13.	46.
Phenanthrene	J	2.0	ug/Kgdrywt	1	20	19.	1.7	9.3
Anthracene	J	1.4	ug/Kgdrywt	1	20	19.	1.1	9.3
Fluoranthene	J	2.4	ug/Kgdrywt	1	20	19.	1.7	9.3
Pyrene	J	3.1	ug/Kgdrywt	1	20	19.	2.0	9.3
3,3'-Dichlorobenzidine	JR-BSL	9.3	ug/Kgdrywt	1	20	19.	2.8	9.3
Benzo (a) anthracene	J-B-MBL	6.5	ug/Kgdrywt	1	20	19.	1.8	9.3
Chrysene	J	2.2	ug/Kgdrywt	1	20	19.	1.6	9.3
bis(2-Ethylhexyl)phthalate	B-MBL	96.	ug/Kgdrywt	1	100	93.	30.	46.
Di-n-octylphthalate	U	46.	ug/Kgdrywt	1	100	93.	43.	46.
Benzo (b) Fluoranthene	J	6.3	ug/Kgdrywt	1	20	19.	2.2	9.3

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 95.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	9.3	ug/Kgdrywt	1	20	19.	2.9	9.3
Benzo(a)pyrene	U	9.3	ug/Kgdrywt	1	20	19.	3.1	9.3
Indeno (1,2,3-cd) pyrene	J	2.2	ug/Kgdrywt	1	20	19.	1.8	9.3
Dibenzo (a,h) anthracene	U	9.3	ug/Kgdrywt	1	20	19.	1.7	9.3
Benzo(g,h,i)perylene	J	2.4	ug/Kgdrywt	1	20	19.	1.9	9.3
2-Methylnaphthalene-D10		42.7	%					
Fluorene-D10		44.2	%					
Pyrene-D10		85.5	%					
2,4-Dibromophenol		51.9	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83074

Analysis Date: 14-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	U UL-BSL	0.10	ug/L	1	.2	0.20	0.042	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Nitrobenzene EXCLUDE-RE	U	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.20	0.089	0.10
2,4,6-Trichlorophenol	U	0.51	ug/L	1	1	1.0	0.12	0.51
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2,4-Dinitrophenol	U UJ-ICB	0.51	ug/L	1	1	1.0	0.24	0.51
4-Nitrophenol	U	0.51	ug/L	1	1	1.0	0.23	0.51
Dibenzofuran	U	0.10	ug/L	1	.2	0.20	0.069	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
4-Nitroaniline	U UJ-2S	0.10	ug/L	1	.2	0.20	0.066	0.10
4,6-Dinitro-2-methylphenol	U	0.76	ug/L	1	1	1.0	0.51	0.76
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.039	0.10
Pentachlorophenol	U	0.51	ug/L	1	1	1.0	0.34	0.51
3,3'-Dichlorobenzidine	U UJ-2S	0.10	ug/L	1	.2	0.20	0.057	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.047	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.037	0.10
bis(2-Ethylhexyl)phthalate	B B-MBL	3.1	ug/L	1	1	1.0	0.51	0.51
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.091	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.050	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.053	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2-Methylnaphthalene-D10	*	102.	%					
Fluorene-D10		64.8	%					
pyrene-d10		75.0	%					
2,4-Dibromophenol		42.2	%					

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REISSUE

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83074

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
bis(2-Chloroethyl)ether	UUL-BSL	0.10	ug/L	1	.2	0.20	0.041	0.10
2,2'-Oxybis(1-chloropropane)	U	0.15	ug/L	1	.2	0.20	0.12	0.15
n-Nitroso-di-n-propylamine	U	0.10	ug/L	1	.2	0.20	0.073	0.10
Hexachloroethane	U	0.10	ug/L	1	.2	0.20	0.074	0.10
Nitrobenzene	EXCLUDE-RE ~~U~~	0.15	ug/L	1	.2	0.20	0.13	0.15
Naphthalene	U	0.10	ug/L	1	.2	0.20	0.065	0.10
Hexachlorobutadiene	U	0.10	ug/L	1	.2	0.20	0.088	0.10
2,4,6-Trichlorophenol	U	0.50	ug/L	1	1	1.0	0.12	0.50
2-Nitroaniline	U	0.15	ug/L	1	.2	0.20	0.12	0.15
2,6-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2,4-Dinitrophenol	~~U~~ UUG-ICB	0.50	ug/L	1	1	1.0	0.24	0.50
4-Nitrophenol	U	0.50	ug/L	1	1	1.0	0.23	0.50
Dibenzofuran	U	0.10	ug/L	1	.2	0.20	0.069	0.10
2,4-Dinitrotoluene	U	0.10	ug/L	1	.2	0.20	0.035	0.10
4-Nitroaniline	UUJ-2S	0.10	ug/L	1	.2	0.20	0.066	0.10
4,6-Dinitro-2-methylphenol	U	0.76	ug/L	1	1	1.0	0.50	0.76
Hexachlorobenzene	U	0.10	ug/L	1	.2	0.20	0.056	0.10
Atrazine	U	0.10	ug/L	1	.2	0.20	0.038	0.10
Pentachlorophenol	U	0.50	ug/L	1	1	1.0	0.33	0.50
3,3'-Dichlorobenzidine	UUJ-2S	0.10	ug/L	1	.2	0.20	0.056	0.10
Benzo(a)anthracene	U	0.10	ug/L	1	.2	0.20	0.046	0.10
Chrysene	U	0.10	ug/L	1	.2	0.20	0.036	0.10
bis(2-Ethylhexyl)phthalate	~~B~~ BB-MBL	5.8	ug/L	1	1	1.0	0.50	0.50
Benzo(b)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.090	0.10
Benzo(k)fluoranthene	U	0.10	ug/L	1	.2	0.20	0.049	0.10
Benzo(a)pyrene	U	0.10	ug/L	1	.2	0.20	0.067	0.10
Indeno(1,2,3-cd)pyrene	U	0.10	ug/L	1	.2	0.20	0.052	0.10
Dibenzo(a,h)anthracene	U	0.10	ug/L	1	.2	0.20	0.071	0.10
2-Methylnaphthalene-D10		75.9	%					
Fluorene-D10		60.5	%					
pyrene-d10		97.1	%					
2,4-Dibromophenol		78.5	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 50.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	99.	ug/Kgdrywt	1	100	200	12.	99.
bis(2-Chloroethyl)ether	U	20.	ug/Kgdrywt	1	20	39.	3.4	20.
2-Chlorophenol	U	99.	ug/Kgdrywt	1	100	200	10.	99.
2-Methylphenol	U	99.	ug/Kgdrywt	1	100	200	17.	99.
3&4-Methylphenol	U	99.	ug/Kgdrywt	1	100	200	20.	99.
n-Nitroso-di-n-propylamine	U	20.	ug/Kgdrywt	1	20	39.	3.8	20.
Nitrobenzene	U	20.	ug/Kgdrywt	1	20	39.	9.5	20.
2,4-Dimethylphenol	UR-BSL	20.	ug/Kgdrywt	1	20	39.	6.3	20.
2,4-Dichlorophenol	J-CCL	22.	ug/Kgdrywt	1	20	39.	4.3	20.
Naphthalene	U-BSL	20.	ug/Kgdrywt	1	20	39.	5.1	20.
Hexachlorobutadiene	U	20.	ug/Kgdrywt	1	20	39.	4.5	20.
2-Methylnaphthalene	J-BSL	6.6	ug/Kgdrywt	1	20	39.	4.3	20.
Hexachlorocyclopentadiene	U	20.	ug/Kgdrywt	1	20	39.	3.0	20.
2,4,6-Trichlorophenol	J	27.	ug/Kgdrywt	1	100	200	6.5	99.
2,4,5-Trichlorophenol	U	99.	ug/Kgdrywt	1	100	200	4.9	99.
Dimethyl phthalate	J-BMBL	8.6	ug/Kgdrywt	1	20	39.	2.8	20.
Acenaphthylene	J	13.	ug/Kgdrywt	1	20	39.	2.4	20.
Acenaphthene	J	23.	ug/Kgdrywt	1	20	39.	3.0	20.
4-Nitrophenol	U-CCB	99.	ug/Kgdrywt	1	100	200	16.	99.
2,4-Dinitrotoluene	U	20.	ug/Kgdrywt	1	20	39.	14.	20.
Fluorene	J	20.	ug/Kgdrywt	1	20	39.	6.3	20.
4,6-Dinitro-2-methylphenol	U	300	ug/Kgdrywt	1	310	610	200	300
Hexachlorobenzene	U	20.	ug/Kgdrywt	1	20	39.	3.6	20.
Atrazine	J	7.3	ug/Kgdrywt	1	20	39.	2.0	20.
Pentachlorophenol	U-BSL	99.	ug/Kgdrywt	1	100	200	28.	99.
Phenanthrene		210	ug/Kgdrywt	1	20	39.	3.6	20.
Anthracene		50.	ug/Kgdrywt	1	20	39.	2.4	20.
Fluoranthene	E Excluded	700	ug/Kgdrywt	1	20	39.	3.6	20.
Pyrene	E	620	ug/Kgdrywt	1	20	39.	4.1	20.
3,3'-Dichlorobenzidine	UR-BSL	20.	ug/Kgdrywt	1	20	39.	5.9	20.
Benzo (a) anthracene	B-MBL	350	ug/Kgdrywt	1	20	39.	3.8	20.
Chrysene		250	ug/Kgdrywt	1	20	39.	3.4	20.
bis(2-Ethylhexyl)phthalate	J-BMBL	120	ug/Kgdrywt	1	100	200	63.	99.
Di-n-octylphthalate	U	99.	ug/Kgdrywt	1	100	200	91.	99.
Benzo (b) Fluoranthene		440	ug/Kgdrywt	1	20	39.	4.7	20.

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HK 12/27/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 50.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		150	ug/Kgdrywt	1	20	39.	6.1	20.
Benzo(a)pyrene		330	ug/Kgdrywt	1	20	39.	6.5	20.
Indeno (1,2,3-cd) pyrene		220	ug/Kgdrywt	1	20	39.	3.8	20.
Dibenzo (a,h) anthracene		75.	ug/Kgdrywt	1	20	39.	3.6	20.
Benzo(g,h,i)perylene		230	ug/Kgdrywt	1	20	39.	3.9	20.
2-Methylnaphthalene-D10		57.6	%					
Fluorene-D10		52.6	%					
Pyrene-D10		92.4	%					
2,4-Dibromophenol		67.3	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9DL
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 50.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	200	ug/Kgdrywt	2	100	390	24.	200
bis(2-Chloroethyl)ether	U	39.	ug/Kgdrywt	2	20	79.	6.7	39.
2-Chlorophenol	U	200	ug/Kgdrywt	2	100	390	21.	200
2-Methylphenol	U	200	ug/Kgdrywt	2	100	390	34.	200
3&4-Methylphenol	U	200	ug/Kgdrywt	2	100	390	39.	200
n-Nitroso-di-n-propylamine	U	39.	ug/Kgdrywt	2	20	79.	7.5	39.
Nitrobenzene	U	39.	ug/Kgdrywt	2	20	79.	19.	39.
2,4-Dimethylphenol	U	39.	ug/Kgdrywt	2	20	79.	13.	39.
2,4-Dichlorophenol	U	39.	ug/Kgdrywt	2	20	79.	8.7	39.
Naphthalene	U	39.	ug/Kgdrywt	2	20	79.	10.	39.
Hexachlorobutadiene	U	39.	ug/Kgdrywt	2	20	79.	9.1	39.
2-Methylnaphthalene	U	39.	ug/Kgdrywt	2	20	79.	8.7	39.
Hexachlorocyclopentadiene	U	39.	ug/Kgdrywt	2	20	79.	5.9	39.
2,4,6-Trichlorophenol	U	200	ug/Kgdrywt	2	100	390	13.	200
2,4,5-Trichlorophenol	U	200	ug/Kgdrywt	2	100	390	9.9	200
Dimethyl phthalate	J	6.6	ug/Kgdrywt	2	20	79.	5.5	39.
Acenaphthylene	U	39.	ug/Kgdrywt	2	20	79.	4.7	39.
Acenaphthene	J	14.	ug/Kgdrywt	2	20	79.	5.9	39.
4-Nitrophenol	U	200	ug/Kgdrywt	2	100	390	32.	200
2,4-Dinitrotoluene	U	39.	ug/Kgdrywt	2	20	79.	28.	39.
Fluorene	J	14.	ug/Kgdrywt	2	20	79.	13.	39.
4,6-Dinitro-2-methylphenol	U	590	ug/Kgdrywt	2	310	1200	390	590
Hexachlorobenzene	U	39.	ug/Kgdrywt	2	20	79.	7.1	39.
Atrazine	J	24.	ug/Kgdrywt	2	20	79.	3.9	39.
Pentachlorophenol	U	200	ug/Kgdrywt	2	100	390	55.	200
Phenanthrene		180	ug/Kgdrywt	2	20	79.	7.1	39.
Anthracene	J	47.	ug/Kgdrywt	2	20	79.	4.7	39.
Fluoranthene		590	ug/Kgdrywt	2	20	79.	7.1	39.
Pyrene		500	ug/Kgdrywt	2	20	79.	8.3	39.
3,3'-Dichlorobenzidine	U Exclude-DL	39.	ug/Kgdrywt	2	20	79.	12.	39.
Benzo (a) anthracene		340	ug/Kgdrywt	2	20	79.	7.5	39.
Chrysene		310	ug/Kgdrywt	2	20	79.	6.7	39.
bis(2-Ethylhexyl)phthalate	U	200	ug/Kgdrywt	2	100	390	130	200
Di-n-octylphthalate	U	200	ug/Kgdrywt	2	100	390	180	200
Benzo (b) Fluoranthene		600	ug/Kgdrywt	2	20	79.	9.5	39.

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HK 12/27/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9DL
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 25-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 50.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-DL	140	ug/Kgdrywt	2	20	79.	12.	39.
Benzo(a)pyrene		300	ug/Kgdrywt	2	20	79.	13.	39.
Indeno (1,2,3-cd) pyrene		170	ug/Kgdrywt	2	20	79.	7.5	39.
Dibenzo (a,h) anthracene	J	54.	ug/Kgdrywt	2	20	79.	7.1	39.
Benzo(g,h,i)perylene		170	ug/Kgdrywt	2	20	79.	7.9	39.
2-Methylnaphthalene-D10		71.7	%					
Fluorene-D10		33.5	%					
Pyrene-D10		71.7	%					
2,4-Dibromophenol		57.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 70.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	69.	ug/Kgdrywt	1	100	140	8.4	69.
bis(2-Chloroethyl)ether	U	14.	ug/Kgdrywt	1	20	28.	2.3	14.
2-Chlorophenol	U	69.	ug/Kgdrywt	1	100	140	7.3	69.
2-Methylphenol	U	69.	ug/Kgdrywt	1	100	140	12.	69.
3&4-Methylphenol	U	69.	ug/Kgdrywt	1	100	140	14.	69.
n-Nitroso-di-n-propylamine	U	14.	ug/Kgdrywt	1	20	28.	2.6	14.
Nitrobenzene	U	14.	ug/Kgdrywt	1	20	28.	6.6	14.
2,4-Dimethylphenol	UR-BSL	14.	ug/Kgdrywt	1	20	28.	4.4	14.
2,4-Dichlorophenol	J-CCL	15.	ug/Kgdrywt	1	20	28.	3.0	14.
Naphthalene	L-BSL	63.	ug/Kgdrywt	1	20	28.	3.6	14.
Hexachlorobutadiene	U	14.	ug/Kgdrywt	1	20	28.	3.2	14.
2-Methylnaphthalene	J-L-BSL	9.9	ug/Kgdrywt	1	20	28.	3.0	14.
Hexachlorocyclopentadiene	U	14.	ug/Kgdrywt	1	20	28.	2.1	14.
2,4,6-Trichlorophenol	J	16.	ug/Kgdrywt	1	100	140	4.5	69.
2,4,5-Trichlorophenol	U	69.	ug/Kgdrywt	1	100	140	3.4	69.
Dimethyl phthalate	U	14.	ug/Kgdrywt	1	20	28.	1.9	14.
Acenaphthylene	J	13.	ug/Kgdrywt	1	20	28.	1.6	14.
Acenaphthene		100	ug/Kgdrywt	1	20	28.	2.1	14.
4-Nitrophenol	UUJ-ICB	69.	ug/Kgdrywt	1	100	140	11.	69.
2,4-Dinitrotoluene	U	14.	ug/Kgdrywt	1	20	28.	9.6	14.
Fluorene		77.	ug/Kgdrywt	1	20	28.	4.4	14.
4,6-Dinitro-2-methylphenol	U	210	ug/Kgdrywt	1	310	430	140	210
Hexachlorobenzene	U	14.	ug/Kgdrywt	1	20	28.	2.5	14.
Atrazine	J	4.4	ug/Kgdrywt	1	20	28.	1.4	14.
Pentachlorophenol	UUL-BSL	69.	ug/Kgdrywt	1	100	140	19.	69.
Phenanthrene	E Exclude-LR	800	ug/Kgdrywt	1	20	28.	2.5	14.
Anthracene		170	ug/Kgdrywt	1	20	28.	1.6	14.
Fluoranthene	E Exclude-LR	1400	ug/Kgdrywt	1	20	28.	2.5	14.
Pyrene	E	1400	ug/Kgdrywt	1	20	28.	2.9	14.
3,3'-Dichlorobenzidine	UR-BSL	14.	ug/Kgdrywt	1	20	28.	4.1	14.
Benzo (a) anthracene	E Exclude-LR	800	ug/Kgdrywt	1	20	28.	2.6	14.
Chrysene	E	530	ug/Kgdrywt	1	20	28.	2.3	14.
bis(2-Ethylhexyl)phthalate	J-B-mBL	110	ug/Kgdrywt	1	100	140	44.	69.
Di-n-octylphthalate	U	69.	ug/Kgdrywt	1	100	140	63.	69.
Benzo (b) Fluoranthene	E Exclude-LR	1100	ug/Kgdrywt	1	20	28.	3.3	14.

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 70.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	~~E~~ Exclude LR	380	ug/Kgdrywt	1	20	28.	4.3	14.
Benzo(a)pyrene	~~E~~	920	ug/Kgdrywt	1	20	28.	4.5	14.
Indeno (1,2,3-cd) pyrene	~~E~~	570	ug/Kgdrywt	1	20	28.	2.6	14.
Dibenzo (a,h) anthracene		210	ug/Kgdrywt	1	20	28.	2.5	14.
Benzo(g,h,i)perylene	~~E~~ Exclude LR	610	ug/Kgdrywt	1	20	28.	2.8	14.
2-Methylnaphthalene-D10		74.3	%					
Fluorene-D10		50.9	%					
Pyrene-D10		99.1	%					
2,4-Dibromophenol		65.8	%					

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ANALYTICAL SERVICES

Accredited in accordance with nelac
Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10DL
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 70.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	550	ug/Kgdrywt	8	100	1100	67.	550
bis(2-Chloroethyl)ether	U	110	ug/Kgdrywt	8	20	220	19.	110
2-Chlorophenol	U	550	ug/Kgdrywt	8	100	1100	58.	550
2-Methylphenol	U	550	ug/Kgdrywt	8	100	1100	94.	550
3&4-Methylphenol	U	550	ug/Kgdrywt	8	100	1100	110	550
n-Nitroso-di-n-propylamine	U	110	ug/Kgdrywt	8	20	220	21.	110
Nitrobenzene	U	110	ug/Kgdrywt	8	20	220	53.	110
2,4-Dimethylphenol	U	110	ug/Kgdrywt	8	20	220	35.	110
2,4-Dichlorophenol	U	110	ug/Kgdrywt	8	20	220	24.	110
Naphthalene	U	110	ug/Kgdrywt	8	20	220	29.	110
Hexachlorobutadiene	U	110	ug/Kgdrywt	8	20	220	25.	110
2-Methylnaphthalene	U	110	ug/Kgdrywt	8	20	220	24.	110
Hexachlorocyclopentadiene	U	110	ug/Kgdrywt	8	20	220	16.	110
2,4,6-Trichlorophenol	U	550	ug/Kgdrywt	8	100	1100	36.	550
2,4,5-Trichlorophenol	U	550	ug/Kgdrywt	8	100	1100	28.	550
Dimethyl phthalate	U	110	ug/Kgdrywt	8	20	220	15.	110
Acenaphthylene	U	110	ug/Kgdrywt	8	20	220	13.	110
Acenaphthene	J	66.	ug/Kgdrywt	8	20	220	16.	110
4-Nitrophenol	U	550	ug/Kgdrywt	8	100	1100	88.	550
2,4-Dinitrotoluene	U	110	ug/Kgdrywt	8	20	220	77.	110
Fluorene	J	49.	ug/Kgdrywt	8	20	220	35.	110
4,6-Dinitro-2-methylphenol	U	1600	ug/Kgdrywt	8	310	3400	1100	1600
Hexachlorobenzene	U	110	ug/Kgdrywt	8	20	220	20.	110
Atrazine	J	53.	ug/Kgdrywt	8	20	220	11.	110
Pentachlorophenol	U	550	ug/Kgdrywt	8	100	1100	150	550
Phenanthrene		780	ug/Kgdrywt	8	20	220	20.	110
Anthracene	J Exclude-DL	170	ug/Kgdrywt	8	20	220	13.	110
Fluoranthene		1400	ug/Kgdrywt	8	20	220	20.	110
Pyrene		1100	ug/Kgdrywt	8	20	220	23.	110
3,3'-Dichlorobenzidine	U Exclude-DL	110	ug/Kgdrywt	8	20	220	33.	110
Benzo (a) anthracene		780	ug/Kgdrywt	8	20	220	21.	110
Chrysene		680	ug/Kgdrywt	8	20	220	19.	110
bis(2-Ethylhexyl)phthalate	U Exclude-DL	550	ug/Kgdrywt	8	100	1100	350	550
Di-n-octylphthalate	U	550	ug/Kgdrywt	8	100	1100	510	550
Benzo (b) Fluoranthene		1300	ug/Kgdrywt	8	20	220	26.	110

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10DL
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 70.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		340	ug/Kgdrywt	8	20	220	34.	110
Benzo(a)pyrene		770	ug/Kgdrywt	8	20	220	36.	110
Indeno (1,2,3-cd) pyrene		420	ug/Kgdrywt	8	20	220	21.	110
Dibenzo (a,h) anthracene	J Exclude DL	120	ug/Kgdrywt	8	20	220	20.	110
Benzo(g,h,i)perylene		430	ug/Kgdrywt	8	20	220	22.	110
2-Methylnaphthalene-D10		68.0	%					
Fluorene-D10	*	14.6	%					
Pyrene-D10		77.3	%					
2,4-Dibromophenol		39.3	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 69.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	65.	ug/Kgdrywt	1	100	130	8.0	65.
bis(2-Chloroethyl)ether	U	13.	ug/Kgdrywt	1	20	26.	2.2	13.
2-Chlorophenol	U	65.	ug/Kgdrywt	1	100	130	6.9	65.
2-Methylphenol	U	65.	ug/Kgdrywt	1	100	130	11.	65.
3&4-Methylphenol	U	65.	ug/Kgdrywt	1	100	130	13.	65.
n-Nitroso-di-n-propylamine	U	13.	ug/Kgdrywt	1	20	26.	2.5	13.
Nitrobenzene	U	13.	ug/Kgdrywt	1	20	26.	6.3	13.
2,4-Dimethylphenol	UR-BSL	13.	ug/Kgdrywt	1	20	26.	4.2	13.
2,4-Dichlorophenol	J-CCL	18.	ug/Kgdrywt	1	20	26.	2.9	13.
Naphthalene	J-FBL	7.6	ug/Kgdrywt	1	20	26.	3.4	13.
Hexachlorobutadiene	U	13.	ug/Kgdrywt	1	20	26.	3.0	13.
2-Methylnaphthalene	J-BSL	5.8	ug/Kgdrywt	1	20	26.	2.9	13.
Hexachlorocyclopentadiene	J	6.6	ug/Kgdrywt	1	20	26.	2.0	13.
2,4,6-Trichlorophenol	J	22.	ug/Kgdrywt	1	100	130	4.3	65.
2,4,5-Trichlorophenol	J	5.8	ug/Kgdrywt	1	100	130	3.3	65.
Dimethyl phthalate	J-BmBL	6.3	ug/Kgdrywt	1	20	26.	1.8	13.
Acenaphthylene	J	21.	ug/Kgdrywt	1	20	26.	1.6	13.
Acenaphthene	J	24.	ug/Kgdrywt	1	20	26.	2.0	13.
4-Nitrophenol	U-UJ-ICB	65.	ug/Kgdrywt	1	100	130	10.	65.
2,4-Dinitrotoluene	U	13.	ug/Kgdrywt	1	20	26.	9.2	13.
Fluorene	J	24.	ug/Kgdrywt	1	20	26.	4.2	13.
4,6-Dinitro-2-methylphenol	U	200	ug/Kgdrywt	1	310	400	130	200
Hexachlorobenzene	J	2.6	ug/Kgdrywt	1	20	26.	2.4	13.
Atrazine	J	3.8	ug/Kgdrywt	1	20	26.	1.3	13.
Pentachlorophenol	UL-BSL	65.	ug/Kgdrywt	1	100	130	18.	65.
Phenanthrene		200	ug/Kgdrywt	1	20	26.	2.4	13.
Anthracene		49.	ug/Kgdrywt	1	20	26.	1.6	13.
Fluoranthene	E Exclude-CR	750	ug/Kgdrywt	1	20	26.	2.4	13.
Pyrene	E ↓	790	ug/Kgdrywt	1	20	26.	2.7	13.
3,3'-Dichlorobenzidine	UR-BSL	13.	ug/Kgdrywt	1	20	26.	3.9	13.
Benzo (a) anthracene	E Exclude-CR	560	ug/Kgdrywt	1	20	26.	2.5	13.
Chrysene	E ↓	380	ug/Kgdrywt	1	20	26.	2.2	13.
bis(2-Ethylhexyl)phthalate	J-BmBL	62.	ug/Kgdrywt	1	100	130	42.	65.
Di-n-octylphthalate	U	65.	ug/Kgdrywt	1	100	130	60.	65.
Benzo (b) Fluoranthene	E Exclude-CR	720	ug/Kgdrywt	1	20	26.	3.1	13.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 69.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		210	ug/Kgdrywt	1	20	26.	4.0	13.
Benzo(a)pyrene	E Exclude LR	620	ug/Kgdrywt	1	20	26.	4.3	13.
Indeno (1,2,3-cd) pyrene	E 1	360	ug/Kgdrywt	1	20	26.	2.5	13.
Dibenzo (a,h) anthracene		140	ug/Kgdrywt	1	20	26.	2.4	13.
Benzo(g,h,i)perylene	E Exclude LR	390	ug/Kgdrywt	1	20	26.	2.6	13.
2-Methylnaphthalene-D10		54.2	%					
Fluorene-D10		55.0	%					
Pyrene-D10		93.7	%					
2,4-Dibromophenol		66.1	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11DL
Client ID: 1S66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 69.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	260	ug/Kgdrywt	4	100	520	32.	260
bis(2-Chloroethyl)ether	U	52.	ug/Kgdrywt	4	20	100	8.9	52.
2-Chlorophenol	U	260	ug/Kgdrywt	4	100	520	28.	260
2-Methylphenol	U	260	ug/Kgdrywt	4	100	520	44.	260
3&4-Methylphenol	U	260	ug/Kgdrywt	4	100	520	52.	260
n-Nitroso-di-n-propylamine	U	52.	ug/Kgdrywt	4	20	100	9.9	52.
Nitrobenzene	U	52.	ug/Kgdrywt	4	20	100	25.	52.
2,4-Dimethylphenol	U	52.	ug/Kgdrywt	4	20	100	17.	52.
2,4-Dichlorophenol	U	52.	ug/Kgdrywt	4	20	100	12.	52.
Naphthalene	U	52.	ug/Kgdrywt	4	20	100	14.	52.
Hexachlorobutadiene	U	52.	ug/Kgdrywt	4	20	100	12.	52.
2-Methylnaphthalene	U	52.	ug/Kgdrywt	4	20	100	12.	52.
Hexachlorocyclopentadiene	U	52.	ug/Kgdrywt	4	20	100	7.8	52.
2,4,6-Trichlorophenol	U	260	ug/Kgdrywt	4	100	520	17.	260
2,4,5-Trichlorophenol	U	260	ug/Kgdrywt	4	100	520	13.	260
Dimethyl phthalate	U	52.	ug/Kgdrywt	4	20	100	7.3	52.
Acenaphthylene	J	8.4	ug/Kgdrywt	4	20	100	6.3	52.
Acenaphthene	J	14.	ug/Kgdrywt	4	20	100	7.8	52.
4-Nitrophenol	U	260	ug/Kgdrywt	4	100	520	42.	260
2,4-Dinitrotoluene	U	52.	ug/Kgdrywt	4	20	100	37.	52.
Fluorene	U	52.	ug/Kgdrywt	4	20	100	17.	52.
4,6-Dinitro-2-methylphenol	U	780	ug/Kgdrywt	4	310	1600	520	780
Hexachlorobenzene	U	52.	ug/Kgdrywt	4	20	100	9.4	52.
Atrazine	J	27.	ug/Kgdrywt	4	20	100	5.2	52.
Pentachlorophenol	U	260	ug/Kgdrywt	4	100	520	73.	260
Phenanthrene		180	ug/Kgdrywt	4	20	100	9.4	52.
Anthracene	J	50.	ug/Kgdrywt	4	20	100	6.3	52.
Fluoranthene		730	ug/Kgdrywt	4	20	100	9.4	52.
Pyrene		660	ug/Kgdrywt	4	20	100	11.	52.
3,3'-Dichlorobenzidine	U Exclude-DL	52.	ug/Kgdrywt	4	20	100	16.	52.
Benzo (a) anthracene	B-MBL	530	ug/Kgdrywt	4	20	100	9.9	52.
Chrysene		460	ug/Kgdrywt	4	20	100	8.9	52.
bis(2-Ethylhexyl)phthalate	U Exclude-DL	260	ug/Kgdrywt	4	100	520	170	260
Di-n-octylphthalate	U	260	ug/Kgdrywt	4	100	520	240	260
Benzo (b) Fluoranthene		810	ug/Kgdrywt	4	20	100	12.	52.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11DL
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 69.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude DL	220	ug/Kgdrywt	4	20	100	16.	52.
Benzo(a)pyrene		500	ug/Kgdrywt	4	20	100	17.	52.
Indeno (1,2,3-cd) pyrene		250	ug/Kgdrywt	4	20	100	9.9	52.
Dibenzo (a,h) anthracene	J Exclude DL	80.	ug/Kgdrywt	4	20	100	9.4	52.
Benzo(g,h,i)perylene		260	ug/Kgdrywt	4	20	100	10.	52.
2-Methylnaphthalene-D10		72.5	%					
Fluorene-D10		29.8	%					
Pyrene-D10		74.6	%					
2,4-Dibromophenol		55.7	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 53.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	87.	ug/Kgdrywt	1	100	170	11.	87.
bis(2-Chloroethyl)ether	U	17.	ug/Kgdrywt	1	20	35.	3.0	17.
2-Chlorophenol	U	87.	ug/Kgdrywt	1	100	170	9.2	87.
2-Methylphenol	U	87.	ug/Kgdrywt	1	100	170	15.	87.
3&4-Methylphenol	U	87.	ug/Kgdrywt	1	100	170	17.	87.
n-Nitroso-di-n-propylamine	U	17.	ug/Kgdrywt	1	20	35.	3.3	17.
Nitrobenzene	U	17.	ug/Kgdrywt	1	20	35.	8.4	17.
2,4-Dimethylphenol	U R-BSL	17.	ug/Kgdrywt	1	20	35.	5.6	17.
2,4-Dichlorophenol	U	17.	ug/Kgdrywt	1	20	35.	3.8	17.
Naphthalene	J B-MBL	5.9	ug/Kgdrywt	1	20	35.	4.5	17.
Hexachlorobutadiene	U	17.	ug/Kgdrywt	1	20	35.	4.0	17.
2-Methylnaphthalene	U UL-BSL	17.	ug/Kgdrywt	1	20	35.	3.8	17.
Hexachlorocyclopentadiene	U	17.	ug/Kgdrywt	1	20	35.	2.6	17.
2,4,6-Trichlorophenol	U	87.	ug/Kgdrywt	1	100	170	5.8	87.
2,4,5-Trichlorophenol	U	87.	ug/Kgdrywt	1	100	170	4.4	87.
Dimethyl phthalate	U	17.	ug/Kgdrywt	1	20	35.	2.4	17.
Acenaphthylene	J	10.	ug/Kgdrywt	1	20	35.	2.1	17.
Acenaphthene	J	31.	ug/Kgdrywt	1	20	35.	2.6	17.
4-Nitrophenol	U UJ-ICB	87.	ug/Kgdrywt	1	100	170	14.	87.
2,4-Dinitrotoluene	U	17.	ug/Kgdrywt	1	20	35.	12.	17.
Fluorene		41.	ug/Kgdrywt	1	20	35.	5.6	17.
4,6-Dinitro-2-methylphenol	U	260	ug/Kgdrywt	1	310	540	170	260
Hexachlorobenzene	U	17.	ug/Kgdrywt	1	20	35.	3.1	17.
Atrazine	U	17.	ug/Kgdrywt	1	20	35.	1.7	17.
Pentachlorophenol	U UL-BSL	87.	ug/Kgdrywt	1	100	170	24.	87.
Phenanthrene		390	ug/Kgdrywt	1	20	35.	3.1	17.
Anthracene		93.	ug/Kgdrywt	1	20	35.	2.1	17.
Fluoranthene	E Exclude-LR	990	ug/Kgdrywt	1	20	35.	3.1	17.
Pyrene	E J	1100	ug/Kgdrywt	1	20	35.	3.7	17.
3,3'-Dichlorobenzidine	U R-BSL	17.	ug/Kgdrywt	1	20	35.	5.2	17.
Benzo (a) anthracene	E Exclude-LR	500	ug/Kgdrywt	1	20	35.	3.3	17.
Chrysene	E J	550	ug/Kgdrywt	1	20	35.	3.0	17.
bis(2-Ethylhexyl)phthalate	B-MBL	190	ug/Kgdrywt	1	100	170	56.	87.
Di-n-octylphthalate	U	87.	ug/Kgdrywt	1	100	170	80.	87.
Benzo (b) Fluoranthene	E Exclude-LR	900	ug/Kgdrywt	1	20	35.	4.2	17.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 53.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		240	ug/Kgdrywt	1	20	35.	5.4	17.
Benzo(a)pyrene	E-Exclude-D	510	ug/Kgdrywt	1	20	35.	5.8	17.
Indeno (1,2,3-cd) pyrene		300	ug/Kgdrywt	1	20	35.	3.3	17.
Dibenzo (a,h) anthracene		110	ug/Kgdrywt	1	20	35.	3.1	17.
Benzo(g,h,i)perylene		350	ug/Kgdrywt	1	20	35.	3.5	17.
2-Methylnaphthalene-D10		50.7	%					
Fluorene-D10		45.2	%					
Pyrene-D10		78.2	%					
2,4-Dibromophenol		50.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12DL
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 27-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 53.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	350	ug/Kgdrywt	4	100	700	43.	350
bis(2-Chloroethyl)ether	U	70.	ug/Kgdrywt	4	20	140	12.	70.
2-Chlorophenol	U	350	ug/Kgdrywt	4	100	700	37.	350
2-Methylphenol	U	350	ug/Kgdrywt	4	100	700	59.	350
3&4-Methylphenol	U	350	ug/Kgdrywt	4	100	700	69.	350
n-Nitroso-di-n-propylamine	U	70.	ug/Kgdrywt	4	20	140	13.	70.
Nitrobenzene	U	70.	ug/Kgdrywt	4	20	140	34.	70.
2,4-Dimethylphenol	U	70.	ug/Kgdrywt	4	20	140	22.	70.
2,4-Dichlorophenol	U	70.	ug/Kgdrywt	4	20	140	15.	70.
Naphthalene	U	70.	ug/Kgdrywt	4	20	140	18.	70.
Hexachlorobutadiene	U	70.	ug/Kgdrywt	4	20	140	16.	70.
2-Methylnaphthalene	U	70.	ug/Kgdrywt	4	20	140	15.	70.
Hexachlorocyclopentadiene	U	70.	ug/Kgdrywt	4	20	140	10.	70.
2,4,6-Trichlorophenol	U	350	ug/Kgdrywt	4	100	700	23.	350
2,4,5-Trichlorophenol	U	350	ug/Kgdrywt	4	100	700	17.	350
Dimethyl phthalate	U	70.	ug/Kgdrywt	4	20	140	9.8	70.
Acenaphthylene	J	9.1	ug/Kgdrywt	4	20	140	8.4	70.
Acenaphthene	J	22.	ug/Kgdrywt	4	20	140	10.	70.
4-Nitrophenol	U	350	ug/Kgdrywt	4	100	700	56.	350
2,4-Dinitrotoluene	U	70.	ug/Kgdrywt	4	20	140	49.	70.
Fluorene	J	35.	ug/Kgdrywt	4	20	140	22.	70.
4,6-Dinitro-2-methylphenol	U	1000	ug/Kgdrywt	4	310	2200	700	1000
Hexachlorobenzene	U	70.	ug/Kgdrywt	4	20	140	12.	70.
Atrazine	U	70.	ug/Kgdrywt	4	20	140	7.0	70.
Pentachlorophenol	U	350	ug/Kgdrywt	4	100	700	98.	350
Phenanthrene		380	ug/Kgdrywt	4	20	140	12.	70.
Anthracene	J	100	ug/Kgdrywt	4	20	140	8.4	70.
Fluoranthene		1100	ug/Kgdrywt	4	20	140	12.	70.
Pyrene		890	ug/Kgdrywt	4	20	140	15.	70.
3,3'-Dichlorobenzidine	U Exclude-DL	70.	ug/Kgdrywt	4	20	140	21.	70.
Benzo (a) anthracene	B MBL	580	ug/Kgdrywt	4	20	140	13.	70.
Chrysene		490	ug/Kgdrywt	4	20	140	12.	70.
bis(2-Ethylhexyl)phthalate	U Exclude-DL	350	ug/Kgdrywt	4	100	700	220	350
Di-n-octylphthalate	U	350	ug/Kgdrywt	4	100	700	320	350
Benzo (b) Fluoranthene		820	ug/Kgdrywt	4	20	140	17.	70.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12DL
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 27-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 53.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-DL	220	ug/Kgdrywt	4	20	140	22.	70.
Benzo(a)pyrene		470	ug/Kgdrywt	4	20	140	23.	70.
Indeno (1,2,3-cd) pyrene	Exclude-DL	310	ug/Kgdrywt	4	20	140	13.	70.
Dibenzo (a,h) anthracene	J	99.	ug/Kgdrywt	4	20	140	12.	70.
Benzo(g,h,i)perylene		340	ug/Kgdrywt	4	20	140	14.	70.
2-Methylnaphthalene-D10		43.9	%					
Fluorene-D10		37.8	%					
Pyrene-D10		65.0	%					
2,4-Dibromophenol		36.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 74.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	J	8.8	ug/Kgdrywt	1	100	120	7.7	63.
bis(2-Chloroethyl)ether	J	2.2	ug/Kgdrywt	1	20	25.	2.1	12.
2-Chlorophenol	U	63.	ug/Kgdrywt	1	100	120	6.7	63.
2-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	11.	63.
3&4-Methylphenol	U	63.	ug/Kgdrywt	1	100	120	12.	63.
n-Nitroso-di-n-propylamine	U	12.	ug/Kgdrywt	1	20	25.	2.4	12.
Nitrobenzene	U	12.	ug/Kgdrywt	1	20	25.	6.0	12.
2,4-Dimethylphenol	UR-BSL	12.	ug/Kgdrywt	1	20	25.	4.0	12.
2,4-Dichlorophenol	J-CCL	18.	ug/Kgdrywt	1	20	25.	2.8	12.
Naphthalene	J-FB-FBL	20.	ug/Kgdrywt	1	20	25.	3.3	12.
Hexachlorobutadiene	U	12.	ug/Kgdrywt	1	20	25.	2.9	12.
2-Methylnaphthalene	J-BSL	8.1	ug/Kgdrywt	1	20	25.	2.8	12.
Hexachlorocyclopentadiene	J	6.6	ug/Kgdrywt	1	20	25.	1.9	12.
2,4,6-Trichlorophenol	J	23.	ug/Kgdrywt	1	100	120	4.2	63.
2,4,5-Trichlorophenol	J	7.4	ug/Kgdrywt	1	100	120	3.1	63.
Dimethyl phthalate	J-B-MBL	6.1	ug/Kgdrywt	1	20	25.	1.8	12.
Acenaphthylene	J	9.0	ug/Kgdrywt	1	20	25.	1.5	12.
Acenaphthene		47.	ug/Kgdrywt	1	20	25.	1.9	12.
4-Nitrophenol	UWJ-ICB	63.	ug/Kgdrywt	1	100	120	10.	63.
2,4-Dinitrotoluene	U	12.	ug/Kgdrywt	1	20	25.	8.8	12.
Fluorene		98.	ug/Kgdrywt	1	20	25.	4.0	12.
4,6-Dinitro-2-methylphenol	U	190	ug/Kgdrywt	1	310	390	120	190
Hexachlorobenzene	J	2.4	ug/Kgdrywt	1	20	25.	2.3	12.
Atrazine	J	4.2	ug/Kgdrywt	1	20	25.	1.2	12.
Pentachlorophenol	UWL-BSL	63.	ug/Kgdrywt	1	100	120	18.	63.
Phenanthrene	EExclude-LR	720	ug/Kgdrywt	1	20	25.	2.3	12.
Anthracene		120	ug/Kgdrywt	1	20	25.	1.5	12.
Fluoranthene	EExclude-LR	1000	ug/Kgdrywt	1	20	25.	2.3	12.
Pyrene	E	1000	ug/Kgdrywt	1	20	25.	2.6	12.
3,3'-Dichlorobenzidine	UR-BSL	12.	ug/Kgdrywt	1	20	25.	3.8	12.
Benzo (a) anthracene	EExclude-LR	520	ug/Kgdrywt	1	20	25.	2.4	12.
Chrysene	E	370	ug/Kgdrywt	1	20	25.	2.1	12.
bis(2-Ethylhexyl)phthalate	JB-MBL	60.	ug/Kgdrywt	1	100	120	40.	63.
Di-n-octylphthalate	U	63.	ug/Kgdrywt	1	100	120	58.	63.
Benzo (b) Fluoranthene	EExclude-LR	570	ug/Kgdrywt	1	20	25.	3.0	12.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13
Client ID: 1S66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 74.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		210	ug/Kgdrywt	1	20	25.	3.9	12.
Benzo(a)pyrene	E Excluded	440	ug/Kgdrywt	1	20	25.	4.2	12.
Indeno (1,2,3-cd) pyrene		250	ug/Kgdrywt	1	20	25.	2.4	12.
Dibenzo (a,h) anthracene		86.	ug/Kgdrywt	1	20	25.	2.3	12.
Benzo(g,h,i)perylene		240	ug/Kgdrywt	1	20	25.	2.5	12.
2-Methylnaphthalene-D10		50.1	%					
Fluorene-D10		51.8	%					
Pyrene-D10		99.3	%					
2,4-Dibromophenol		64.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13DL
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 74.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U Exclude-DL	380	ug/Kgdrywt	6	100	750	46.	380
bis(2-Chloroethyl)ether	U	75.	ug/Kgdrywt	6	20	150	13.	75.
2-Chlorophenol	U	380	ug/Kgdrywt	6	100	750	40.	380
2-Methylphenol	U	380	ug/Kgdrywt	6	100	750	64.	380
3&4-Methylphenol	U	380	ug/Kgdrywt	6	100	750	75.	380
n-Nitroso-di-n-propylamine	U	75.	ug/Kgdrywt	6	20	150	14.	75.
Nitrobenzene	U	75.	ug/Kgdrywt	6	20	150	36.	75.
2,4-Dimethylphenol	U	75.	ug/Kgdrywt	6	20	150	24.	75.
2,4-Dichlorophenol	U	75.	ug/Kgdrywt	6	20	150	17.	75.
Naphthalene	U	75.	ug/Kgdrywt	6	20	150	20.	75.
Hexachlorobutadiene	U	75.	ug/Kgdrywt	6	20	150	17.	75.
2-Methylnaphthalene	U	75.	ug/Kgdrywt	6	20	150	17.	75.
Hexachlorocyclopentadiene	U	75.	ug/Kgdrywt	6	20	150	11.	75.
2,4,6-Trichlorophenol	U	380	ug/Kgdrywt	6	100	750	25.	380
2,4,5-Trichlorophenol	U	380	ug/Kgdrywt	6	100	750	19.	380
Dimethyl phthalate	U	75.	ug/Kgdrywt	6	20	150	10.	75.
Acenaphthylene	U	75.	ug/Kgdrywt	6	20	150	9.0	75.
Acenaphthene	J	27.	ug/Kgdrywt	6	20	150	11.	75.
4-Nitrophenol	U	380	ug/Kgdrywt	6	100	750	60.	380
2,4-Dinitrotoluene	U	75.	ug/Kgdrywt	6	20	150	53.	75.
Fluorene	J	60.	ug/Kgdrywt	6	20	150	24.	75.
4,6-Dinitro-2-methylphenol	U	1100	ug/Kgdrywt	6	310	2300	750	1100
Hexachlorobenzene	U	75.	ug/Kgdrywt	6	20	150	14.	75.
Atrazine	J	38.	ug/Kgdrywt	6	20	150	7.5	75.
Pentachlorophenol	U	380	ug/Kgdrywt	6	100	750	100	380
Phenanthrene		680	ug/Kgdrywt	6	20	150	14.	75.
Anthracene	J Exclude-DL	130	ug/Kgdrywt	6	20	150	9.0	75.
Fluoranthene		1000	ug/Kgdrywt	6	20	150	14.	75.
Pyrene		780	ug/Kgdrywt	6	20	150	16.	75.
3,3'-Dichlorobenzidine	U LL-BSL	75.	ug/Kgdrywt	6	20	150	23.	75.
Benzo (a) anthracene	B-MBL	530	ug/Kgdrywt	6	20	150	14.	75.
Chrysene		470	ug/Kgdrywt	6	20	150	13.	75.
bis(2-Ethylhexyl)phthalate	U LL-BSL	380	ug/Kgdrywt	6	100	750	240	380
Di-n-octylphthalate	U LL-BSL	380	ug/Kgdrywt	6	100	750	350	380
Benzo (b) Fluoranthene		710	ug/Kgdrywt	6	20	150	18.	75.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13DL
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 74.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	Exclude-DL	230	ug/Kgdrywt	6	20	150	23.	75.
Benzo(a)pyrene		420	ug/Kgdrywt	6	20	150	25.	75.
Indeno (1,2,3-cd) pyrene	Exclude-DL	210	ug/Kgdrywt	6	20	150	14.	75.
Dibenzo (a,h) anthracene	J	79.	ug/Kgdrywt	6	20	150	14.	75.
Benzo(g,h,i)perylene		210	ug/Kgdrywt	6	20	150	15.	75.
2-Methylnaphthalene-D10		75.5	%					
Fluorene-D10	*	19.0	%					
Pyrene-D10		74.0	%					
2,4-Dibromophenol		41.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 46.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	110	ug/Kgdrywt	1	100	220	13.	110
bis(2-Chloroethyl)ether	U	22.	ug/Kgdrywt	1	20	43.	3.7	22.
2-Chlorophenol	U	110	ug/Kgdrywt	1	100	220	11.	110
2-Methylphenol	U	110	ug/Kgdrywt	1	100	220	18.	110
3&4-Methylphenol	U	110	ug/Kgdrywt	1	100	220	21.	110
n-Nitroso-di-n-propylamine	U	22.	ug/Kgdrywt	1	20	43.	4.1	22.
Nitrobenzene	U	22.	ug/Kgdrywt	1	20	43.	10.	22.
2,4-Dimethylphenol	UR-BSL	22.	ug/Kgdrywt	1	20	43.	6.9	22.
2,4-Dichlorophenol	J-CCL	23.	ug/Kgdrywt	1	20	43.	4.8	22.
Naphthalene	UUL-BSL	22.	ug/Kgdrywt	1	20	43.	5.6	22.
Hexachlorobutadiene	U	22.	ug/Kgdrywt	1	20	43.	5.0	22.
2-Methylnaphthalene	JL-BSL	6.2	ug/Kgdrywt	1	20	43.	4.8	22.
Hexachlorocyclopentadiene	U	22.	ug/Kgdrywt	1	20	43.	3.2	22.
2,4,6-Trichlorophenol	J	24.	ug/Kgdrywt	1	100	220	7.1	110
2,4,5-Trichlorophenol	U	110	ug/Kgdrywt	1	100	220	5.4	110
Dimethyl phthalate	JB-MBL	4.6	ug/Kgdrywt	1	20	43.	3.0	22.
Acenaphthylene	J	9.0	ug/Kgdrywt	1	20	43.	2.6	22.
Acenaphthene	J	14.	ug/Kgdrywt	1	20	43.	3.2	22.
4-Nitrophenol	UUJ-ICB	110	ug/Kgdrywt	1	100	220	17.	110
2,4-Dinitrotoluene	U	22.	ug/Kgdrywt	1	20	43.	15.	22.
Fluorene	J	20.	ug/Kgdrywt	1	20	43.	6.9	22.
4,6-Dinitro-2-methylphenol	U	320	ug/Kgdrywt	1	310	670	220	320
Hexachlorobenzene	U	22.	ug/Kgdrywt	1	20	43.	3.9	22.
Atrazine	J	4.3	ug/Kgdrywt	1	20	43.	2.2	22.
Pentachlorophenol	UUL-BSL	110	ug/Kgdrywt	1	100	220	30.	110
Phenanthrene		140	ug/Kgdrywt	1	20	43.	3.9	22.
Anthracene	J	23.	ug/Kgdrywt	1	20	43.	2.6	22.
Fluoranthene		240	ug/Kgdrywt	1	20	43.	3.9	22.
Pyrene		270	ug/Kgdrywt	1	20	43.	4.5	22.
3,3'-Dichlorobenzidine	UR-BSL	22.	ug/Kgdrywt	1	20	43.	6.5	22.
Benzo (a) anthracene	B-MBL	130	ug/Kgdrywt	1	20	43.	4.1	22.
Chrysene		150	ug/Kgdrywt	1	20	43.	3.7	22.
bis(2-Ethylhexyl)phthalate	JB-MBL	97.	ug/Kgdrywt	1	100	220	69.	110
Di-n-octylphthalate	U	110	ug/Kgdrywt	1	100	220	99.	110
Benzo (b) Fluoranthene		280	ug/Kgdrywt	1	20	43.	5.2	22.

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HK 12/27/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 46.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene		88.	ug/Kgdrywt	1	20	43.	6.7	22.
Benzo(a)pyrene		160	ug/Kgdrywt	1	20	43.	7.1	22.
Indeno (1,2,3-cd) pyrene		140	ug/Kgdrywt	1	20	43.	4.1	22.
Dibenzo (a,h) anthracene		50.	ug/Kgdrywt	1	20	43.	3.9	22.
Benzo(g,h,i)perylene		130	ug/Kgdrywt	1	20	43.	4.3	22.
2-Methylnaphthalene-D10		56.4	%					
Fluorene-D10		48.0	%					
Pyrene-D10		86.1	%					
2,4-Dibromophenol		59.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 72.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	67.	ug/Kgdrywt	1	100	130	8.2	67.
bis(2-Chloroethyl)ether	U	13.	ug/Kgdrywt	1	20	27.	2.3	13.
2-Chlorophenol	U	67.	ug/Kgdrywt	1	100	130	7.1	67.
2-Methylphenol	U	67.	ug/Kgdrywt	1	100	130	11.	67.
3&4-Methylphenol	J	18.	ug/Kgdrywt	1	100	130	13.	67.
n-Nitroso-di-n-propylamine	U	13.	ug/Kgdrywt	1	20	27.	2.5	13.
Nitrobenzene	U	13.	ug/Kgdrywt	1	20	27.	6.4	13.
2,4-Dimethylphenol	U BSL	13.	ug/Kgdrywt	1	20	27.	4.3	13.
2,4-Dichlorophenol	U	13.	ug/Kgdrywt	1	20	27.	2.9	13.
Naphthalene	U BSL	13.	ug/Kgdrywt	1	20	27.	3.5	13.
Hexachlorobutadiene	U	13.	ug/Kgdrywt	1	20	27.	3.1	13.
2-Methylnaphthalene	U BSL	13.	ug/Kgdrywt	1	20	27.	2.9	13.
Hexachlorocyclopentadiene	U MSL	13.	ug/Kgdrywt	1	20	27.	2.0	13.
2,4,6-Trichlorophenol	U	67.	ug/Kgdrywt	1	100	130	4.4	67.
2,4,5-Trichlorophenol	U	67.	ug/Kgdrywt	1	100	130	3.3	67.
Dimethyl phthalate	J MB	2.3	ug/Kgdrywt	1	20	27.	1.9	13.
Acenaphthylene	J	2.4	ug/Kgdrywt	1	20	27.	1.6	13.
Acenaphthene	U	13.	ug/Kgdrywt	1	20	27.	2.0	13.
4-Nitrophenol	U LCS-LCB	67.	ug/Kgdrywt	1	100	130	11.	67.
2,4-Dinitrotoluene	U	13.	ug/Kgdrywt	1	20	27.	9.4	13.
Fluorene	U	13.	ug/Kgdrywt	1	20	27.	4.3	13.
4,6-Dinitro-2-methylphenol	U	200	ug/Kgdrywt	1	310	410	130	200
Hexachlorobenzene	U	13.	ug/Kgdrywt	1	20	27.	2.4	13.
Atrazine	U	13.	ug/Kgdrywt	1	20	27.	1.3	13.
Pentachlorophenol	U BSL	67.	ug/Kgdrywt	1	100	130	19.	67.
Phenanthrene	J	18.	ug/Kgdrywt	1	20	27.	2.4	13.
Anthracene	J	3.7	ug/Kgdrywt	1	20	27.	1.6	13.
Fluoranthene		36.	ug/Kgdrywt	1	20	27.	2.4	13.
Pyrene		38.	ug/Kgdrywt	1	20	27.	2.8	13.
3,3'-Dichlorobenzidine	U BSL	13.	ug/Kgdrywt	1	20	27.	4.0	13.
Benzo (a) anthracene	J MB	25.	ug/Kgdrywt	1	20	27.	2.5	13.
Chrysene	J	22.	ug/Kgdrywt	1	20	27.	2.3	13.
bis(2-Ethylhexyl)phthalate	J MB	45.	ug/Kgdrywt	1	100	130	43.	67.
Di-n-octylphthalate	U	67.	ug/Kgdrywt	1	100	130	61.	67.
Benzo (b) Fluoranthene		33.	ug/Kgdrywt	1	20	27.	3.2	13.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 72.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	11.	ug/Kgdrywt	1	20	27.	4.1	13.
Benzo(a)pyrene	J	24.	ug/Kgdrywt	1	20	27.	4.4	13.
Indeno (1,2,3-cd) pyrene	J	16.	ug/Kgdrywt	1	20	27.	2.5	13.
Dibenzo (a,h) anthracene	J	4.7	ug/Kgdrywt	1	20	27.	2.4	13.
Benzo(g,h,i)perylene	J	18.	ug/Kgdrywt	1	20	27.	2.7	13.
2-Methylnaphthalene-D10		48.0	%					
Fluorene-D10		30.8	%					
Pyrene-D10		89.8	%					
2,4-Dibromophenol		46.5	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 66.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	72.	ug/Kgdrywt	1	100	140	8.8	72.
bis(2-Chloroethyl)ether	U	14.	ug/Kgdrywt	1	20	29.	2.5	14.
2-Chlorophenol	U	72.	ug/Kgdrywt	1	100	140	7.7	72.
2-Methylphenol	U	72.	ug/Kgdrywt	1	100	140	12.	72.
3&4-Methylphenol	J	20.	ug/Kgdrywt	1	100	140	14.	72.
n-Nitroso-di-n-propylamine	U	14.	ug/Kgdrywt	1	20	29.	2.8	14.
Nitrobenzene	U	14.	ug/Kgdrywt	1	20	29.	7.0	14.
2,4-Dimethylphenol	UR-BSL	14.	ug/Kgdrywt	1	20	29.	4.6	14.
2,4-Dichlorophenol	U	14.	ug/Kgdrywt	1	20	29.	3.2	14.
Naphthalene	U-BSL	14.	ug/Kgdrywt	1	20	29.	3.8	14.
Hexachlorobutadiene	U	14.	ug/Kgdrywt	1	20	29.	3.3	14.
2-Methylnaphthalene	U-BSL	14.	ug/Kgdrywt	1	20	29.	3.2	14.
Hexachlorocyclopentadiene	U	14.	ug/Kgdrywt	1	20	29.	2.2	14.
2,4,6-Trichlorophenol	U	72.	ug/Kgdrywt	1	100	140	4.8	72.
2,4,5-Trichlorophenol	U	72.	ug/Kgdrywt	1	100	140	3.6	72.
Dimethyl phthalate	J-B-MBL	2.2	ug/Kgdrywt	1	20	29.	2.0	14.
Acenaphthylene	U	14.	ug/Kgdrywt	1	20	29.	1.7	14.
Acenaphthene	U	14.	ug/Kgdrywt	1	20	29.	2.2	14.
4-Nitrophenol	U-UJ-ICB	72.	ug/Kgdrywt	1	100	140	12.	72.
2,4-Dinitrotoluene	U	14.	ug/Kgdrywt	1	20	29.	10.	14.
Fluorene	U	14.	ug/Kgdrywt	1	20	29.	4.6	14.
4,6-Dinitro-2-methylphenol	U	220	ug/Kgdrywt	1	310	450	140	220
Hexachlorobenzene	U	14.	ug/Kgdrywt	1	20	29.	2.6	14.
Atrazine	U	14.	ug/Kgdrywt	1	20	29.	1.4	14.
Pentachlorophenol	U-BSL	72.	ug/Kgdrywt	1	100	140	20.	72.
Phenanthrene	J	2.9	ug/Kgdrywt	1	20	29.	2.6	14.
Anthracene	U	14.	ug/Kgdrywt	1	20	29.	1.7	14.
Fluoranthene	J	7.5	ug/Kgdrywt	1	20	29.	2.6	14.
Pyrene	J	7.7	ug/Kgdrywt	1	20	29.	3.0	14.
3,3'-Dichlorobenzidine	UR-BSL	14.	ug/Kgdrywt	1	20	29.	4.3	14.
Benzo (a) anthracene	J-B-MBL	8.6	ug/Kgdrywt	1	20	29.	2.8	14.
Chrysene	J	5.1	ug/Kgdrywt	1	20	29.	2.5	14.
bis(2-Ethylhexyl)phthalate	E-Exclude-LB	400	ug/Kgdrywt	1	100	140	46.	72.
Di-n-octylphthalate	U	72.	ug/Kgdrywt	1	100	140	67.	72.
Benzo (b) Fluoranthene	J	6.5	ug/Kgdrywt	1	20	29.	3.5	14.

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HK 12/27/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 23-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 66.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U	14.	ug/Kgdrywt	1	20	29.	4.5	14.
Benzo(a)pyrene	J	4.9	ug/Kgdrywt	1	20	29.	4.8	14.
Indeno (1,2,3-cd) pyrene	U	14.	ug/Kgdrywt	1	20	29.	2.8	14.
Dibenzo (a,h) anthracene	U	14.	ug/Kgdrywt	1	20	29.	2.6	14.
Benzo(g,h,i)perylene	U	14.	ug/Kgdrywt	1	20	29.	2.9	14.
2-Methylnaphthalene-D10		52.6	%					
Fluorene-D10		30.2	%					
Pyrene-D10		87.5	%					
2,4-Dibromophenol		49.3	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16DL
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 66.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	140	ug/Kgdrywt	2	100	290	18.	140
bis(2-Chloroethyl)ether	U	29.	ug/Kgdrywt	2	20	58.	4.9	29.
2-Chlorophenol	U	140	ug/Kgdrywt	2	100	290	15.	140
2-Methylphenol	U	140	ug/Kgdrywt	2	100	290	25.	140
3&4-Methylphenol	U	140	ug/Kgdrywt	2	100	290	29.	140
n-Nitroso-di-n-propylamine	U	29.	ug/Kgdrywt	2	20	58.	5.5	29.
Nitrobenzene	U	29.	ug/Kgdrywt	2	20	58.	14.	29.
2,4-Dimethylphenol	U	29.	ug/Kgdrywt	2	20	58.	9.3	29.
2,4-Dichlorophenol	U	29.	ug/Kgdrywt	2	20	58.	6.4	29.
Naphthalene	U	29.	ug/Kgdrywt	2	20	58.	7.5	29.
Hexachlorobutadiene	U	29.	ug/Kgdrywt	2	20	58.	6.7	29.
2-Methylnaphthalene	U	29.	ug/Kgdrywt	2	20	58.	6.4	29.
Hexachlorocyclopentadiene	U	29.	ug/Kgdrywt	2	20	58.	4.3	29.
2,4,6-Trichlorophenol	U	140	ug/Kgdrywt	2	100	290	9.6	140
2,4,5-Trichlorophenol	U	140	ug/Kgdrywt	2	100	290	7.2	140
Dimethyl phthalate	U	29.	ug/Kgdrywt	2	20	58.	4.0	29.
Acenaphthylene	U	29.	ug/Kgdrywt	2	20	58.	3.5	29.
Acenaphthene	U	29.	ug/Kgdrywt	2	20	58.	4.3	29.
4-Nitrophenol	U	140	ug/Kgdrywt	2	100	290	23.	140
2,4-Dinitrotoluene	U	29.	ug/Kgdrywt	2	20	58.	20.	29.
Fluorene	U	29.	ug/Kgdrywt	2	20	58.	9.3	29.
4,6-Dinitro-2-methylphenol	U	430	ug/Kgdrywt	2	310	900	290	430
Hexachlorobenzene	U	29.	ug/Kgdrywt	2	20	58.	5.2	29.
Atrazine	J	14.	ug/Kgdrywt	2	20	58.	2.9	29.
Pentachlorophenol	U	140	ug/Kgdrywt	2	100	290	40.	140
Phenanthrene	U	29.	ug/Kgdrywt	2	20	58.	5.2	29.
Anthracene	U	29.	ug/Kgdrywt	2	20	58.	3.5	29.
Fluoranthene	J	19.	ug/Kgdrywt	2	20	58.	5.2	29.
Pyrene	J	6.2	ug/Kgdrywt	2	20	58.	6.1	29.
3,3'-Dichlorobenzidine	U	29.	ug/Kgdrywt	2	20	58.	8.7	29.
Benzo (a) anthracene	J	24.	ug/Kgdrywt	2	20	58.	5.5	29.
Chrysene	U	29.	ug/Kgdrywt	2	20	58.	4.9	29.
bis(2-Ethylhexyl)phthalate	B-MBL	360	ug/Kgdrywt	2	100	290	93.	140
Di-n-octylphthalate	U	140	ug/Kgdrywt	2	100	290	130	140
Benzo (b) Fluoranthene	U	29.	ug/Kgdrywt	2	20	58.	7.0	29.

Exclude-D

Exclude-D

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16DL
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 66.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	U Exclude-DL	29.	ug/Kgdrywt	2	20	58.	9.0	29.
Benzo(a)pyrene	J	14.	ug/Kgdrywt	2	20	58.	9.6	29.
Indeno (1,2,3-cd) pyrene	U	29.	ug/Kgdrywt	2	20	58.	5.5	29.
Dibenzo (a,h) anthracene	U	29.	ug/Kgdrywt	2	20	58.	5.2	29.
Benzo(g,h,i)perylene	U	29.	ug/Kgdrywt	2	20	58.	5.8	29.
2-Methylnaphthalene-D10		59.4	%					
Fluorene-D10		28.7	%					
Pyrene-D10		60.9	%					
2,4-Dibromophenol		54.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 73.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Phenol	U	66.	ug/Kgdrywt	1	100	130	8.0	66.
bis(2-Chloroethyl)ether	U	13.	ug/Kgdrywt	1	20	26.	2.2	13.
2-Chlorophenol	U	66.	ug/Kgdrywt	1	100	130	7.0	66.
2-Methylphenol	U	66.	ug/Kgdrywt	1	100	130	11.	66.
3&4-Methylphenol	U	66.	ug/Kgdrywt	1	100	130	13.	66.
n-Nitroso-di-n-propylamine	U	13.	ug/Kgdrywt	1	20	26.	2.5	13.
Nitrobenzene	U	13.	ug/Kgdrywt	1	20	26.	6.3	13.
2,4-Dimethylphenol	U R-BSL	13.	ug/Kgdrywt	1	20	26.	4.2	13.
2,4-Dichlorophenol	U	13.	ug/Kgdrywt	1	20	26.	2.9	13.
Naphthalene	U UL-BSL	13.	ug/Kgdrywt	1	20	26.	3.4	13.
Hexachlorobutadiene	U	13.	ug/Kgdrywt	1	20	26.	3.0	13.
2-Methylnaphthalene	U UL-BSL	13.	ug/Kgdrywt	1	20	26.	2.9	13.
Hexachlorocyclopentadiene	U	13.	ug/Kgdrywt	1	20	26.	2.0	13.
2,4,6-Trichlorophenol	U	66.	ug/Kgdrywt	1	100	130	4.3	66.
2,4,5-Trichlorophenol	U	66.	ug/Kgdrywt	1	100	130	3.3	66.
Dimethyl phthalate	U	13.	ug/Kgdrywt	1	20	26.	1.8	13.
Acenaphthylene	U	13.	ug/Kgdrywt	1	20	26.	1.6	13.
Acenaphthene	U	13.	ug/Kgdrywt	1	20	26.	2.0	13.
4-Nitrophenol	U	66.	ug/Kgdrywt	1	100	130	10.	66.
2,4-Dinitrotoluene	U	13.	ug/Kgdrywt	1	20	26.	9.2	13.
Fluorene	U	13.	ug/Kgdrywt	1	20	26.	4.2	13.
4,6-Dinitro-2-methylphenol	U	200	ug/Kgdrywt	1	310	410	130	200
Hexachlorobenzene	U	13.	ug/Kgdrywt	1	20	26.	2.4	13.
Atrazine	U	13.	ug/Kgdrywt	1	20	26.	1.3	13.
Pentachlorophenol	U UL-BSL	66.	ug/Kgdrywt	1	100	130	18.	66.
Phenanthrene	J	7.4	ug/Kgdrywt	1	20	26.	2.4	13.
Anthracene	U	13.	ug/Kgdrywt	1	20	26.	1.6	13.
Fluoranthene	J	20.	ug/Kgdrywt	1	20	26.	2.4	13.
Pyrene	J	14.	ug/Kgdrywt	1	20	26.	2.8	13.
3,3'-Dichlorobenzidine	U R-BSL	13.	ug/Kgdrywt	1	20	26.	3.9	13.
Benzo (a) anthracene	J B-MBL	16.	ug/Kgdrywt	1	20	26.	2.5	13.
Chrysene	J	8.2	ug/Kgdrywt	1	20	26.	2.2	13.
bis(2-Ethylhexyl)phthalate	J B-MBL	87.	ug/Kgdrywt	1	100	130	42.	66.
Di-n-octylphthalate	U	66.	ug/Kgdrywt	1	100	130	60.	66.
Benzo (b) Fluoranthene	J	15.	ug/Kgdrywt	1	20	26.	3.2	13.

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83127

Analysis Date: 26-OCT-10
Analyst: JCG
Analysis Method: SW846 M8270C
Matrix: SL
% Solids: 73.
Report Date: 28-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzo(k)fluoranthene	J	4.9	ug/Kgdrywt	1	20	26.	4.1	13.
Benzo(a)pyrene	J	13.	ug/Kgdrywt	1	20	26.	4.3	13.
Indeno (1,2,3-cd) pyrene	J	5.4	ug/Kgdrywt	1	20	26.	2.5	13.
Dibenzo (a,h) anthracene	U	13.	ug/Kgdrywt	1	20	26.	2.4	13.
Benzo(g,h,i)perylene	J	5.6	ug/Kgdrywt	1	20	26.	2.6	13.
2-Methylnaphthalene-D10		66.3	%					
Fluorene-D10		30.8	%					
Pyrene-D10		73.5	%					
2,4-Dibromophenol		55.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 76.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U R- BSL	310	ug/Kgdrywt	1	330	420	150	310
2,2'-Oxybis(1-Chloropropane)	U	310	ug/Kgdrywt	1	330	420	110	310
Acetophenone	U	310	ug/Kgdrywt	1	330	420	220	310
Hexachloroethane	U	310	ug/Kgdrywt	1	330	420	120	310
Isophorone	U	310	ug/Kgdrywt	1	330	420	94.	310
2-Nitrophenol	U	310	ug/Kgdrywt	1	330	420	210	310
Bis(2-Chloroethoxy) Methane	U	310	ug/Kgdrywt	1	330	420	120	310
4-Chloroaniline	U	310	ug/Kgdrywt	1	330	420	150	310
Caprolactam	U	310	ug/Kgdrywt	1	330	420	180	310
4-Chloro-3-Methylphenol	U	310	ug/Kgdrywt	1	330	420	210	310
1,1'-Biphenyl	U	310	ug/Kgdrywt	1	330	420	92.	310
2-Chloronaphthalene	U	310	ug/Kgdrywt	1	330	420	110	310
2-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	94.	770
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	310	ug/Kgdrywt	1	330	420	99.	310
3-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	120	770
2,4-Dinitrophenol	U	770	ug/Kgdrywt	1	820	1000	470	770
Dibenzofuran	U	310	ug/Kgdrywt	1	330	420	99.	310
Diethylphthalate	U	310	ug/Kgdrywt	1	330	420	100	310
4-Chlorophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	420	98.	310
4-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	170	770
N-Nitrosodiphenylamine	U	310	ug/Kgdrywt	1	330	420	280	310
4-Bromophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	420	110	310
Carbazole	U	310	ug/Kgdrywt	1	330	420	140	310
Di-N-Butylphthalate	U	310	ug/Kgdrywt	1	330	420	130	310
Butylbenzylphthalate	U	310	ug/Kgdrywt	1	330	420	120	310
2-Fluorophenol		63.0	%					
Phenol-D6		74.9	%					
Nitrobenzene-d5		61.9	%					
2-Fluorobiphenyl		69.0	%					
2,4,6-Tribromophenol		79.5	%					
Terphenyl-d14		75.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: IS66DP251011 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 83.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	UR-BSL	290	ug/Kgdrywt	1	330	390	140	290
2,2'-Oxybis(1-Chloropropane)	U	290	ug/Kgdrywt	1	330	390	100	290
Acetophenone	U	290	ug/Kgdrywt	1	330	390	210	290
Hexachloroethane	U	290	ug/Kgdrywt	1	330	390	110	290
Isophorone	U	290	ug/Kgdrywt	1	330	390	89.	290
2-Nitrophenol	U	290	ug/Kgdrywt	1	330	390	200	290
Bis(2-Chloroethoxy) Methane	U	290	ug/Kgdrywt	1	330	390	110	290
4-Chloroaniline	U	290	ug/Kgdrywt	1	330	390	140	290
Caprolactam	U	290	ug/Kgdrywt	1	330	390	170	290
4-Chloro-3-Methylphenol	U	290	ug/Kgdrywt	1	330	390	200	290
1,1'-Biphenyl	U	290	ug/Kgdrywt	1	330	390	86.	290
2-Chloronaphthalene	U	290	ug/Kgdrywt	1	330	390	100	290
2-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	89.	730
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	290	ug/Kgdrywt	1	330	390	93.	290
3-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	110	730
2,4-Dinitrophenol	U	730	ug/Kgdrywt	1	820	970	440	730
Dibenzofuran	U	290	ug/Kgdrywt	1	330	390	93.	290
Diethylphthalate	U	290	ug/Kgdrywt	1	330	390	94.	290
4-Chlorophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	92.	290
4-Nitroaniline	U	730	ug/Kgdrywt	1	820	970	160	730
N-Nitrosodiphenylamine	U	290	ug/Kgdrywt	1	330	390	260	290
4-Bromophenyl-Phenylether	U	290	ug/Kgdrywt	1	330	390	100	290
Carbazole	U	290	ug/Kgdrywt	1	330	390	130	290
Di-N-Butylphthalate	U	290	ug/Kgdrywt	1	330	390	120	290
Butylbenzylphthalate	U	290	ug/Kgdrywt	1	330	390	110	290
2-Fluorophenol		47.5	%					
Phenol-D6		52.3	%					
Nitrobenzene-d5		46.0	%					
2-Fluorobiphenyl		50.1	%					
2,4,6-Tribromophenol		52.0	%					
Terphenyl-d14		62.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 82.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U UJ2-BSL	280	ug/Kgdrywt	1	330	380	140	280
2,2'-Oxybis(1-Chloropropane)	U	280	ug/Kgdrywt	1	330	380	100	280
Acetophenone	U	280	ug/Kgdrywt	1	330	380	200	280
Hexachloroethane	U	280	ug/Kgdrywt	1	330	380	110	280
Isophorone	U	280	ug/Kgdrywt	1	330	380	86.	280
2-Nitrophenol	U	280	ug/Kgdrywt	1	330	380	190	280
Bis(2-Chloroethoxy) Methane	U	280	ug/Kgdrywt	1	330	380	110	280
4-Chloroaniline	U	280	ug/Kgdrywt	1	330	380	140	280
Caprolactam	U	280	ug/Kgdrywt	1	330	380	160	280
4-Chloro-3-Methylphenol	U	280	ug/Kgdrywt	1	330	380	190	280
1,1'-Biphenyl	U	280	ug/Kgdrywt	1	330	380	83.	280
2-Chloronaphthalene	U	280	ug/Kgdrywt	1	330	380	99.	280
2-Nitroaniline	U	700	ug/Kgdrywt	1	820	940	86.	700
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	280	ug/Kgdrywt	1	330	380	90.	280
3-Nitroaniline	U	700	ug/Kgdrywt	1	820	940	110	700
2,4-Dinitrophenol	U	700	ug/Kgdrywt	1	820	940	430	700
Dibenzofuran	U	280	ug/Kgdrywt	1	330	380	90.	280
Diethylphthalate	U	280	ug/Kgdrywt	1	330	380	91.	280
4-Chlorophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	89.	280
4-Nitroaniline	U	700	ug/Kgdrywt	1	820	940	150	700
N-Nitrosodiphenylamine	U	280	ug/Kgdrywt	1	330	380	250	280
4-Bromophenyl-Phenylether	U	280	ug/Kgdrywt	1	330	380	97.	280
Carbazole	U	280	ug/Kgdrywt	1	330	380	130	280
Di-N-Butylphthalate	U	280	ug/Kgdrywt	1	330	380	120	280
Butylbenzylphthalate	U	280	ug/Kgdrywt	1	330	380	110	280
2-Fluorophenol		67.9	%					
Phenol-D6		76.6	%					
Nitrobenzene-d5		67.4	%					
2-Fluorobiphenyl		76.3	%					
2,4,6-Tribromophenol		70.0	%					
Terphenyl-d14		77.9	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 95.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ UR-BSL	230	ug/Kgdrywt	1	330	310	110	230
2,2'-Oxybis(1-Chloropropane)	U	230	ug/Kgdrywt	1	330	310	83.	230
Acetophenone	U	230	ug/Kgdrywt	1	330	310	160	230
Hexachloroethane	U	230	ug/Kgdrywt	1	330	310	89.	230
Isophorone	U	230	ug/Kgdrywt	1	330	310	70.	230
2-Nitrophenol	U	230	ug/Kgdrywt	1	330	310	160	230
Bis(2-Chloroethoxy) Methane	U	230	ug/Kgdrywt	1	330	310	89.	230
4-Chloroaniline	U	230	ug/Kgdrywt	1	330	310	110	230
Caprolactam	U	230	ug/Kgdrywt	1	330	310	130	230
4-Chloro-3-Methylphenol	U	230	ug/Kgdrywt	1	330	310	150	230
1,1'-Biphenyl	U	230	ug/Kgdrywt	1	330	310	68.	230
2-Chloronaphthalene	U	230	ug/Kgdrywt	1	330	310	81.	230
2-Nitroaniline	U	570	ug/Kgdrywt	1	820	760	70.	570
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	230	ug/Kgdrywt	1	330	310	74.	230
3-Nitroaniline	U	570	ug/Kgdrywt	1	820	760	87.	570
2,4-Dinitrophenol	U	570	ug/Kgdrywt	1	820	760	350	570
Dibenzofuran	U	230	ug/Kgdrywt	1	330	310	74.	230
Diethylphthalate	U	230	ug/Kgdrywt	1	330	310	74.	230
4-Chlorophenyl-Phenylether	U	230	ug/Kgdrywt	1	330	310	72.	230
4-Nitroaniline	U	570	ug/Kgdrywt	1	820	760	120	570
N-Nitrosodiphenylamine	U	230	ug/Kgdrywt	1	330	310	200	230
4-Bromophenyl-Phenylether	U	230	ug/Kgdrywt	1	330	310	79.	230
Carbazole	U	230	ug/Kgdrywt	1	330	310	100	230
Di-N-Butylphthalate	U	230	ug/Kgdrywt	1	330	310	94.	230
Butylbenzylphthalate	U	230	ug/Kgdrywt	1	330	310	86.	230
2-Fluorophenol		61.6	%					
Phenol-D6		67.1	%					
Nitrobenzene-d5		62.4	%					
2-Fluorobiphenyl		65.8	%					
2,4,6-Tribromophenol		62.6	%					
Terphenyl-d14		73.5	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83072

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	J CJ-2S	1.6	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.3	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.9	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	4.0	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.7	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U UJ-BSL	7.6	ug/L	1	10	10.	2.8	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.5	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.1	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.41	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.7	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.3	7.6
Hexachlorocyclopentadiene	U R-BSL	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.8	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	3.0	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.8	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.6	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83072

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		31.4	%					
Phenol-D6		48.3	%					
Nitrobenzene-d5		61.6	%					
2-Fluorobiphenyl		71.6	%					
2,4,6-Tribromophenol		41.7	%					
Terphenyl-d14		86.5	%					

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REISSUE

HK 12/26/2010

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7RE
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 11-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83296

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	J	Exclude RE 7.3	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.3	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.9	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	4.0	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.7	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U	7.6	ug/L	1	10	10.	2.8	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.5	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.1	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.41	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.7	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.3	7.6
Hexachlorocyclopentadiene	U	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	26.	3.7	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.8	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	3.0	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	26.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.8	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.6	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7RE
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 11-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83296

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U EXCLUDE RE	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		56.4	%					
Phenol-D6		37.5	%					
Nitrobenzene-d5		78.1	%					
2-Fluorobiphenyl		93.2	%					
2,4,6-Tribromophenol		91.0	%					
Terphenyl-d14		91.8	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83072

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	J-J-2S	1.6	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.2	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.8	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	3.9	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.6	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U-LS-BSL	7.6	ug/L	1	10	10.	2.7	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.4	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.0	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.40	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.6	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.2	7.6
Hexachlorocyclopentadiene	U-R-BSL	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	25.	3.6	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.7	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	2.9	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	25.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.7	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.5	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 06-OCT-10
Extracted By: WS
Extraction Method: SW846 3520
Lab Prep Batch: WG83072

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		81.8	%					
Phenol-D6		92.0	%					
Nitrobenzene-d5		81.5	%					
2-Fluorobiphenyl		91.0	%					
2,4,6-Tribromophenol		86.4	%					
Terphenyl-d14		88.4	%					

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Cert No EB7604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8RE
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 11-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83296

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	J EXCLUDE RE	1.2	ug/L	1	10	10.	1.0	7.6
Phenol	U	7.6	ug/L	1	10	10.	1.8	7.6
2-Chlorophenol	U	7.6	ug/L	1	10	10.	3.2	7.6
2-Methylphenol	U	7.6	ug/L	1	10	10.	3.8	7.6
Acetophenone	U	7.6	ug/L	1	10	10.	3.9	7.6
3&4-Methylphenol	U	7.6	ug/L	1	10	10.	5.6	7.6
Isophorone	U	7.6	ug/L	1	10	10.	1.7	7.6
2-Nitrophenol	U	7.6	ug/L	1	10	10.	2.7	7.6
2,4-Dimethylphenol	U	7.6	ug/L	1	10	10.	4.4	7.6
Bis(2-Chloroethoxy) Methane	U	7.6	ug/L	1	10	10.	2.1	7.6
2,4-Dichlorophenol	U	7.6	ug/L	1	10	10.	3.0	7.6
4-Chloroaniline	U	7.6	ug/L	1	10	10.	1.9	7.6
Caprolactam	U	7.6	ug/L	1	10	10.	0.40	7.6
4-Chloro-3-Methylphenol	U	7.6	ug/L	1	10	10.	3.6	7.6
2-Methylnaphthalene	U	7.6	ug/L	1	10	10.	3.2	7.6
Hexachlorocyclopentadiene	U	7.6	ug/L	1	10	10.	1.2	7.6
2,4,5-Trichlorophenol	U	19.	ug/L	1	25	25.	3.6	19.
1,1'-Biphenyl	U	7.6	ug/L	1	10	10.	2.7	7.6
2-Chloronaphthalene	U	7.6	ug/L	1	10	10.	2.9	7.6
Dimethyl Phthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Acenaphthylene	U	7.6	ug/L	1	10	10.	1.5	7.6
3-Nitroaniline	U	19.	ug/L	1	25	25.	1.5	19.
Acenaphthene	U	7.6	ug/L	1	10	10.	1.5	7.6
Diethylphthalate	U	7.6	ug/L	1	10	10.	2.0	7.6
Fluorene	U	7.6	ug/L	1	10	10.	2.1	7.6
4-Chlorophenyl-Phenylether	U	7.6	ug/L	1	10	10.	2.2	7.6
N-Nitrosodiphenylamine	U	7.6	ug/L	1	10	10.	3.7	7.6
4-Bromophenyl-Phenylether	U	7.6	ug/L	1	10	10.	1.9	7.6
Phenanthrene	U	7.6	ug/L	1	10	10.	2.4	7.6
Anthracene	U	7.6	ug/L	1	10	10.	1.7	7.6
Carbazole	U	7.6	ug/L	1	10	10.	2.1	7.6
Di-N-Butylphthalate	U	7.6	ug/L	1	10	10.	2.5	7.6
Fluoranthene	U	7.6	ug/L	1	10	10.	2.4	7.6
Pyrene	U	7.6	ug/L	1	10	10.	1.9	7.6
Butylbenzylphthalate	U	7.6	ug/L	1	10	10.	1.9	7.6

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Katahdin Analytical Services A0000117

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8RE
Client ID: 1S66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 11-OCT-10
Extracted By: WS
Extraction Method: SW846 3510
Lab Prep Batch: WG83296

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: AQ
% Solids: NA
Report Date: 03-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Di-N-Octylphthalate	U	7.6	ug/L	1	10	10.	1.8	7.6
Benzo(g,h,i)perylene	U	7.6	ug/L	1	10	10.	1.5	7.6
2-Fluorophenol		50.2	%					
Phenol-D6		33.6	%					
Nitrobenzene-d5		70.0	%					
2-Fluorobiphenyl		87.3	%					
2,4,6-Tribromophenol		81.3	%					
Terphenyl-d14		95.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-9
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 50.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ JR-BSL	490	ug/Kgdrywt	1	330	650	240	490
2,2'-Oxybis(1-Chloropropane)	U	490	ug/Kgdrywt	1	330	650	180	490
Acetophenone	U	490	ug/Kgdrywt	1	330	650	350	490
Hexachloroethane	U	490	ug/Kgdrywt	1	330	650	190	490
Isophorone	U	490	ug/Kgdrywt	1	330	650	150	490
2-Nitrophenol	U	490	ug/Kgdrywt	1	330	650	330	490
Bis(2-Chloroethoxy) Methane	U	490	ug/Kgdrywt	1	330	650	190	490
4-Chloroaniline	U	490	ug/Kgdrywt	1	330	650	230	490
Caprolactam	U	490	ug/Kgdrywt	1	330	650	280	490
4-Chloro-3-Methylphenol	U	490	ug/Kgdrywt	1	330	650	330	490
1,1'-Biphenyl	U	490	ug/Kgdrywt	1	330	650	140	490
2-Chloronaphthalene	U	490	ug/Kgdrywt	1	330	650	170	490
2-Nitroaniline	U	1200	ug/Kgdrywt	1	820	1600	150	1200
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	490	ug/Kgdrywt	1	330	650	160	490
3-Nitroaniline	U	1200	ug/Kgdrywt	1	820	1600	180	1200
2,4-Dinitrophenol	U	1200	ug/Kgdrywt	1	820	1600	740	1200
Dibenzofuran	U	490	ug/Kgdrywt	1	330	650	160	490
Diethylphthalate	U	490	ug/Kgdrywt	1	330	650	160	490
4-Chlorophenyl-Phenylether	U	490	ug/Kgdrywt	1	330	650	150	490
4-Nitroaniline	U	1200	ug/Kgdrywt	1	820	1600	260	1200
N-Nitrosodiphenylamine	U	490	ug/Kgdrywt	1	330	650	430	490
4-Bromophenyl-Phenylether	U	490	ug/Kgdrywt	1	330	650	170	490
Carbazole	U	490	ug/Kgdrywt	1	330	650	220	490
Di-N-Butylphthalate	U	490	ug/Kgdrywt	1	330	650	200	490
Butylbenzylphthalate	U	490	ug/Kgdrywt	1	330	650	180	490
2-Fluorophenol		59.9	%					
Phenol-D6		67.6	%					
Nitrobenzene-d5		57.8	%					
2-Fluorobiphenyl		65.6	%					
2,4,6-Tribromophenol		78.7	%					
Terphenyl-d14		74.8	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-10
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 21-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 70.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R-BSL	340	ug/Kgdrywt	1	330	450	160	340
2,2'-Oxybis(1-Chloropropane)	U	340	ug/Kgdrywt	1	330	450	120	340
Acetophenone	U	340	ug/Kgdrywt	1	330	450	240	340
Hexachloroethane	U	340	ug/Kgdrywt	1	330	450	130	340
Isophorone	U	340	ug/Kgdrywt	1	330	450	100	340
2-Nitrophenol	U	340	ug/Kgdrywt	1	330	450	230	340
Bis(2-Chloroethoxy) Methane	U	340	ug/Kgdrywt	1	330	450	130	340
4-Chloroaniline	U	340	ug/Kgdrywt	1	330	450	160	340
Caprolactam	U	340	ug/Kgdrywt	1	330	450	200	340
4-Chloro-3-Methylphenol	U	340	ug/Kgdrywt	1	330	450	230	340
1,1'-Biphenyl	U	340	ug/Kgdrywt	1	330	450	100	340
2-Chloronaphthalene	U	340	ug/Kgdrywt	1	330	450	120	340
2-Nitroaniline	U	850	ug/Kgdrywt	1	820	1100	100	850
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	340	ug/Kgdrywt	1	330	450	110	340
3-Nitroaniline	U	850	ug/Kgdrywt	1	820	1100	130	850
2,4-Dinitrophenol	U	850	ug/Kgdrywt	1	820	1100	520	850
Dibenzofuran	U	340	ug/Kgdrywt	1	330	450	110	340
Diethylphthalate	U	340	ug/Kgdrywt	1	330	450	110	340
4-Chlorophenyl-Phenylether	U	340	ug/Kgdrywt	1	330	450	110	340
4-Nitroaniline	U	850	ug/Kgdrywt	1	820	1100	180	850
N-Nitrosodiphenylamine	U	340	ug/Kgdrywt	1	330	450	300	340
4-Bromophenyl-Phenylether	U	340	ug/Kgdrywt	1	330	450	120	340
Carbazole	U	340	ug/Kgdrywt	1	330	450	150	340
Di-N-Butylphthalate	U	340	ug/Kgdrywt	1	330	450	140	340
Butylbenzylphthalate	U	340	ug/Kgdrywt	1	330	450	130	340
2-Fluorophenol		62.5	%					
Phenol-D6		74.1	%					
Nitrobenzene-d5		60.4	%					
2-Fluorobiphenyl		68.7	%					
2,4,6-Tribromophenol		87.1	%					
Terphenyl-d14		83.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-11
Client ID: 1S66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 69.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R BSL	320	ug/Kgdrywt	1	330	430	160	320
2,2'-Oxybis(1-Chloropropane)	U	320	ug/Kgdrywt	1	330	430	120	320
Acetophenone	U	320	ug/Kgdrywt	1	330	430	230	320
Hexachloroethane	U	320	ug/Kgdrywt	1	330	430	120	320
Isophorone	U	320	ug/Kgdrywt	1	330	430	98.	320
2-Nitrophenol	U	320	ug/Kgdrywt	1	330	430	220	320
Bis(2-Chloroethoxy) Methane	U	320	ug/Kgdrywt	1	330	430	120	320
4-Chloroaniline	U	320	ug/Kgdrywt	1	330	430	160	320
Caprolactam	U	320	ug/Kgdrywt	1	330	430	190	320
4-Chloro-3-Methylphenol	U	320	ug/Kgdrywt	1	330	430	220	320
1,1'-Biphenyl	U	320	ug/Kgdrywt	1	330	430	96.	320
2-Chloronaphthalene	U	320	ug/Kgdrywt	1	330	430	110	320
2-Nitroaniline	U	800	ug/Kgdrywt	1	820	1100	98.	800
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	320	ug/Kgdrywt	1	330	430	100	320
3-Nitroaniline	U	800	ug/Kgdrywt	1	820	1100	120	800
2,4-Dinitrophenol	U	800	ug/Kgdrywt	1	820	1100	490	800
Dibenzofuran	U	320	ug/Kgdrywt	1	330	430	100	320
Diethylphthalate	U	320	ug/Kgdrywt	1	330	430	100	320
4-Chlorophenyl-Phenylether	U	320	ug/Kgdrywt	1	330	430	100	320
4-Nitroaniline	U	800	ug/Kgdrywt	1	820	1100	180	800
N-Nitrosodiphenylamine	U	320	ug/Kgdrywt	1	330	430	290	320
4-Bromophenyl-Phenylether	U	320	ug/Kgdrywt	1	330	430	110	320
Carbazole	U	320	ug/Kgdrywt	1	330	430	140	320
Di-N-Butylphthalate	U	320	ug/Kgdrywt	1	330	430	130	320
Butylbenzylphthalate	U	320	ug/Kgdrywt	1	330	430	120	320
2-Fluorophenol		67.7	%					
Phenol-D6		77.8	%					
Nitrobenzene-d5		66.0	%					
2-Fluorobiphenyl		74.8	%					
2,4,6-Tribromophenol		79.6	%					
Terphenyl-d14		81.2	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-12
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 53.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U R-1SL	430	ug/Kgdrywt	1	330	580	210	430
2,2'-Oxybis(1-Chloropropane)	U	430	ug/Kgdrywt	1	330	580	160	430
Acetophenone	U	430	ug/Kgdrywt	1	330	580	310	430
Hexachloroethane	U	430	ug/Kgdrywt	1	330	580	170	430
Isophorone	U	430	ug/Kgdrywt	1	330	580	130	430
2-Nitrophenol	U	430	ug/Kgdrywt	1	330	580	290	430
Bis(2-Chloroethoxy) Methane	U	430	ug/Kgdrywt	1	330	580	170	430
4-Chloroaniline	U	430	ug/Kgdrywt	1	330	580	210	430
Caprolactam	U	430	ug/Kgdrywt	1	330	580	250	430
4-Chloro-3-Methylphenol	U	430	ug/Kgdrywt	1	330	580	290	430
1,1'-Biphenyl	U	430	ug/Kgdrywt	1	330	580	130	430
2-Chloronaphthalene	U	430	ug/Kgdrywt	1	330	580	150	430
2-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	130	1100
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	430	ug/Kgdrywt	1	330	580	140	430
3-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	160	1100
2,4-Dinitrophenol	U	1100	ug/Kgdrywt	1	820	1400	660	1100
Dibenzofuran	U	430	ug/Kgdrywt	1	330	580	140	430
Diethylphthalate	U	430	ug/Kgdrywt	1	330	580	140	430
4-Chlorophenyl-Phenylether	U	430	ug/Kgdrywt	1	330	580	140	430
4-Nitroaniline	U	1100	ug/Kgdrywt	1	820	1400	230	1100
N-Nitrosodiphenylamine	U	430	ug/Kgdrywt	1	330	580	380	430
4-Bromophenyl-Phenylether	U	430	ug/Kgdrywt	1	330	580	150	430
Carbazole	U	430	ug/Kgdrywt	1	330	580	190	430
Di-N-Butylphthalate	U	430	ug/Kgdrywt	1	330	580	180	430
Butylbenzylphthalate	U	430	ug/Kgdrywt	1	330	580	160	430
2-Fluorophenol		47.1	%					
Phenol-D6		53.6	%					
Nitrobenzene-d5		43.6	%					
2-Fluorobiphenyl		50.5	%					
2,4,6-Tribromophenol		56.2	%					
Terphenyl-d14		56.0	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-13
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 74.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R2-BSL	310	ug/Kgdrywt	1	330	420	150	310
2,2'-Oxybis(1-Chloropropane)	U	310	ug/Kgdrywt	1	330	420	110	310
Acetophenone	U	310	ug/Kgdrywt	1	330	420	220	310
Hexachloroethane	U	310	ug/Kgdrywt	1	330	420	120	310
Isophorone	U	310	ug/Kgdrywt	1	330	420	94.	310
2-Nitrophenol	U	310	ug/Kgdrywt	1	330	420	210	310
Bis(2-Chloroethoxy) Methane	U	310	ug/Kgdrywt	1	330	420	120	310
4-Chloroaniline	U	310	ug/Kgdrywt	1	330	420	150	310
Caprolactam	U	310	ug/Kgdrywt	1	330	420	180	310
4-Chloro-3-Methylphenol	U	310	ug/Kgdrywt	1	330	420	210	310
1,1'-Biphenyl	U	310	ug/Kgdrywt	1	330	420	92.	310
2-Chloronaphthalene	U	310	ug/Kgdrywt	1	330	420	110	310
2-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	94.	770
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	310	ug/Kgdrywt	1	330	420	99.	310
3-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	120	770
2,4-Dinitrophenol	U	770	ug/Kgdrywt	1	820	1000	470	770
Dibenzofuran	U	310	ug/Kgdrywt	1	330	420	99.	310
Diethylphthalate	U	310	ug/Kgdrywt	1	330	420	100	310
4-Chlorophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	420	98.	310
4-Nitroaniline	U	770	ug/Kgdrywt	1	820	1000	170	770
N-Nitrosodiphenylamine	U	310	ug/Kgdrywt	1	330	420	280	310
4-Bromophenyl-Phenylether	U	310	ug/Kgdrywt	1	330	420	110	310
Carbazole	U	310	ug/Kgdrywt	1	330	420	140	310
Di-N-Butylphthalate	U	310	ug/Kgdrywt	1	330	420	130	310
Butylbenzylphthalate	U	310	ug/Kgdrywt	1	330	420	120	310
2-Fluorophenol		56.8	%					
Phenol-D6		59.4	%					
Nitrobenzene-d5		55.2	%					
2-Fluorobiphenyl		61.4	%					
2,4,6-Tribromophenol		67.1	%					
Terphenyl-d14		75.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-14
Client ID: 1S66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 46.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R-BSL	540	ug/Kgdrywt	1	330	710	260	540
2,2'-Oxybis(1-Chloropropane)	U	540	ug/Kgdrywt	1	330	710	190	540
Acetophenone	U	540	ug/Kgdrywt	1	330	710	380	540
Hexachloroethane	U	540	ug/Kgdrywt	1	330	710	210	540
Isophorone	U	540	ug/Kgdrywt	1	330	710	160	540
2-Nitrophenol	U	540	ug/Kgdrywt	1	330	710	360	540
Bis(2-Chloroethoxy) Methane	U	540	ug/Kgdrywt	1	330	710	210	540
4-Chloroaniline	U	540	ug/Kgdrywt	1	330	710	260	540
Caprolactam	U	540	ug/Kgdrywt	1	330	710	310	540
4-Chloro-3-Methylphenol	U	540	ug/Kgdrywt	1	330	710	360	540
1,1'-Biphenyl	U	540	ug/Kgdrywt	1	330	710	160	540
2-Chloronaphthalene	U	540	ug/Kgdrywt	1	330	710	190	540
2-Nitroaniline	U	1300	ug/Kgdrywt	1	820	1800	160	1300
2,6-Dinitrotoluene	EXCLUDE-RE ~~U~~	540	ug/Kgdrywt	1	330	710	170	540
3-Nitroaniline	U	1300	ug/Kgdrywt	1	820	1800	200	1300
2,4-Dinitrophenol	U	1300	ug/Kgdrywt	1	820	1800	810	1300
Dibenzofuran	U	540	ug/Kgdrywt	1	330	710	170	540
Diethylphthalate	U	540	ug/Kgdrywt	1	330	710	170	540
4-Chlorophenyl-Phenylether	U	540	ug/Kgdrywt	1	330	710	170	540
4-Nitroaniline	U	1300	ug/Kgdrywt	1	820	1800	290	1300
N-Nitrosodiphenylamine	U	540	ug/Kgdrywt	1	330	710	470	540
4-Bromophenyl-Phenylether	U	540	ug/Kgdrywt	1	330	710	180	540
Carbazole	U	540	ug/Kgdrywt	1	330	710	240	540
Di-N-Butylphthalate	U	540	ug/Kgdrywt	1	330	710	220	540
Butylbenzylphthalate	U	540	ug/Kgdrywt	1	330	710	200	540
2-Fluorophenol		55.1	%					
Phenol-D6		62.4	%					
Nitrobenzene-d5		52.5	%					
2-Fluorobiphenyl		62.2	%					
2,4,6-Tribromophenol		67.6	%					
Terphenyl-d14		73.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-15
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 72.
Report Date: 25-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R-BSL	330	ug/Kgdrywt	1	330	440	160	330
2,2'-Oxybis(1-Chloropropane)	U	330	ug/Kgdrywt	1	330	440	120	330
Acetophenone	U	330	ug/Kgdrywt	1	330	440	240	330
Hexachloroethane	U	330	ug/Kgdrywt	1	330	440	130	330
Isophorone	U	330	ug/Kgdrywt	1	330	440	100	330
2-Nitrophenol	U	330	ug/Kgdrywt	1	330	440	220	330
Bis(2-Chloroethoxy) Methane	U	330	ug/Kgdrywt	1	330	440	130	330
4-Chloroaniline	U	330	ug/Kgdrywt	1	330	440	160	330
Caprolactam	U	330	ug/Kgdrywt	1	330	440	190	330
4-Chloro-3-Methylphenol	U	330	ug/Kgdrywt	1	330	440	220	330
1,1'-Biphenyl	U	330	ug/Kgdrywt	1	330	440	98.	330
2-Chloronaphthalene	U	330	ug/Kgdrywt	1	330	440	120	330
2-Nitroaniline	U	820	ug/Kgdrywt	1	820	1100	100	820
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	330	ug/Kgdrywt	1	330	440	100	330
3-Nitroaniline	U	820	ug/Kgdrywt	1	820	1100	120	820
2,4-Dinitrophenol	U	820	ug/Kgdrywt	1	820	1100	500	820
Dibenzofuran	U	330	ug/Kgdrywt	1	330	440	100	330
Diethylphthalate	U	330	ug/Kgdrywt	1	330	440	110	330
4-Chlorophenyl-Phenylether	U	330	ug/Kgdrywt	1	330	440	100	330
4-Nitroaniline	U	820	ug/Kgdrywt	1	820	1100	180	820
N-Nitrosodiphenylamine	U	330	ug/Kgdrywt	1	330	440	290	330
4-Bromophenyl-Phenylether	U	330	ug/Kgdrywt	1	330	440	110	330
Carbazole	U	330	ug/Kgdrywt	1	330	440	150	330
Di-N-Butylphthalate	U	330	ug/Kgdrywt	1	330	440	140	330
Butylbenzylphthalate	U	330	ug/Kgdrywt	1	330	440	120	330
2-Fluorophenol		55.2	%					
Phenol-D6		61.4	%					
Nitrobenzene-d5		56.5	%					
2-Fluorobiphenyl		63.2	%					
2,4,6-Tribromophenol		68.8	%					
Terphenyl-d14		74.4	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-16
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 66.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	U R2-BSL	360	ug/Kgdrywt	1	330	480	170	360
2,2'-Oxybis(1-Chloropropane)	U	360	ug/Kgdrywt	1	330	480	130	360
Acetophenone	U	360	ug/Kgdrywt	1	330	480	260	360
Hexachloroethane	U	360	ug/Kgdrywt	1	330	480	140	360
Isophorone	U	360	ug/Kgdrywt	1	330	480	110	360
2-Nitrophenol	U	360	ug/Kgdrywt	1	330	480	240	360
Bis(2-Chloroethoxy) Methane	U	360	ug/Kgdrywt	1	330	480	140	360
4-Chloroaniline	U	360	ug/Kgdrywt	1	330	480	170	360
Caprolactam	U	360	ug/Kgdrywt	1	330	480	210	360
4-Chloro-3-Methylphenol	U	360	ug/Kgdrywt	1	330	480	240	360
1,1'-Biphenyl	U	360	ug/Kgdrywt	1	330	480	100	360
2-Chloronaphthalene	U	360	ug/Kgdrywt	1	330	480	130	360
2-Nitroaniline	U	890	ug/Kgdrywt	1	820	1200	110	890
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	360	ug/Kgdrywt	1	330	480	110	360
3-Nitroaniline	U	890	ug/Kgdrywt	1	820	1200	140	890
2,4-Dinitrophenol	U	890	ug/Kgdrywt	1	820	1200	550	890
Dibenzofuran	U	360	ug/Kgdrywt	1	330	480	110	360
Diethylphthalate	U	360	ug/Kgdrywt	1	330	480	120	360
4-Chlorophenyl-Phenylether	U	360	ug/Kgdrywt	1	330	480	110	360
4-Nitroaniline	U	890	ug/Kgdrywt	1	820	1200	190	890
N-Nitrosodiphenylamine	U	360	ug/Kgdrywt	1	330	480	320	360
4-Bromophenyl-Phenylether	U	360	ug/Kgdrywt	1	330	480	120	360
Carbazole	U	360	ug/Kgdrywt	1	330	480	160	360
Di-N-Butylphthalate	U	360	ug/Kgdrywt	1	330	480	150	360
Butylbenzylphthalate	U	360	ug/Kgdrywt	1	330	480	130	360
2-Fluorophenol		52.4	%					
Phenol-D6		56.7	%					
Nitrobenzene-d5		50.2	%					
2-Fluorobiphenyl		57.3	%					
2,4,6-Tribromophenol		63.6	%					
Terphenyl-d14		71.0	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-17
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date: 07-OCT-10
Extracted By: WS
Extraction Method: SW846 3550
Lab Prep Batch: WG83126

Analysis Date: 22-OCT-10
Analyst: JCG
Analysis Method: SW846 8270C
Matrix: SL
% Solids: 73.
Report Date: 27-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Benzaldehyde	~~U~~ R-BSL	320	ug/Kgdrywt	1	330	430	160	320
2,2'-Oxybis(1-Chloropropane)	U	320	ug/Kgdrywt	1	330	430	120	320
Acetophenone	U	320	ug/Kgdrywt	1	330	430	230	320
Hexachloroethane	U	320	ug/Kgdrywt	1	330	430	130	320
Isophorone	U	320	ug/Kgdrywt	1	330	430	98.	320
2-Nitrophenol	U	320	ug/Kgdrywt	1	330	430	220	320
Bis(2-Chloroethoxy) Methane	U	320	ug/Kgdrywt	1	330	430	130	320
4-Chloroaniline	U	320	ug/Kgdrywt	1	330	430	160	320
Caprolactam	U	320	ug/Kgdrywt	1	330	430	190	320
4-Chloro-3-Methylphenol	U	320	ug/Kgdrywt	1	330	430	220	320
1,1'-Biphenyl	U	320	ug/Kgdrywt	1	330	430	96.	320
2-Chloronaphthalene	U	320	ug/Kgdrywt	1	330	430	110	320
2-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	98.	810
2,6-Dinitrotoluene EXCLUDE-RE	~~U~~	320	ug/Kgdrywt	1	330	430	100	320
3-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	120	810
2,4-Dinitrophenol	U	810	ug/Kgdrywt	1	820	1100	500	810
Dibenzofuran	U	320	ug/Kgdrywt	1	330	430	100	320
Diethylphthalate	U	320	ug/Kgdrywt	1	330	430	100	320
4-Chlorophenyl-Phenylether	U	320	ug/Kgdrywt	1	330	430	100	320
4-Nitroaniline	U	810	ug/Kgdrywt	1	820	1100	180	810
N-Nitrosodiphenylamine	U	320	ug/Kgdrywt	1	330	430	290	320
4-Bromophenyl-Phenylether	U	320	ug/Kgdrywt	1	330	430	110	320
Carbazole	U	320	ug/Kgdrywt	1	330	430	140	320
Di-N-Butylphthalate	U	320	ug/Kgdrywt	1	330	430	130	320
Butylbenzylphthalate	U	320	ug/Kgdrywt	1	330	430	120	320
2-Fluorophenol		54.8	%					
Phenol-D6		64.4	%					
Nitrobenzene-d5		52.0	%					
2-Fluorobiphenyl		58.4	%					
2,4,6-Tribromophenol		74.2	%					
Terphenyl-d14		67.6	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: 1S66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
Chloromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.8	6.5
Vinyl Chloride	U	6.5	ug/Kgdrywt	1	10	13.	1.1	6.5
Bromomethane	U	6.5	ug/Kgdrywt	1	10	13.	1.4	6.5
Chloroethane	U	6.5	ug/Kgdrywt	1	10	13.	1.7	6.5
Trichlorofluoromethane	U	6.5	ug/Kgdrywt	1	10	13.	1.2	6.5
1,1-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Carbon Disulfide	J-B	1.7	ug/Kgdrywt	1	5	6.5	1.0	3.2
Freon-113	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Methylene Chloride	U	16.	ug/Kgdrywt	1	25	32.	10.	16.
Acetone		63.	ug/Kgdrywt	1	25	32.	6.6	16.
trans-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.92	3.2
Methyl tert-butyl Ether	U	3.2	ug/Kgdrywt	1	5	6.5	1.4	3.2
1,1-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	2.2	3.2
cis-1,2-Dichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Chloroform	U	3.2	ug/Kgdrywt	1	5	6.5	0.46	3.2
Carbon Tetrachloride	U	3.2	ug/Kgdrywt	1	5	6.5	1.7	3.2
1,1,1-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.55	3.2
2-Butanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Benzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
Cyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
1,2-Dichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Trichloroethene	U	3.2	ug/Kgdrywt	1	5	6.5	0.77	3.2
1,2-Dichloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
Bromodichloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	0.78	3.2
cis-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	0.94	3.2
Toluene	U	3.2	ug/Kgdrywt	1	5	6.5	1.8	3.2
4-Methyl-2-Pentanone	U	16.	ug/Kgdrywt	1	25	32.	7.7	16.
Tetrachloroethene		8.7	ug/Kgdrywt	1	5	6.5	1.6	3.2
trans-1,3-Dichloropropene	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,1,2-Trichloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
Dibromochloromethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.3	3.2
1,2-Dibromoethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.6	3.2
2-Hexanone	U	16.	ug/Kgdrywt	1	25	32.	6.2	16.
Chlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.84	3.2
Total Xylene	U	9.8	ug/Kgdrywt	1	15	20.	1.7	9.8
Styrene	U	3.2	ug/Kgdrywt	1	5	6.5	0.66	3.2
Bromoform	U	3.2	ug/Kgdrywt	1	5	6.5	0.91	3.2
Isopropylbenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
1,1,2,2-Tetrachloroethane	U	3.2	ug/Kgdrywt	1	5	6.5	1.1	3.2
1,3-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.81	3.2
1,4-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	0.57	3.2
1,2-Dichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
1,2-Dibromo-3-Chloropropane	U	3.2	ug/Kgdrywt	1	5	6.5	2.0	3.2
1,2,4-Trichlorobenzene	U	3.2	ug/Kgdrywt	1	5	6.5	1.0	3.2
Methyl Acetate	U	3.9	ug/Kgdrywt	1	5	6.5	3.5	3.9
Methylcyclohexane	U	3.2	ug/Kgdrywt	1	5	6.5	1.2	3.2
p-Bromofluorobenzene	*	57.7	%					
Toluene-D8		107.	%					
1,2-Dichloroethane-D4	*	135.	%					
Dibromofluoromethane		124.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1RA
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-ISL	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J-B-MBL	2.2	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U UJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	J-ISL	55.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U UJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J-DT	10.	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U UJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-1RA
Client ID: IS66DP250001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 76.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	UUJ-ISL	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene	*	78.9	%					
Toluene-D8	*	133.	%					
1,2-Dichloroethane-D4	*	174.	%					
Dibromofluoromethane	*	160.	%					

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Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: IS66DP251011 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude BE	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B MBL	1.6	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J B FBC	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene		6.9	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		120	%					
Toluene-D8	*	144.	%					
1,2-Dichloroethane-D4	*	175.	%					
Dibromofluoromethane	*	160.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2RA
Client ID: IS66DP251011
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U UJ-ISL	4.8	ug/Kgdrywt	1	10	9.6	0.88	4.8
Chloromethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.3	4.8
Vinyl Chloride	U	4.8	ug/Kgdrywt	1	10	9.6	0.84	4.8
Bromomethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.0	4.8
Chloroethane	U	4.8	ug/Kgdrywt	1	10	9.6	1.2	4.8
Trichlorofluoromethane	U	4.8	ug/Kgdrywt	1	10	9.6	0.87	4.8
1,1-Dichloroethene	J-ISL	1.1	ug/Kgdrywt	1	5	4.8	0.89	2.4
Carbon Disulfide	B-MBL	1.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
Freon-113	U UJ-ISL	2.4	ug/Kgdrywt	1	5	4.8	0.86	2.4
Methylene Chloride	U UJ-ISL	12.	ug/Kgdrywt	1	25	24.	7.6	12.
Acetone	JB-EBL	9.0	ug/Kgdrywt	1	25	24.	4.9	12.
trans-1,2-Dichloroethene	U UJ-ISL	2.4	ug/Kgdrywt	1	5	4.8	0.68	2.4
Methyl tert-butyl Ether	U	2.4	ug/Kgdrywt	1	5	4.8	1.0	2.4
1,1-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.6	2.4
cis-1,2-Dichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.87	2.4
Chloroform	U	2.4	ug/Kgdrywt	1	5	4.8	0.34	2.4
Carbon Tetrachloride	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
1,1,1-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.40	2.4
2-Butanone	U	12.	ug/Kgdrywt	1	25	24.	5.7	12.
Benzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
Cyclohexane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
1,2-Dichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.96	2.4
Trichloroethene	U	2.4	ug/Kgdrywt	1	5	4.8	0.57	2.4
1,2-Dichloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
Bromodichloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.58	2.4
cis-1,3-Dichloropropene	U	2.4	ug/Kgdrywt	1	5	4.8	0.69	2.4
Toluene	U	2.4	ug/Kgdrywt	1	5	4.8	1.3	2.4
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	24.	5.7	12.
Tetrachloroethene	J-CT	5.6	ug/Kgdrywt	1	5	4.8	1.2	2.4
trans-1,3-Dichloropropene	U UJ-ISL	2.4	ug/Kgdrywt	1	5	4.8	0.82	2.4
1,1,2-Trichloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.93	2.4
Dibromochloromethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.96	2.4
1,2-Dibromoethane	U	2.4	ug/Kgdrywt	1	5	4.8	1.2	2.4
2-Hexanone	U	12.	ug/Kgdrywt	1	25	24.	4.6	12.
Chlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-2RA
Client ID: IS66DP251011 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 83.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U UJ-ISL	2.4	ug/Kgdrywt	1	5	4.8	0.62	2.4
Total Xylene	U	7.2	ug/Kgdrywt	1	15	14.	1.2	7.2
Styrene	U	2.4	ug/Kgdrywt	1	5	4.8	0.49	2.4
Bromoform	U	2.4	ug/Kgdrywt	1	5	4.8	0.67	2.4
Isopropylbenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.88	2.4
1,1,2,2-Tetrachloroethane	U	2.4	ug/Kgdrywt	1	5	4.8	0.81	2.4
1,3-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.60	2.4
1,4-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.42	2.4
1,2-Dichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.75	2.4
1,2-Dibromo-3-Chloropropane	U	2.4	ug/Kgdrywt	1	5	4.8	1.4	2.4
1,2,4-Trichlorobenzene	U	2.4	ug/Kgdrywt	1	5	4.8	0.76	2.4
Methyl Acetate	U	2.9	ug/Kgdrywt	1	5	4.8	2.6	2.9
Methylcyclohexane	U	2.4	ug/Kgdrywt	1	5	4.8	0.92	2.4
p-Bromofluorobenzene		111.	%					
Toluene-D8	*	135.	%					
1,2-Dichloroethane-D4	*	168.	%					
Dibromofluoromethane	*	154.	%					

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-RE	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
Chloromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.5	5.5
Vinyl Chloride	U	5.5	ug/Kgdrywt	1	10	11.	0.96	5.5
Bromomethane	U	5.5	ug/Kgdrywt	1	10	11.	1.2	5.5
Chloroethane	U	5.5	ug/Kgdrywt	1	10	11.	1.4	5.5
Trichlorofluoromethane	U	5.5	ug/Kgdrywt	1	10	11.	1.0	5.5
1,1-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Carbon Disulfide	J Bamb6L	1.5	ug/Kgdrywt	1	5	5.5	0.86	2.8
Freon-113	U	2.8	ug/Kgdrywt	1	5	5.5	0.99	2.8
Methylene Chloride	U	14.	ug/Kgdrywt	1	25	28.	8.7	14.
Acetone		220	ug/Kgdrywt	1	25	28.	5.6	14.
trans-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.78	2.8
Methyl tert-butyl Ether	U	2.8	ug/Kgdrywt	1	5	5.5	1.2	2.8
1,1-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.9	2.8
cis-1,2-Dichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Chloroform	U	2.8	ug/Kgdrywt	1	5	5.5	0.38	2.8
Carbon Tetrachloride	U	2.8	ug/Kgdrywt	1	5	5.5	1.4	2.8
1,1,1-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.46	2.8
2-Butanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Benzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
Cyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
1,2-Dichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Trichloroethene	U	2.8	ug/Kgdrywt	1	5	5.5	0.65	2.8
1,2-Dichloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
Bromodichloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.66	2.8
cis-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.79	2.8
Toluene	U	2.8	ug/Kgdrywt	1	5	5.5	1.5	2.8
4-Methyl-2-Pentanone	U	14.	ug/Kgdrywt	1	25	28.	6.5	14.
Tetrachloroethene		7.1	ug/Kgdrywt	1	5	5.5	1.3	2.8
trans-1,3-Dichloropropene	U	2.8	ug/Kgdrywt	1	5	5.5	0.95	2.8
1,1,2-Trichloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
Dibromochloromethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.1	2.8
1,2-Dibromoethane	U	2.8	ug/Kgdrywt	1	5	5.5	1.3	2.8
2-Hexanone	U	14.	ug/Kgdrywt	1	25	28.	5.3	14.
Chlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3
Client ID: 1S66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.72	2.8
Total Xylene	U	8.2	ug/Kgdrywt	1	15	16.	1.4	8.2
Styrene	U	2.8	ug/Kgdrywt	1	5	5.5	0.56	2.8
Bromoform	U	2.8	ug/Kgdrywt	1	5	5.5	0.77	2.8
Isopropylbenzene	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
1,1,2,2-Tetrachloroethane	U	2.8	ug/Kgdrywt	1	5	5.5	0.92	2.8
1,3-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.68	2.8
1,4-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.48	2.8
1,2-Dichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.86	2.8
1,2-Dibromo-3-Chloropropane	U	2.8	ug/Kgdrywt	1	5	5.5	1.6	2.8
1,2,4-Trichlorobenzene	U	2.8	ug/Kgdrywt	1	5	5.5	0.87	2.8
Methyl Acetate	U	3.3	ug/Kgdrywt	1	5	5.5	3.0	3.3
Methylcyclohexane	U	2.8	ug/Kgdrywt	1	5	5.5	1.0	2.8
p-Bromofluorobenzene	*	71.5	%					
Toluene-D8	*	116.	%					
1,2-Dichloroethane-D4	*	149.	%					
Dibromofluoromethane	*	134.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3RA
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site E
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B MBL	1.7	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J-2S	380	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	J	12.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J-DT	7.6	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	UJ-1SL	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	UJ-1SL	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-3RA
Client ID: IS66DP240001
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 82.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	UUJ-ISL	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene	*	62.1	%					
Toluene-D8		108.	%					
1,2-Dichloroethane-D4	*	136.	%					
Dibromofluoromethane		126.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RF	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J B-MBL	1.6	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	J B-MBL	20.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J	4.8	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene	*	128.	%					
Toluene-D8	*	140.	%					
1,2-Dichloroethane-D4	*	172.	%					
Dibromofluoromethane	*	155.	%					

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HK 12/26/2010

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4RA
Client ID: IS66DP240708 SB
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	JB-MBL	2.1	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	JB-EBL	11.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	UUJ-25	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J [illegible]	4.6	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-4RA
Client ID: IS66DP240708
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 95.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		110.	%					
Toluene-D8	*	124.	%					
1,2-Dichloroethane-D4		134	%					
Dibromofluoromethane	*	131.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: 1S66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.1	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.7	ug/L	1	5	5.0	1.1	2.5
Acetone		6.1	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Katahdin Analytical Services A0000021

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-7
Client ID: IS66EB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		96.0	%					
Toluene-d8		99.5	%					
1,2-Dichloroethane-d4		102.	%					
Dibromofluoromethane		97.2	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	1.0	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	J	1.6	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.7	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-8
Client ID: IS66EB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		87.0	%					
Toluene-d8		102.	%					
1,2-Dichloroethane-d4		98.0	%					
Dibromofluoromethane		98.1	%					

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REISSUE

HK 12/26/2010

Katahdin
ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-18
Client ID: 1S66TB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
Chloromethane	J	0.57	ug/L	1	2	2.0	0.36	1.0
Vinyl Chloride	U	1.0	ug/L	1	2	2.0	0.25	1.0
Bromomethane	U	1.0	ug/L	1	2	2.0	0.49	1.0
Chloroethane	U	1.0	ug/L	1	2	2.0	0.55	1.0
Trichlorofluoromethane	U	1.0	ug/L	1	2	2.0	0.24	1.0
1,1-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.35	0.50
Carbon Disulfide	U	0.50	ug/L	1	1	1.0	0.25	0.50
Freon-113	U	0.50	ug/L	1	1	1.0	0.31	0.50
Methylene Chloride	U	2.5	ug/L	1	5	5.0	1.1	2.5
Acetone	J	4.6	ug/L	1	5	5.0	2.2	2.5
trans-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.25	0.50
Methyl tert-butyl Ether	U	0.50	ug/L	1	1	1.0	0.36	0.50
1,1-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.21	0.50
cis-1,2-Dichloroethene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Chloroform	U	0.50	ug/L	1	1	1.0	0.32	0.50
1,1,1-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
2-Butanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
Cyclohexane	U	0.50	ug/L	1	1	1.0	0.31	0.50
Carbon Tetrachloride	U	0.50	ug/L	1	1	1.0	0.22	0.50
Benzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,2-Dichloroethane	U	0.50	ug/L	1	1	1.0	0.20	0.50
Trichloroethene	U	0.50	ug/L	1	1	1.0	0.28	0.50
1,2-Dichloropropane	U	0.50	ug/L	1	1	1.0	0.25	0.50
Bromodichloromethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
cis-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.19	0.50
Toluene	U	0.50	ug/L	1	1	1.0	0.27	0.50
4-Methyl-2-Pentanone	U	2.5	ug/L	1	5	5.0	1.3	2.5
trans-1,3-Dichloropropene	U	0.50	ug/L	1	1	1.0	0.20	0.50
1,1,2-Trichloroethane	U	0.50	ug/L	1	1	1.0	0.33	0.50
Tetrachloroethene	U	0.50	ug/L	1	1	1.0	0.40	0.50
Dibromochloromethane	U	0.50	ug/L	1	1	1.0	0.30	0.50
1,2-Dibromoethane	U	0.50	ug/L	1	1	1.0	0.22	0.50
2-Hexanone	U	2.5	ug/L	1	5	5.0	1.7	2.5
Chlorobenzene	U	0.50	ug/L	1	1	1.0	0.22	0.50

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REISSUE

HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-18
Client ID: IS66TB01-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: TTC
Extraction Method:
Lab Prep Batch: WG83450

Analysis Date: 13-OCT-10
Analyst: TTC
Analysis Method: SW846 8260B
Matrix: AQ
% Solids: NA
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	0.50	ug/L	1	1	1.0	0.21	0.50
Total Xylene	U	1.5	ug/L	1	3	3.0	0.25	1.5
Styrene	U	0.50	ug/L	1	1	1.0	0.23	0.50
Bromoform	U	0.50	ug/L	1	1	1.0	0.23	0.50
Isopropylbenzene	U	0.50	ug/L	1	1	1.0	0.23	0.50
1,1,2,2-Tetrachloroethane	U	0.50	ug/L	1	1	1.0	0.38	0.50
1,3-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.26	0.50
1,4-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.24	0.50
1,2-Dichlorobenzene	U	0.50	ug/L	1	1	1.0	0.15	0.50
1,2-Dibromo-3-Chloropropane	U	1.0	ug/L	1	2	2.0	0.50	1.0
1,2,4-Trichlorobenzene	U	0.50	ug/L	1	1	1.0	0.37	0.50
Methyl Acetate	U	0.75	ug/L	1	1	1.0	0.53	0.75
Methylcyclohexane	U	0.50	ug/L	1	1	1.0	0.30	0.50
P-Bromofluorobenzene		94.1	%					
Toluene-d8		103.	%					
1,2-Dichloroethane-d4		108.	%					
Dibromofluoromethane		100.	%					

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REISSUE

HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-19
Client ID: IS66TB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 100
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.92	5.0
Chloromethane	U	5.0	ug/Kgdrywt	1	10	10.	1.4	5.0
Vinyl Chloride	U	5.0	ug/Kgdrywt	1	10	10.	0.87	5.0
Bromomethane	U	5.0	ug/Kgdrywt	1	10	10.	1.1	5.0
Chloroethane	U	5.0	ug/Kgdrywt	1	10	10.	1.3	5.0
Trichlorofluoromethane	U	5.0	ug/Kgdrywt	1	10	10.	0.91	5.0
1,1-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.93	2.5
Carbon Disulfide	J	1.7	ug/Kgdrywt	1	5	5.0	0.78	2.5
Freon-113	U	2.5	ug/Kgdrywt	1	5	5.0	0.90	2.5
Methylene Chloride	U	12.	ug/Kgdrywt	1	25	25.	7.9	12.
Acetone	UJ-25	12.	ug/Kgdrywt	1	25	25.	5.1	12.
trans-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.71	2.5
Methyl tert-butyl Ether	U	2.5	ug/Kgdrywt	1	5	5.0	1.1	2.5
1,1-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.7	2.5
cis-1,2-Dichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.91	2.5
Chloroform	U	2.5	ug/Kgdrywt	1	5	5.0	0.35	2.5
Carbon Tetrachloride	U	2.5	ug/Kgdrywt	1	5	5.0	1.3	2.5
1,1,1-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.42	2.5
2-Butanone	UJ-25	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Benzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
Cyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
1,2-Dichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
Trichloroethene	U	2.5	ug/Kgdrywt	1	5	5.0	0.59	2.5
1,2-Dichloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
Bromodichloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.60	2.5
cis-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.72	2.5
Toluene	U	2.5	ug/Kgdrywt	1	5	5.0	1.4	2.5
4-Methyl-2-Pentanone	U	12.	ug/Kgdrywt	1	25	25.	5.9	12.
Tetrachloroethene	J-25	2.6	ug/Kgdrywt	1	5	5.0	1.2	2.5
trans-1,3-Dichloropropene	U	2.5	ug/Kgdrywt	1	5	5.0	0.86	2.5
1,1,2-Trichloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.97	2.5
Dibromochloromethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.0	2.5
1,2-Dibromoethane	U	2.5	ug/Kgdrywt	1	5	5.0	1.2	2.5
2-Hexanone	U	12.	ug/Kgdrywt	1	25	25.	4.8	12.
Chlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-19
Client ID: IS66TB02-100110
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 100
Report Date: 02-NOV-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.65	2.5
Total Xylene	U	7.5	ug/Kgdrywt	1	15	15.	1.3	7.5
Styrene	U	2.5	ug/Kgdrywt	1	5	5.0	0.51	2.5
Bromoform	U	2.5	ug/Kgdrywt	1	5	5.0	0.70	2.5
Isopropylbenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.92	2.5
1,1,2,2-Tetrachloroethane	U	2.5	ug/Kgdrywt	1	5	5.0	0.84	2.5
1,3-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.62	2.5
1,4-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.44	2.5
1,2-Dichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.78	2.5
1,2-Dibromo-3-Chloropropane	U	2.5	ug/Kgdrywt	1	5	5.0	1.5	2.5
1,2,4-Trichlorobenzene	U	2.5	ug/Kgdrywt	1	5	5.0	0.79	2.5
Methyl Acetate	U	3.0	ug/Kgdrywt	1	5	5.0	2.7	3.0
Methylcyclohexane	U	2.5	ug/Kgdrywt	1	5	5.0	0.96	2.5
p-Bromofluorobenzene		112.	%					
Toluene-D8		115	%					
1,2-Dichloroethane-D4		112.	%					
Dibromofluoromethane		116.	%					

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REISSUE

HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-20
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 56.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	8.5	ug/Kgdrywt	1	10	17.	1.6	8.5
Chloromethane	U	8.5	ug/Kgdrywt	1	10	17.	2.4	8.5
Vinyl Chloride	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
Bromomethane	U	8.5	ug/Kgdrywt	1	10	17.	1.9	8.5
Chloroethane	U	8.5	ug/Kgdrywt	1	10	17.	2.2	8.5
Trichlorofluoromethane	U	8.5	ug/Kgdrywt	1	10	17.	1.5	8.5
1,1-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Carbon Disulfide	J-BTBL	2.5	ug/Kgdrywt	1	5	8.5	1.3	4.2
Freon-113	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Methylene Chloride	U	21.	ug/Kgdrywt	1	25	42.	13.	21.
Acetone	J-2S	64.	ug/Kgdrywt	1	25	42.	8.7	21.
trans-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Methyl tert-butyl Ether	U	4.2	ug/Kgdrywt	1	5	8.5	1.9	4.2
1,1-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.9	4.2
cis-1,2-Dichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
Chloroform	U	4.2	ug/Kgdrywt	1	5	8.5	0.60	4.2
Carbon Tetrachloride	U	4.2	ug/Kgdrywt	1	5	8.5	2.2	4.2
1,1,1-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	0.71	4.2
2-Butanone	J	20.	ug/Kgdrywt	1	25	42.	10.	21.
Benzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Cyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
1,2-Dichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
Trichloroethene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,2-Dichloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
Bromodichloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
cis-1,3-Dichloropropene	U	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Toluene	U	4.2	ug/Kgdrywt	1	5	8.5	2.4	4.2
4-Methyl-2-Pentanone	U	21.	ug/Kgdrywt	1	25	42.	10.	21.
Tetrachloroethene	J-OT	14.	ug/Kgdrywt	1	5	8.5	2.0	4.2
trans-1,3-Dichloropropene	U	4.2	ug/Kgdrywt	1	5	8.5	1.5	4.2
1,1,2-Trichloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
Dibromochloromethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.7	4.2
1,2-Dibromoethane	U	4.2	ug/Kgdrywt	1	5	8.5	2.0	4.2
2-Hexanone	U	21.	ug/Kgdrywt	1	25	42.	8.2	21.
Chlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-20
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 56.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.1	4.2
Total Xylene	U	13.	ug/Kgdrywt	1	15	26.	2.2	13.
Styrene	U	4.2	ug/Kgdrywt	1	5	8.5	0.87	4.2
Bromoform	U-US-ISL	4.2	ug/Kgdrywt	1	5	8.5	1.2	4.2
Isopropylbenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
1,1,2,2-Tetrachloroethane	U	4.2	ug/Kgdrywt	1	5	8.5	1.4	4.2
1,3-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.0	4.2
1,4-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	0.75	4.2
1,2-Dichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
1,2-Dibromo-3-Chloropropane	U	4.2	ug/Kgdrywt	1	5	8.5	2.6	4.2
1,2,4-Trichlorobenzene	U	4.2	ug/Kgdrywt	1	5	8.5	1.3	4.2
Methyl Acetate	U	5.1	ug/Kgdrywt	1	5	8.5	4.6	5.1
Methylcyclohexane	U	4.2	ug/Kgdrywt	1	5	8.5	1.6	4.2
p-Bromofluorobenzene	*	79.2	%					
Toluene-D8		95.1	%					
1,2-Dichloroethane-D4		110.	%					
Dibromofluoromethane		107.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-20RA
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 56.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude RE	9.5	ug/Kgdrywt	1	10	19.	1.7	9.5
Chloromethane	U	9.5	ug/Kgdrywt	1	10	19.	2.7	9.5
Vinyl Chloride	U	9.5	ug/Kgdrywt	1	10	19.	1.6	9.5
Bromomethane	U	9.5	ug/Kgdrywt	1	10	19.	2.1	9.5
Chloroethane	U	9.5	ug/Kgdrywt	1	10	19.	2.5	9.5
Trichlorofluoromethane	U	9.5	ug/Kgdrywt	1	10	19.	1.7	9.5
1,1-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
Carbon Disulfide	~~2B-TIC~~	3.1	ug/Kgdrywt	1	5	9.5	1.5	4.8
Freon-113	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Methylene Chloride	U	24.	ug/Kgdrywt	1	25	48.	15.	24.
Acetone		110	ug/Kgdrywt	1	25	48.	9.7	24.
trans-1,2-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.3	4.8
Methyl tert-butyl Ether	U	4.8	ug/Kgdrywt	1	5	9.5	2.1	4.8
1,1-Dichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	3.2	4.8
cis-1,2-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Chloroform	U	4.8	ug/Kgdrywt	1	5	9.5	0.66	4.8
Carbon Tetrachloride	U	4.8	ug/Kgdrywt	1	5	9.5	2.5	4.8
1,1,1-Trichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	0.80	4.8
2-Butanone	J	24.	ug/Kgdrywt	1	25	48.	11.	24.
Benzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Cyclohexane	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
1,2-Dichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.9	4.8
Trichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.1	4.8
1,2-Dichloropropane	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
Bromodichloromethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.1	4.8
cis-1,3-Dichloropropene	U	4.8	ug/Kgdrywt	1	5	9.5	1.4	4.8
Toluene	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
4-Methyl-2-Pentanone	U	24.	ug/Kgdrywt	1	25	48.	11.	24.
Tetrachloroethene		18.	ug/Kgdrywt	1	5	9.5	2.3	4.8
trans-1,3-Dichloropropene	U	4.8	ug/Kgdrywt	1	5	9.5	1.6	4.8
1,1,2-Trichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
Dibromochloromethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.9	4.8
1,2-Dibromoethane	U	4.8	ug/Kgdrywt	1	5	9.5	2.3	4.8
2-Hexanone	U	24.	ug/Kgdrywt	1	25	48.	9.1	24.
Chlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	0.97	4.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-20RA
Client ID: IS66SD13
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 56.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.2	4.8
Total Xylene	U	14.	ug/Kgdrywt	1	15	28.	2.5	14.
Styrene	U	4.8	ug/Kgdrywt	1	5	9.5	0.97	4.8
Bromoform	U	4.8	ug/Kgdrywt	1	5	9.5	1.3	4.8
Isopropylbenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
1,1,2,2-Tetrachloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.6	4.8
1,3-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.2	4.8
1,4-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	0.84	4.8
1,2-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.5	4.8
1,2-Dibromo-3-Chloropropane	U	4.8	ug/Kgdrywt	1	5	9.5	2.8	4.8
1,2,4-Trichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.5	4.8
Methyl Acetate	U	5.7	ug/Kgdrywt	1	5	9.5	5.1	5.7
Methylcyclohexane	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
p-Bromofluorobenzene	*	69.7	%					
Toluene-D8		93.0	%					
1,2-Dichloroethane-D4		119.	%					
Dibromofluoromethane		108.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-21
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J B TBL	1.8	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	J B EBL	30.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J-17	8.2	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-21
Client ID: IS66SD12
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene		84.6	%					
Toluene-D8		90.7	%					
1,2-Dichloroethane-D4		110.	%					
Dibromofluoromethane		103.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-22
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
Bromomethane	U	7.5	ug/Kgdrywt	1	10	15.	1.6	7.5
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Carbon Disulfide	JB-TBL	2.0	ug/Kgdrywt	1	5	7.5	1.2	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Methylene Chloride	U	19.	ug/Kgdrywt	1	25	38.	12.	19.
Acetone	J-25	100	ug/Kgdrywt	1	25	38.	7.6	19.
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
2-Butanone	J	21.	ug/Kgdrywt	1	25	38.	8.8	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Cyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
4-Methyl-2-Pentanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Tetrachloroethene		11.	ug/Kgdrywt	1	5	7.5	1.8	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
2-Hexanone	U	19.	ug/Kgdrywt	1	25	38.	7.2	19.
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-22
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Total Xylene	U	11.	ug/Kgdrywt	1	15	22.	2.0	11.
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Methyl Acetate	U	4.5	ug/Kgdrywt	1	5	7.5	4.0	4.5
Methylcyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
p-Bromofluorobenzene	*	57.4	%					
Toluene-D8		85.4	%					
1,2-Dichloroethane-D4		111.	%					
Dibromofluoromethane		105.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-22RA
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Reduce RL	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
Chloromethane	U	7.5	ug/Kgdrywt	1	10	15.	2.1	7.5
Vinyl Chloride	U	7.5	ug/Kgdrywt	1	10	15.	1.3	7.5
Bromomethane	U	7.5	ug/Kgdrywt	1	10	15.	1.6	7.5
Chloroethane	U	7.5	ug/Kgdrywt	1	10	15.	2.0	7.5
Trichlorofluoromethane	U	7.5	ug/Kgdrywt	1	10	15.	1.4	7.5
1,1-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Carbon Disulfide	J B-TBL	2.1	ug/Kgdrywt	1	5	7.5	1.2	3.8
Freon-113	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Methylene Chloride	U	19.	ug/Kgdrywt	1	25	38.	12.	19.
Acetone	B-EBL	52.	ug/Kgdrywt	1	25	38.	7.6	19.
trans-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Methyl tert-butyl Ether	U	3.8	ug/Kgdrywt	1	5	7.5	1.6	3.8
1,1-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	2.6	3.8
cis-1,2-Dichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Chloroform	U	3.8	ug/Kgdrywt	1	5	7.5	0.52	3.8
Carbon Tetrachloride	U	3.8	ug/Kgdrywt	1	5	7.5	2.0	3.8
1,1,1-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.63	3.8
2-Butanone	J	14.	ug/Kgdrywt	1	25	38.	8.8	19.
Benzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Cyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
1,2-Dichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
Trichloroethene	U	3.8	ug/Kgdrywt	1	5	7.5	0.88	3.8
1,2-Dichloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
Bromodichloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	0.90	3.8
cis-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.1	3.8
Toluene	U	3.8	ug/Kgdrywt	1	5	7.5	2.1	3.8
4-Methyl-2-Pentanone	U	19.	ug/Kgdrywt	1	25	38.	8.8	19.
Tetrachloroethene	B-TBL	8.5	ug/Kgdrywt	1	5	7.5	1.8	3.8
trans-1,3-Dichloropropene	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,1,2-Trichloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
Dibromochloromethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.5	3.8
1,2-Dibromoethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.8	3.8
2-Hexanone	U	19.	ug/Kgdrywt	1	25	38.	7.2	19.
Chlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-22RA
Client ID: IS66SD11
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 61.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.98	3.8
Total Xylene	U	11.	ug/Kgdrywt	1	15	22.	2.0	11.
Styrene	U	3.8	ug/Kgdrywt	1	5	7.5	0.76	3.8
Bromoform	U	3.8	ug/Kgdrywt	1	5	7.5	1.0	3.8
Isopropylbenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
1,1,2,2-Tetrachloroethane	U	3.8	ug/Kgdrywt	1	5	7.5	1.3	3.8
1,3-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.93	3.8
1,4-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	0.66	3.8
1,2-Dichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
1,2-Dibromo-3-Chloropropane	U	3.8	ug/Kgdrywt	1	5	7.5	2.2	3.8
1,2,4-Trichlorobenzene	U	3.8	ug/Kgdrywt	1	5	7.5	1.2	3.8
Methyl Acetate	U	4.5	ug/Kgdrywt	1	5	7.5	4.0	4.5
Methylcyclohexane	U	3.8	ug/Kgdrywt	1	5	7.5	1.4	3.8
p-Bromofluorobenzene	*	35.1	%					
Toluene-D8	*	69.3	%					
1,2-Dichloroethane-D4		112.	%					
Dibromofluoromethane		109.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-23
Client ID: 1S66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 63.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	8.0	ug/Kgdrywt	1	10	16.	1.5	8.0
Chloromethane	U	8.0	ug/Kgdrywt	1	10	16.	2.2	8.0
Vinyl Chloride	U	8.0	ug/Kgdrywt	1	10	16.	1.4	8.0
Bromomethane	U	8.0	ug/Kgdrywt	1	10	16.	1.8	8.0
Chloroethane	U	8.0	ug/Kgdrywt	1	10	16.	2.1	8.0
Trichlorofluoromethane	U	8.0	ug/Kgdrywt	1	10	16.	1.4	8.0
1,1-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
Carbon Disulfide	J-BTBL	2.4	ug/Kgdrywt	1	5	8.0	1.2	4.0
Freon-113	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
Methylene Chloride	U	20.	ug/Kgdrywt	1	25	40.	13.	20.
Acetone	J B-EBL	35.	ug/Kgdrywt	1	25	40.	8.2	20.
trans-1,2-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.1	4.0
Methyl tert-butyl Ether	U	4.0	ug/Kgdrywt	1	5	8.0	1.8	4.0
1,1-Dichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	2.7	4.0
cis-1,2-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
Chloroform	U	4.0	ug/Kgdrywt	1	5	8.0	0.56	4.0
Carbon Tetrachloride	U	4.0	ug/Kgdrywt	1	5	8.0	2.1	4.0
1,1,1-Trichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	0.67	4.0
2-Butanone	U	20.	ug/Kgdrywt	1	25	40.	9.4	20.
Benzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
Cyclohexane	U	4.0	ug/Kgdrywt	1	5	8.0	2.2	4.0
1,2-Dichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
Trichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	0.94	4.0
1,2-Dichloropropane	U	4.0	ug/Kgdrywt	1	5	8.0	2.2	4.0
Bromodichloromethane	U	4.0	ug/Kgdrywt	1	5	8.0	0.96	4.0
cis-1,3-Dichloropropene	U	4.0	ug/Kgdrywt	1	5	8.0	1.2	4.0
Toluene		24.	ug/Kgdrywt	1	5	8.0	2.2	4.0
4-Methyl-2-Pentanone	U	20.	ug/Kgdrywt	1	25	40.	9.4	20.
Tetrachloroethene	J-BT	9.2	ug/Kgdrywt	1	5	8.0	1.9	4.0
trans-1,3-Dichloropropene	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
1,1,2-Trichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
Dibromochloromethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
1,2-Dibromoethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.9	4.0
2-Hexanone	U	20.	ug/Kgdrywt	1	25	40.	7.7	20.
Chlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.82	4.0

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-23
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 63.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.0	4.0
Total Xylene	U	12.	ug/Kgdrywt	1	15	24.	2.1	12.
Styrene	U	4.0	ug/Kgdrywt	1	5	8.0	0.82	4.0
Bromoform	UJ-ISL	4.0	ug/Kgdrywt	1	5	8.0	1.1	4.0
Isopropylbenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
1,1,2,2-Tetrachloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.3	4.0
1,3-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.99	4.0
1,4-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.70	4.0
1,2-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.2	4.0
1,2-Dibromo-3-Chloropropane	U	4.0	ug/Kgdrywt	1	5	8.0	2.4	4.0
1,2,4-Trichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.3	4.0
Methyl Acetate	U	4.8	ug/Kgdrywt	1	5	8.0	4.3	4.8
Methylcyclohexane	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
p-Bromofluorobenzene	*	68.0	%					
Toluene-D8		93.3	%					
1,2-Dichloroethane-D4		118.	%					
Dibromofluoromethane		110.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-23RA
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 63.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U Exclude-2E	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	J B-TBL	2.3	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	B-EBL	48.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	J	14.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J B-TBL	6.1	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-23RA
Client ID: IS66SD10
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 63.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U EXCLUDE-RE	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene	*	61.4	%					
Toluene-D8		90.3	%					
1,2-Dichloroethane-D4		123.	%					
Dibromofluoromethane		115.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-24
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 67.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	JB-TBL	1.6	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	JUJ-25	15.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J- TBL	5.8	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-24
Client ID: IS66SD09
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 67.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		99.2	%					
Toluene-D8		96.6	%					
1,2-Dichloroethane-D4		118.	%					
Dibromofluoromethane		110.	%					

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ANALYTICAL SERVICES

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-25
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 46.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	9.5	ug/Kgdrywt	1	10	19.	1.7	9.5
Chloromethane	U	9.5	ug/Kgdrywt	1	10	19.	2.7	9.5
Vinyl Chloride	U	9.5	ug/Kgdrywt	1	10	19.	1.6	9.5
Bromomethane	U	9.5	ug/Kgdrywt	1	10	19.	2.1	9.5
Chloroethane	U	9.5	ug/Kgdrywt	1	10	19.	2.5	9.5
Trichlorofluoromethane	U	9.5	ug/Kgdrywt	1	10	19.	1.7	9.5
1,1-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
Carbon Disulfide	J B TBL	2.8	ug/Kgdrywt	1	5	9.5	1.5	4.8
Freon-113	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Methylene Chloride	U	24.	ug/Kgdrywt	1	25	48.	15.	24.
Acetone	U UJ-25	24.	ug/Kgdrywt	1	25	48.	9.7	24.
trans-1,2-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.3	4.8
Methyl tert-butyl Ether	U	4.8	ug/Kgdrywt	1	5	9.5	2.1	4.8
1,1-Dichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	3.2	4.8
cis-1,2-Dichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Chloroform	U	4.8	ug/Kgdrywt	1	5	9.5	0.66	4.8
Carbon Tetrachloride	U	4.8	ug/Kgdrywt	1	5	9.5	2.5	4.8
1,1,1-Trichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	0.80	4.8
2-Butanone	U	24.	ug/Kgdrywt	1	25	48.	11.	24.
Benzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
Cyclohexane	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
1,2-Dichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.9	4.8
Trichloroethene	U	4.8	ug/Kgdrywt	1	5	9.5	1.1	4.8
1,2-Dichloropropane	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
Bromodichloromethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.1	4.8
cis-1,3-Dichloropropene	U	4.8	ug/Kgdrywt	1	5	9.5	1.4	4.8
Toluene	U	4.8	ug/Kgdrywt	1	5	9.5	2.7	4.8
4-Methyl-2-Pentanone	U	24.	ug/Kgdrywt	1	25	48.	11.	24.
Tetrachloroethene	J-BJ	10.	ug/Kgdrywt	1	5	9.5	2.3	4.8
trans-1,3-Dichloropropene	U	4.8	ug/Kgdrywt	1	5	9.5	1.6	4.8
1,1,2-Trichloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
Dibromochloromethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.9	4.8
1,2-Dibromoethane	U	4.8	ug/Kgdrywt	1	5	9.5	2.3	4.8
2-Hexanone	U	24.	ug/Kgdrywt	1	25	48.	9.1	24.
Chlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	0.97	4.8

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-25
Client ID: IS66SD08
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83107

Analysis Date: 06-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 46.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.2	4.8
Total Xylene	U	14.	ug/Kgdrywt	1	15	28.	2.5	14.
Styrene	U	4.8	ug/Kgdrywt	1	5	9.5	0.97	4.8
Bromoform	U	4.8	ug/Kgdrywt	1	5	9.5	1.3	4.8
Isopropylbenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.7	4.8
1,1,2,2-Tetrachloroethane	U	4.8	ug/Kgdrywt	1	5	9.5	1.6	4.8
1,3-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.2	4.8
1,4-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	0.84	4.8
1,2-Dichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.5	4.8
1,2-Dibromo-3-Chloropropane	U	4.8	ug/Kgdrywt	1	5	9.5	2.8	4.8
1,2,4-Trichlorobenzene	U	4.8	ug/Kgdrywt	1	5	9.5	1.5	4.8
Methyl Acetate	U	5.7	ug/Kgdrywt	1	5	9.5	5.1	5.7
Methylcyclohexane	U	4.8	ug/Kgdrywt	1	5	9.5	1.8	4.8
p-Bromofluorobenzene		86.3	%					
Toluene-D8		91.5	%					
1,2-Dichloroethane-D4		121.	%					
Dibromofluoromethane		110.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-26
Client ID: IS66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 68.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	8.0	ug/Kgdrywt	1	10	16.	1.5	8.0
Chloromethane	U	8.0	ug/Kgdrywt	1	10	16.	2.2	8.0
Vinyl Chloride	U	8.0	ug/Kgdrywt	1	10	16.	1.4	8.0
Bromomethane	U	8.0	ug/Kgdrywt	1	10	16.	1.8	8.0
Chloroethane	U	8.0	ug/Kgdrywt	1	10	16.	2.1	8.0
Trichlorofluoromethane	U	8.0	ug/Kgdrywt	1	10	16.	1.4	8.0
1,1-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
Carbon Disulfide	J B-TBL	3.1	ug/Kgdrywt	1	5	8.0	1.2	4.0
Freon-113	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
Methylene Chloride	U	20.	ug/Kgdrywt	1	25	40.	13.	20.
Acetone	J-MSL	110	ug/Kgdrywt	1	25	40.	8.2	20.
trans-1,2-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.1	4.0
Methyl tert-butyl Ether	U	4.0	ug/Kgdrywt	1	5	8.0	1.8	4.0
1,1-Dichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	2.7	4.0
cis-1,2-Dichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
Chloroform	U	4.0	ug/Kgdrywt	1	5	8.0	0.56	4.0
Carbon Tetrachloride	U	4.0	ug/Kgdrywt	1	5	8.0	2.1	4.0
1,1,1-Trichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	0.67	4.0
2-Butanone	J	25.	ug/Kgdrywt	1	25	40.	9.4	20.
Benzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
Cyclohexane	U	4.0	ug/Kgdrywt	1	5	8.0	2.2	4.0
1,2-Dichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
Trichloroethene	U	4.0	ug/Kgdrywt	1	5	8.0	0.94	4.0
1,2-Dichloropropane	U	4.0	ug/Kgdrywt	1	5	8.0	2.2	4.0
Bromodichloromethane	U	4.0	ug/Kgdrywt	1	5	8.0	0.96	4.0
cis-1,3-Dichloropropene	U	4.0	ug/Kgdrywt	1	5	8.0	1.2	4.0
Toluene	U	4.0	ug/Kgdrywt	1	5	8.0	2.2	4.0
4-Methyl-2-Pentanone	U	20.	ug/Kgdrywt	1	25	40.	9.4	20.
Tetrachloroethene	J	6.0	ug/Kgdrywt	1	5	8.0	1.9	4.0
trans-1,3-Dichloropropene	U	4.0	ug/Kgdrywt	1	5	8.0	1.4	4.0
1,1,2-Trichloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
Dibromochloromethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.6	4.0
1,2-Dibromoethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.9	4.0
2-Hexanone	U	20.	ug/Kgdrywt	1	25	40.	7.7	20.
Chlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.82	4.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-26
Client ID: 1S66SD07
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83197

Analysis Date: 07-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 68.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.0	4.0
Total Xylene	U	12.	ug/Kgdrywt	1	15	24.	2.1	12.
Styrene	U	4.0	ug/Kgdrywt	1	5	8.0	0.82	4.0
Bromoform	~~U~~ UJ-ISL	4.0	ug/Kgdrywt	1	5	8.0	1.1	4.0
Isopropylbenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
1,1,2,2-Tetrachloroethane	U	4.0	ug/Kgdrywt	1	5	8.0	1.3	4.0
1,3-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.99	4.0
1,4-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	0.70	4.0
1,2-Dichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.2	4.0
1,2-Dibromo-3-Chloropropane	U	4.0	ug/Kgdrywt	1	5	8.0	2.4	4.0
1,2,4-Trichlorobenzene	U	4.0	ug/Kgdrywt	1	5	8.0	1.3	4.0
Methyl Acetate	~~U~~ UJ-MSL	4.8	ug/Kgdrywt	1	5	8.0	4.3	4.8
Methylcyclohexane	U	4.0	ug/Kgdrywt	1	5	8.0	1.5	4.0
p-Bromofluorobenzene	*	76.4	%					
Toluene-D8		93.9	%					
1,2-Dichloroethane-D4		124.	%					
Dibromofluoromethane		113.	%					

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-27
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
Chloromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.7	6.0
Vinyl Chloride	U	6.0	ug/Kgdrywt	1	10	12.	1.0	6.0
Bromomethane	U	6.0	ug/Kgdrywt	1	10	12.	1.3	6.0
Chloroethane	U	6.0	ug/Kgdrywt	1	10	12.	1.6	6.0
Trichlorofluoromethane	U	6.0	ug/Kgdrywt	1	10	12.	1.1	6.0
1,1-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Carbon Disulfide	J B-TBL	2.4	ug/Kgdrywt	1	5	6.0	0.94	3.0
Freon-113	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Methylene Chloride	U	15.	ug/Kgdrywt	1	25	30.	9.5	15.
Acetone	J B-EBL	30.	ug/Kgdrywt	1	25	30.	6.1	15.
trans-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.85	3.0
Methyl tert-butyl Ether	U	3.0	ug/Kgdrywt	1	5	6.0	1.3	3.0
1,1-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	2.0	3.0
cis-1,2-Dichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Chloroform	U	3.0	ug/Kgdrywt	1	5	6.0	0.42	3.0
Carbon Tetrachloride	U	3.0	ug/Kgdrywt	1	5	6.0	1.6	3.0
1,1,1-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.50	3.0
2-Butanone	UJ-25	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Benzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
Cyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
1,2-Dichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Trichloroethene	U	3.0	ug/Kgdrywt	1	5	6.0	0.71	3.0
1,2-Dichloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
Bromodichloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	0.72	3.0
cis-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	0.86	3.0
Toluene	U	3.0	ug/Kgdrywt	1	5	6.0	1.7	3.0
4-Methyl-2-Pentanone	U	15.	ug/Kgdrywt	1	25	30.	7.1	15.
Tetrachloroethene	J [illegible]	3.3	ug/Kgdrywt	1	5	6.0	1.4	3.0
trans-1,3-Dichloropropene	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,1,2-Trichloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
Dibromochloromethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
1,2-Dibromoethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.4	3.0
2-Hexanone	U	15.	ug/Kgdrywt	1	25	30.	5.8	15.
Chlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0

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Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-27
Client ID: IS66SD06
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 75.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.78	3.0
Total Xylene	U	9.0	ug/Kgdrywt	1	15	18.	1.6	9.0
Styrene	U	3.0	ug/Kgdrywt	1	5	6.0	0.61	3.0
Bromoform	U	3.0	ug/Kgdrywt	1	5	6.0	0.84	3.0
Isopropylbenzene	U	3.0	ug/Kgdrywt	1	5	6.0	1.1	3.0
1,1,2,2-Tetrachloroethane	U	3.0	ug/Kgdrywt	1	5	6.0	1.0	3.0
1,3-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.74	3.0
1,4-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.53	3.0
1,2-Dichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.94	3.0
1,2-Dibromo-3-Chloropropane	U	3.0	ug/Kgdrywt	1	5	6.0	1.8	3.0
1,2,4-Trichlorobenzene	U	3.0	ug/Kgdrywt	1	5	6.0	0.95	3.0
Methyl Acetate	U	3.6	ug/Kgdrywt	1	5	6.0	3.2	3.6
Methylcyclohexane	U	3.0	ug/Kgdrywt	1	5	6.0	1.2	3.0
p-Bromofluorobenzene		89.4	%					
Toluene-D8		100.	%					
1,2-Dichloroethane-D4		101.	%					
Dibromofluoromethane		104.	%					

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ANALYTICAL SERVICES

Cert No E87604

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-28
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 66.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Dichlorodifluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
Chloromethane	U	7.0	ug/Kgdrywt	1	10	14.	2.0	7.0
Vinyl Chloride	U	7.0	ug/Kgdrywt	1	10	14.	1.2	7.0
Bromomethane	U	7.0	ug/Kgdrywt	1	10	14.	1.5	7.0
Chloroethane	U	7.0	ug/Kgdrywt	1	10	14.	1.8	7.0
Trichlorofluoromethane	U	7.0	ug/Kgdrywt	1	10	14.	1.3	7.0
1,1-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Carbon Disulfide	JB-TBL	2.9	ug/Kgdrywt	1	5	7.0	1.1	3.5
Freon-113	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Methylene Chloride	U	18.	ug/Kgdrywt	1	25	35.	11.	18.
Acetone	JB-EBL	34.	ug/Kgdrywt	1	25	35.	7.1	18.
trans-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.99	3.5
Methyl tert-butyl Ether	U	3.5	ug/Kgdrywt	1	5	7.0	1.5	3.5
1,1-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	2.4	3.5
cis-1,2-Dichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Chloroform	U	3.5	ug/Kgdrywt	1	5	7.0	0.49	3.5
Carbon Tetrachloride	U	3.5	ug/Kgdrywt	1	5	7.0	1.8	3.5
1,1,1-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.59	3.5
2-Butanone	UJ-2S	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Benzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
Cyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
1,2-Dichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Trichloroethene	U	3.5	ug/Kgdrywt	1	5	7.0	0.83	3.5
1,2-Dichloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
Bromodichloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	0.84	3.5
cis-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.0	3.5
Toluene	U	3.5	ug/Kgdrywt	1	5	7.0	2.0	3.5
4-Methyl-2-Pentanone	U	18.	ug/Kgdrywt	1	25	35.	8.3	18.
Tetrachloroethene	J [illegible]	4.0	ug/Kgdrywt	1	5	7.0	1.7	3.5
trans-1,3-Dichloropropene	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,1,2-Trichloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
Dibromochloromethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.4	3.5
1,2-Dibromoethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.7	3.5
2-Hexanone	U	18.	ug/Kgdrywt	1	25	35.	6.7	18.
Chlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5

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HK 12/26/2010

Report of Analytical Results

Client: CH2MHill
Lab ID: SD6083-28
Client ID: IS66SD06P
Project: CTO-JU04 Indian Head Site 6
SDG: JU04-5

Sample Date: 01-OCT-10
Received Date: 02-OCT-10
Extract Date:
Extracted By: DJP
Extraction Method:
Lab Prep Batch: WG83397

Analysis Date: 12-OCT-10
Analyst: DJP
Analysis Method: SW846 8260B
Matrix: SL
% Solids: 66.
Report Date: 23-OCT-10

Compound	Qualifier	Result	Units	Dilution	LOQ	ADJ LOQ	ADJ MDL	ADJ LOD
Ethylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.91	3.5
Total Xylene	U	10.	ug/Kgdrywt	1	15	21.	1.8	10.
Styrene	U	3.5	ug/Kgdrywt	1	5	7.0	0.71	3.5
Bromoform	U	3.5	ug/Kgdrywt	1	5	7.0	0.98	3.5
Isopropylbenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
1,1,2,2-Tetrachloroethane	U	3.5	ug/Kgdrywt	1	5	7.0	1.2	3.5
1,3-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.87	3.5
1,4-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	0.62	3.5
1,2-Dichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
1,2-Dibromo-3-Chloropropane	U	3.5	ug/Kgdrywt	1	5	7.0	2.1	3.5
1,2,4-Trichlorobenzene	U	3.5	ug/Kgdrywt	1	5	7.0	1.1	3.5
Methyl Acetate	U	4.2	ug/Kgdrywt	1	5	7.0	3.8	4.2
Methylcyclohexane	U	3.5	ug/Kgdrywt	1	5	7.0	1.3	3.5
p-Bromofluorobenzene		94.7	%					
Toluene-D8		101.	%					
1,2-Dichloroethane-D4		109.	%					
Dibromofluoromethane		108.	%					

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Data Validation Summary

Indian Head CTO-JU04

TO: Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 29th, 2010

Introduction

The following data validation report discusses the data validation process and findings for Columbia Analytical Services, SDG E1001062.

The original sample ids as submitted to the laboratory were incorrect. A cross-reference table with the correct sample ids is provided at the end of this report.

Samples were analyzed using the following analytical methods:

- SW8290 Dioxins

The samples included in this SDG are listed in the table below.

Sample Name	Lab Sample ID
IS66SD07	E1001062-001
IS66SD06	E1001062-002
IS66SD06P	E1001062-003
IS66DP230001	E1001062-004
IS66DP231516	E1001062-005
IS66DP220001	E1001062-006
IS66DP22P0001	E1001062-007
IS66DP221112	E1001062-008
IS66DP22P1112	E1001062-009
IS66DP250001	E1001062-010
IS66DP251011	E1001062-011
IS66DP240001	E1001062-012

IS66DP240708	E1001062-013

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: National Functional Guidelines for Superfund Organic Methods Data Review (EPA 2008) and Region III Modifications for Dioxin/Furan Data Validation Guidance (EPA 1993), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Initial/Continuing Calibrations
- Blanks
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogate Recoveries
- Internal Standards
- Window Defining Mix
- Ion Abundance
- Field Duplicate Precision
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact. Resubmissions were not required.

Technical Holding Times

According to the chain of custody records, sampling was performed on 10/1/10 and 10/1/10. Samples were received at the laboratory on 10/2/10. All sample preparation analysis was performed within holding time.

EMPC (Estimated Maximum Possible Concentration)

The compounds listed below are those in which the ion ratio were outside criteria by 25% difference or greater. These compounds were qualified "X" as estimated, with a qualification code of "EMPC".

Sample ID	Compound
IS66SD06P	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP220001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP240001	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin

EMPCs

The compounds listed below are those in which the ion ratio were outside criteria greater than 15% but less than 25% difference. These compounds were qualified "X" as estimated, with a qualification code of "IR15".

Sample ID	Compound
IS66DP230001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP220001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP220001	2,3,4,6,7,8-Hexachlorodibenzofuran
IS66DP220001	2,3,7,8-Tetrachlorodibenzofuran
IS66DP221112	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP250001	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin
IS66DP250001	1,2,3,6,7,8-Hexachlorodibenzofuran
IS66DP250001	2,3,4,6,7,8-Hexachlorodibenzofuran

Matrix Spike/Spike Duplicate
Octachlorodibenzo-p-dioxin exhibited low recoveries in the MS/MSD for sample IS66SD07. Data are summarized in **Attachment 1.**

Linear Range
Octachlorodibenzo-p-dioxin was outside of linear range for the samples listed below. Data are summarized in **Attachment 1.**

Sample ID
IS66DP230001
IS66DP231516
IS66DP240001
IS66DP240708

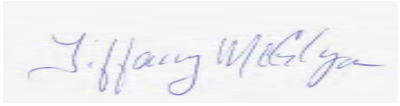
Re-extractions and Dilutions
All qualified data are summarized in **Attachment 1** except for those excluded for re-extractions and dilutions.

Conclusion

These data, as qualified, are available to be evaluated by the project team for use in decision-making purposes.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.
X	Dioxins only: Estimated Maximum Possible Concentration

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other

Value	Description
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

Station ID	Incorrect Sample IDs	Correct Sample IDs
Surface Soil Samples		
IS66DP22	IS66DP220001	IS66SS220001
IS66DP22	IS66DP22P0001	IS66SS22P0001
IS66DP23	IS66DP230001	IS66SS230001
IS66DP24	IS66DP240001	IS66SS240001
IS66DP25	IS66DP250001	IS66SS250001
IS66DP26	IS66DP260001	IS66SS260001
IS66DP27	IS66DP270001	IS66SS270001
IS66DP28	IS66DP280001	IS66SS280001
IS66DP29	IS66DP290001	IS66SS290001
IS66DP30	IS66DP300001	IS66SS300001
IS66DP31	IS66DP310001	IS66SS310001
IS66DP32	IS66DP320001	IS66SS320001
IS66DP32	IS66DP32P0001	IS66SS32P0001
IS66DP33	IS66DP330001	IS66SS330001
IS66DP34	IS66DP340001	IS66SS340001
IS66DP35	IS66DP350001	IS66SS350001
IS66DP35	IS66DP350001MS	IS66SS350001MS
IS66DP35	IS66DP350001SD	IS66SS350001SD
IS66DP36	IS66DP360001	IS66SS360001
IS66DP37	IS66DP370001	IS66SS370001
IS66DP38	IS66DP380001	IS66SS380001
IS66DP38	IS66DP380001-01	IS66SS380001-01
IS66DP39	IS66DP390001	IS66SS390001
IS66DP40	IS66DP400001	IS66SS400001
IS66DP41	IS66DP410001	IS66SS410001
IS66SO42	IS66SO420001	IS66SS420001
IS66SO42	IS66SO42P0001	IS66SS42P0001
IS66SO43	IS66SO430001	IS66SS430001
IS66SO44	IS66SO440001	IS66SS440001
IS66SO45	IS66SO450001	IS66SS450001
Subsurface Soil Samples		
IS66DP22	IS66DP221112	IS66SB221112
IS66DP22	IS66DP22P1112	IS66SB22P1112
IS66DP23	IS66DP231516	IS66SB231516
IS66DP24	IS66DP240708	IS66SB240708
IS66DP25	IS66DP251011	IS66SB251011
IS66DP26	IS66DP260708	IS66SB260708
IS66DP27	IS66DP270910	IS66SB270910
IS66DP28	IS66DP280607	IS66SB280607
IS66DP29	IS66DP291617	IS66SB291617

Station ID	Incorrect Sample IDs	Correct Sample IDs
IS66DP30	IS66DP300910	IS66SB300910
IS66DP31	IS66DP311415	IS66SB311415
IS66DP32	IS66DP320809	IS66SB320809
IS66DP32	IS66DP32P0809	IS66SB32P0809
IS66DP33	IS66DP331415	IS66SB331415
IS66DP34	IS66DP340809	IS66SB340809
IS66DP35	IS66DP351415	IS66SB351415
IS66DP35	IS66DP351415MS	IS66SB351415MS
IS66DP35	IS66DP351415SD	IS66SB351415SD
IS66DP36	IS66DP360809	IS66SB360809
IS66DP37	IS66DP371314	IS66SB371314
IS66DP38	IS66DP381213	IS66SB381213
IS66DP38	IS66DP381213-01	IS66SB381213-01
IS66DP39	IS66DP391213	IS66SB391213
IS66DP40	IS66DP400910	IS66SB400910
IS66DP41	IS66DP410607	IS66SB410607
Monitoring Well Samples		
IS66MW01	IS66MW010910	IS66GW010910
IS66MW02	IS66MW020910	IS66GW020910
IS66MW03	IS66MW030910	IS66GW030910
IS66MW03	IS66MW03P0910	IS66GW03P0910
IS66MW04	IS66MW040910	IS66GW040910
IS66MW05	IS66MW050910	IS66GW050910

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	pg/L
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2239
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209777	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.331	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.263	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.322	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.269	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.325	26.0			1
1,2,3,4,6,7,8-HpCDD	**0.691**	JK	0.178	26.0	1.49	1.000	1
OCDD	**4.43**	BJ	0.266	52.1	1.02	1.000	1
2,3,7,8-TCDF	ND	U	0.363	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.225	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.207	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.211	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.196	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.291	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.234	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.356	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.470	26.0			1
OCDF	ND	U	0.481	52.1			1
Total Tetra-Dioxins	ND	U	0.331	10.4			1
Total Penta-Dioxins	ND	U	0.263	26.0			1
Total Hexa-Dioxins	ND	U	0.269	26.0			1
Total Hepta-Dioxins	ND	U	0.178	26.0			1
Total Tetra-Furans	ND	U	0.363	10.4			1
Total Penta-Furans	ND	U	0.207	26.0			1
Total Hexa-Furans	ND	U	0.196	26.0			1
Total Hepta-Furans	ND	U	0.356	26.0			1

Ward Durden
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	Percent
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2239
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209777	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	625.226	63		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	596.233	60		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1386.414	55		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1318.265	53		40-135	1.07	1.068
13C-OCDD	5000	2189.523	44		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	539.006	54		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	666.513	67		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1402.965	56		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1421.445	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	654.623	82		40-135	NA	1.009

Ward Dick
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	pg/L
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.331	1	1	
1,2,3,7,8-PeCDD	ND	0.263	1	1	
1,2,3,4,7,8-HxCDD	ND	0.322	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.269	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.325	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.691**	0.178	1	0.01	0.00691
OCDD	**4.43**	0.266	1	0.0003	0.00133
2,3,7,8-TCDF	ND	0.363	1	0.1	
1,2,3,7,8-PeCDF	ND	0.225	1	0.03	
2,3,4,7,8-PeCDF	ND	0.207	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.211	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.196	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.291	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.234	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.356	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.470	1	0.01	
OCDF	ND	0.481	1	0.0003	
		Total TEQ			0.00824

2005 WHO TEFs, ND = 0

Ward Dirk
12-27-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1545
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-100110	**Units:**	pg/L
Lab Code:	E1001059-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2328
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209778	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.402	10.2			1
1,2,3,7,8-PeCDD	ND	U	0.420	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.348	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.291	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.353	25.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.308	25.5			1
OCDD	3.63	BJK	0.623	51.0	1.14	1.000	1
2,3,7,8-TCDF	ND	U	0.478	10.2			1
1,2,3,7,8-PeCDF	ND	U	0.258	25.5			1
2,3,4,7,8-PeCDF	ND	U	0.236	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.250	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.233	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.346	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.278	25.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.341	25.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.450	25.5			1
OCDF	ND	U	0.506	51.0			1
Total Tetra-Dioxins	ND	U	0.402	10.2			1
Total Penta-Dioxins	ND	U	0.420	25.5			1
Total Hexa-Dioxins	ND	U	0.291	25.5			1
Total Hepta-Dioxins	ND	U	0.308	25.5			1
Total Tetra-Furans	ND	U	0.478	10.2			1
Total Penta-Furans	ND	U	0.236	25.5			1
Total Hexa-Furans	ND	U	0.233	25.5			1
Total Hepta-Furans	ND	U	0.341	25.5			1

Ward Link
12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1545
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-100110	**Units:**	Percent
Lab Code:	E1001059-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2328
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	980mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209778	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	579.721	58		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	558.587	56		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1396.833	56		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1296.593	52		40-135	1.06	1.068
13C-OCDD	5000	1900.736	38	Y	40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	494.813	49		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	619.945	62		40-135	1.61	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1379.867	55		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1388.790	56		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	590.007	74		40-135	NA	1.009

Ward Dirks
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1545
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-100110	**Units:**	pg/L
Lab Code:	E1001059-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.402	1	1	
1,2,3,7,8-PeCDD	ND	0.420	1	1	
1,2,3,4,7,8-HxCDD	ND	0.348	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.291	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.353	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.308	1	0.01	
OCDD	**3.63**	0.623	1	0.0003	0.00109
2,3,7,8-TCDF	ND	0.478	1	0.1	
1,2,3,7,8-PeCDF	ND	0.258	1	0.03	
2,3,4,7,8-PeCDF	ND	0.236	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.250	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.233	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.346	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.278	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.341	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.450	1	0.01	
OCDF	ND	0.506	1	0.0003	
		Total TEQ			0.00109

2005 WHO TEFs, ND = 0

Ward Durkan
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	pg/L
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0016
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209779	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.395	9.80			1
1,2,3,7,8-PeCDD	ND	U	0.227	24.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.306	24.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.255	24.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.309	24.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.206	24.5			1
OCDD	**2.88**	BJK	0.457	49.0	1.09	1.000	1
2,3,7,8-TCDF	ND	U	0.525	9.80			1
1,2,3,7,8-PeCDF	ND	U	0.174	24.5			1
2,3,4,7,8-PeCDF	ND	U	0.159	24.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.100	24.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.0932	24.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.139	24.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.111	24.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.224	24.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.296	24.5			1
OCDF	ND	U	0.610	49.0			1
Total Tetra-Dioxins	ND	U	0.395	9.80			1
Total Penta-Dioxins	ND	U	0.227	24.5			1
Total Hexa-Dioxins	ND	U	0.255	24.5			1
Total Hepta-Dioxins	ND	U	0.206	24.5			1
Total Tetra-Furans	ND	U	0.525	9.80			1
Total Penta-Furans	ND	U	0.159	24.5			1
Total Hexa-Furans	ND	U	0.0932	24.5			1
Total Hepta-Furans	ND	U	0.224	24.5			1

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	Percent
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0016
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209779	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	626.031	63		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	608.620	61		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1407.642	56		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1340.209	54		40-135	1.06	1.068
13C-OCDD	5000	1967.896	39	Y	40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	527.206	53		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	684.703	68		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1400.047	56		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1427.592	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	664.453	83		40-135	NA	1.009

Wade Duke 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	pg/L
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.395	1	1	
1,2,3,7,8-PeCDD	ND	0.227	1	1	
1,2,3,4,7,8-HxCDD	ND	0.306	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.255	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.309	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.206	1	0.01	
OCDD	**2.88**	0.457	1	0.0003	0.000864
2,3,7,8-TCDF	ND	0.525	1	0.1	
1,2,3,7,8-PeCDF	ND	0.174	1	0.03	
2,3,4,7,8-PeCDF	ND	0.159	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.100	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0932	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.139	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.111	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.224	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.296	1	0.01	
OCDF	ND	0.610	1	0.0003	
		Total TEQ			0.000864

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1425
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-093010	**Units:**	pg/L
Lab Code:	E1001059-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0105
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209780	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.461	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.248	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.293	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.245	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.296	26.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.361	26.0			1
OCDD	2.75	BJK	0.464	52.1	0.48	1.000	1
2,3,7,8-TCDF	ND	U	0.596	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.421	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.388	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.229	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.213	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.315	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.254	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.374	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.494	26.0			1
OCDF	ND	U	0.624	52.1			1
Total Tetra-Dioxins	ND	U	0.461	10.4			1
Total Penta-Dioxins	ND	U	0.248	26.0			1
Total Hexa-Dioxins	ND	U	0.245	26.0			1
Total Hepta-Dioxins	0.986	J	0.361	26.0	0.99		1
Total Tetra-Furans	ND	U	0.596	10.4			1
Total Penta-Furans	ND	U	0.388	26.0			1
Total Hexa-Furans	ND	U	0.213	26.0			1
Total Hepta-Furans	ND	U	0.374	26.0			1

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TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1425
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-093010	**Units:**	Percent
Lab Code:	E1001059-004	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0105
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209780	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	540.145	54		40-135	0.81	1.008
13C-1,2,3,7,8-PeCDD	1000	519.631	52		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1315.357	53		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1244.198	50		40-135	1.05	1.068
13C-OCDD	5000	2027.923	41		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	459.731	46		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	580.159	58		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1301.232	52		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1340.597	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	561.414	70		40-135	NA	1.009

Ward Link
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1425
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-093010	**Units:**	pg/L
Lab Code:	E1001059-004	**Basis:**	NA

EB01

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.461	1	1	
1,2,3,7,8-PeCDD	ND	0.248	1	1	
1,2,3,4,7,8-HxCDD	ND	0.293	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.245	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.296	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.361	1	0.01	
OCDD	**2.75**	0.464	1	0.0003	0.000825
2,3,7,8-TCDF	ND	0.596	1	0.1	
1,2,3,7,8-PeCDF	ND	0.421	1	0.03	
2,3,4,7,8-PeCDF	ND	0.388	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.229	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.213	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.315	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.254	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.374	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.494	1	0.01	
OCDF	ND	0.624	1	0.0003	
		Total TEQ			0.000825

2005 WHO TEFs, ND = 0

Ward Duke 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: CH2M Hill
Project: Indian Head - Site pp 366829
Sample Matrix: Water

Sample Name: IS66FB092710
Lab Code: E1001042-009

Service Request: E1001042
Date Collected: 9/27/10 1445
Date Received: 9/28/10

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.271	1	1	
1,2,3,7,8-PeCDD	ND	0.301	1	1	
1,2,3,4,7,8-HxCDD	ND	0.288	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.252	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.275	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.295	1	0.01	
OCDD	3.54	0.421 B-MB4	1	0.0003	0.00106
2,3,7,8-TCDF	ND	0.411	1	0.1	
1,2,3,7,8-PeCDF	ND	0.381	1	0.03	
2,3,4,7,8-PeCDF	ND	0.377	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.117	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.228	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.309	1	0.01	
OCDF	ND	0.568	1	0.0003	
		Total TEQ			0.00106

2005 WHO TEFs, ND = 0

Ward Dinh 12-23-10

TWD 12/22/2010

Client: CH2M Hill
Project: Indian Head - Site 66 386529
Sample Matrix: Water

Sample Name: IS66FB092710
Lab Code: E1001042-009

Service Request: E1001042
Date Collected: 9/27/10 1445
Date Received: 9/28/10

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 1020mL

Data File Name: P209715
ICAL Date: 08/01/08

Date Analyzed: 10/5/10 1256
Date Extracted: 9/30/10
Instrument Name: E-HRMS-04
GC Column: DB-5
Blank File Name: P209714
Cal Ver. File Name: P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	641.773	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	747.011	75		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1812.083	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1602.195	64		40-135	1.06	1.068
13C-OCDD	5000	2165.257	43		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	607.162	61		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	697.334	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1658.315	66		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1484.918	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.137	81		40-135	NA	1.010

Wade Ditsworth
12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0915
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD15	**Units:**	ng/Kg
Lab Code:	E1001059-005	**Basis:**	Dry
		Percent Solids:	29.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2110
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209799	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.492**	JK	0.144	3.33	0.45	1.002	1
1,2,3,7,8-PeCDD	**1.07**	J	0.183	8.32	1.37	1.000	1
1,2,3,4,7,8-HxCDD	**1.02**	JK	0.182	8.32	0.99	0.999	1
1,2,3,6,7,8-HxCDD	**3.10**	J	0.153	8.32	1.18	1.000	1
1,2,3,7,8,9-HxCDD	**3.88**	J	0.183	8.32	1.30	1.008	1
1,2,3,4,6,7,8-HpCDD	**75.1**	~~B~~	0.427	8.32	1.01	1.000	1
OCDD	**1650**	~~B~~	0.134	16.6	0.89	1.000	1
2,3,7,8-TCDF	**6.91**	C	0.198	3.33	0.67	1.001	1
1,2,3,7,8-PeCDF	**1.93**	JK	0.108	8.32	1.26	1.001	1
2,3,4,7,8-PeCDF	**1.96**	JK	0.0972	8.32	1.26	1.025	1
1,2,3,4,7,8-HxCDF	**5.74**	J	0.946	8.32	1.29	1.000	1
1,2,3,6,7,8-HxCDF	**2.27**	J	0.845	8.32	1.21	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	1.26	8.32			1
2,3,4,6,7,8-HxCDF	**2.20**	J	1.01	8.32	1.21	1.017	1
1,2,3,4,6,7,8-HpCDF	**24.1**	~~B~~	0.188	8.32	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	**1.19**	JK	0.253	8.32	1.57	1.034	1
OCDF	**31.1**	~~B~~	0.121	16.6	0.98	1.004	1
Total Tetra-Dioxins	**3.32**	J	0.144	3.33	0.68		1
Total Penta-Dioxins	**4.84**	J	0.183	8.32	1.78		1
Total Hexa-Dioxins	**30.4**		0.153	8.32	1.27		1
Total Hepta-Dioxins	**160**		0.427	8.32	1.00		1
Total Tetra-Furans	**33.9**		0.198	3.33	0.66		1
Total Penta-Furans	**18.7**		0.0972	8.32	1.51		1
Total Hexa-Furans	**26.5**		0.845	8.32	1.11		1
Total Hepta-Furans	**50.2**		0.188	8.32	1.00		1

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0915
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD15	**Units:**	Percent
Lab Code:	E1001059-005	**Basis:**	Dry
		Percent Solids:	29.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2110
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209799	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	749.847	75		40-135	0.76	1.009
13C-1,2,3,7,8-PeCDD	1000	707.858	71		40-135	1.57	1.181
13C-1,2,3,6,7,8-HxCDD	2500	1747.199	70		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1819.572	73		40-135	1.04	1.068
13C-OCDD	5000	3086.146	62		40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	628.108	63		40-135	0.76	0.977
13C-1,2,3,7,8-PeCDF	1000	809.973	81		40-135	1.60	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1588.594	64		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1705.952	68		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	748.675	94		40-135	NA	1.010

Ward Dick 12-22-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0915
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD15	**Units:**	ng/Kg
Lab Code:	E1001059-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.492**	0.144	1	1	0.492
1,2,3,7,8-PeCDD	**1.07**	0.183	1	1	1.07
1,2,3,4,7,8-HxCDD	**1.02**	0.182	1	0.1	0.102
1,2,3,6,7,8-HxCDD	**3.10**	0.153	1	0.1	0.310
1,2,3,7,8,9-HxCDD	**3.88**	0.183	1	0.1	0.388
1,2,3,4,6,7,8-HpCDD	**75.1**	0.427	1	0.01	0.751
OCDD	**1650**	0.134	1	0.0003	0.495
2,3,7,8-TCDF	**3.46**	0.453	1	0.1	0.346
1,2,3,7,8-PeCDF	**1.93**	0.108	1	0.03	0.0579
2,3,4,7,8-PeCDF	**1.96**	0.0972	1	0.3	0.588
1,2,3,4,7,8-HxCDF	**5.74**	0.946	1	0.1	0.574
1,2,3,6,7,8-HxCDF	**2.27**	0.845	1	0.1	0.227
1,2,3,7,8,9-HxCDF	ND	1.26	1	0.1	
2,3,4,6,7,8-HxCDF	**2.20**	1.01	1	0.1	0.220
1,2,3,4,6,7,8-HpCDF	**24.1**	0.188	1	0.01	0.241
1,2,3,4,7,8,9-HpCDF	**1.19**	0.253	1	0.01	0.0119
OCDF	**31.1**	0.121	1	0.0003	0.00933
		Total TEQ			5.88

2005 WHO TEFs, ND = 0

Wad Duke 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0915
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD15	**Units:**	ng/Kg
Lab Code:	E1001059-005	**Basis:**	Dry
		Percent Solids:	29.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1018
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.291g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137899	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	3.46		0.453	3.33	0.78	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	643.648	64		40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	701.591	88		40-135	NA	0.989

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0930
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD14	**Units:**	ng/Kg
Lab Code:	E1001059-006	**Basis:**	Dry
		Percent Solids:	53.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2159
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.210g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209800	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0536	1.66			1
1,2,3,7,8-PeCDD	ND	U	0.0486	4.15			1
1,2,3,4,7,8-HxCDD	**0.175**	J	0.0697	4.15	1.34	0.998	1
1,2,3,6,7,8-HxCDD	**0.356**	JK	0.0584	4.15	0.84	1.000	1
1,2,3,7,8,9-HxCDD	**0.343**	J	0.0699	4.15	1.15	1.008	1
1,2,3,4,6,7,8-HpCDD	**16.6**	~~B~~	0.141	4.15	1.00	1.000	1
OCDD	**1000**	~~B~~	0.0627	8.29	0.89	1.000	1
2,3,7,8-TCDF	**0.718**	~~CJ~~	0.0438	1.66	0.83	1.002	1
1,2,3,7,8-PeCDF	ND	U	0.0679	4.15			1
2,3,4,7,8-PeCDF	ND	U	0.0616	4.15			1
1,2,3,4,7,8-HxCDF	**0.289**	J	0.132	4.15	1.20	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.118	4.15			1
1,2,3,7,8,9-HxCDF	ND	U	0.174	4.15			1
2,3,4,6,7,8-HxCDF	ND	U	0.141	4.15			1
1,2,3,4,6,7,8-HpCDF	**3.90**	~~BJ~~ J	0.135	4.15	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.182	4.15			1
OCDF	**4.87**	~~BJ~~ J	0.0420	8.29	0.85	1.004	1
Total Tetra-Dioxins	ND	U	0.0536	1.66			1
Total Penta-Dioxins	ND	U	0.0486	4.15			1
Total Hexa-Dioxins	**5.67**		0.0584	4.15	1.25		1
Total Hepta-Dioxins	**42.6**		0.141	4.15	1.02		1
Total Tetra-Furans	**0.718**	J	0.0438	1.66	0.83		1
Total Penta-Furans	**1.00**	J	0.0616	4.15	1.54		1
Total Hexa-Furans	**1.97**	J	0.118	4.15	1.16		1
Total Hepta-Furans	**9.14**		0.135	4.15	1.04		1

X-emPt

Exclude-OT

12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0930
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD14	**Units:**	Percent
Lab Code:	E1001059-006	**Basis:**	Dry
		Percent Solids:	53.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2159
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.210g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209800	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	672.766	67		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	636.698	64		40-135	1.59	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1626.333	65		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1445.917	58		40-135	1.05	1.068
13C-OCDD	5000	2424.304	48		40-135	0.88	1.146
13C-2,3,7,8-TCDF	1000	609.688	61		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	713.567	71		40-135	1.56	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1465.504	59		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1362.431	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	660.548	83		40-135	NA	1.010

Ward Dick
12-23-10

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0930
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD14	**Units:**	ng/Kg
Lab Code:	E1001059-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0536	1	1	
1,2,3,7,8-PeCDD	ND	0.0486	1	1	
1,2,3,4,7,8-HxCDD	**0.175**	0.0697	1	0.1	0.0175
1,2,3,6,7,8-HxCDD	**0.356**	0.0584	1	0.1	0.0356
1,2,3,7,8,9-HxCDD	**0.343**	0.0699	1	0.1	0.0343
1,2,3,4,6,7,8-HpCDD	**16.6**	0.141	1	0.01	0.166
OCDD	**1000**	0.0627	1	0.0003	0.300
2,3,7,8-TCDF	**0.497**	0.176	1	0.1	0.0497
1,2,3,7,8-PeCDF	ND	0.0679	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0616	1	0.3	
1,2,3,4,7,8-HxCDF	**0.289**	0.132	1	0.1	0.0289
1,2,3,6,7,8-HxCDF	ND	0.118	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.174	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.141	1	0.1	
1,2,3,4,6,7,8-HpCDF	**3.90**	0.135	1	0.01	0.0390
1,2,3,4,7,8,9-HpCDF	ND	0.182	1	0.01	
OCDF	**4.87**	0.0420	1	0.0003	0.00146
		Total TEQ			0.672

2005 WHO TEFs, ND = 0

12-27-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0930
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD14	**Units:**	ng/Kg
Lab Code:	E1001059-006	**Basis:**	Dry
		Percent Solids:	53.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1055
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.210g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137900	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.497**	J	0.176	1.66	0.85	1.000	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	640.191	64		40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	638.699	80		40-135	NA	0.989

Wad Dick
12-23-10

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS400001	**Units:**	ng/Kg
Lab Code:	E1001059-007	**Basis:**	Dry
		Percent Solids:	75.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2247
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.322g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209801	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0280	1.29			1
1,2,3,7,8-PeCDD	**0.341**	JK	0.0309	3.23	1.84	1.001	1
1,2,3,4,7,8-HxCDD	**0.573**	JK	0.0985	3.23	1.00	0.998	1
1,2,3,6,7,8-HxCDD	**1.46**	J	0.0826	3.23	1.18	1.000	1
1,2,3,7,8,9-HxCDD	**1.36**	J	0.0987	3.23	1.28	1.008	1
1,2,3,4,6,7,8-HpCDD	**57.2**	~~B~~	0.104	3.23	1.02	1.000	1
OCDD	**3590**	BE	0.0754	6.45	0.89	1.000	1
2,3,7,8-TCDF	**0.812**	CJ	0.0587	1.29	0.68	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0313	3.23			1
2,3,4,7,8-PeCDF	**0.239**	JK	0.0284	3.23	0.99	1.025	1
1,2,3,4,7,8-HxCDF	**0.801**	JK	0.118	3.23	1.49	1.000	1
1,2,3,6,7,8-HxCDF	**0.304**	JK	0.105	3.23	1.44	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.155	3.23			1
2,3,4,6,7,8-HxCDF	**0.451**	J	0.126	3.23	1.07	1.017	1
1,2,3,4,6,7,8-HpCDF	**5.87**	~~B~~	0.149	3.23	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.304**	JK	0.200	3.23	0.63	1.034	1
OCDF	**17.0**	~~B~~	0.0474	6.45	0.79	1.004	1
Total Tetra-Dioxins	ND	U	0.0280	1.29			1
Total Penta-Dioxins	**2.28**	J	0.0309	3.23	1.59		1
Total Hexa-Dioxins	**15.3**		0.0826	3.23	1.26		1
Total Hepta-Dioxins	**139**		0.104	3.23	1.01		1
Total Tetra-Furans	**1.41**		0.0587	1.29	0.69		1
Total Penta-Furans	**2.12**	J	0.0284	3.23	1.67		1
Total Hexa-Furans	**7.40**		0.105	3.23	1.22		1
Total Hepta-Furans	**17.0**		0.149	3.23	1.05		1

12-27-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP400001 SS	**Units:**	Percent
Lab Code:	E1001059-007	**Basis:**	Dry
		Percent Solids:	75.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2247
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.322g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209801	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	682.868	68		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	609.884	61		40-135	1.56	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1454.615	58		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1384.177	55		40-135	1.06	1.068
13C-OCDD	5000	3095.282	62		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	540.127	54		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	693.063	69		40-135	1.56	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1382.715	55		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1242.434	50		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	650.784	81		40-135	NA	1.010

Paul Dick 12-29-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP400001 SS	**Units:**	ng/Kg
Lab Code:	E1001059-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0280	1	1	
1,2,3,7,8-PeCDD	**0.341**	0.0309	1	1	0.341
1,2,3,4,7,8-HxCDD	**0.573**	0.0985	1	0.1	0.0573
1,2,3,6,7,8-HxCDD	**1.46**	0.0826	1	0.1	0.146
1,2,3,7,8,9-HxCDD	**1.36**	0.0987	1	0.1	0.136
1,2,3,4,6,7,8-HpCDD	**57.2**	0.104	1	0.01	0.572
OCDD	**3590**	0.0754	1	0.0003	1.08
2,3,7,8-TCDF	**0.560**	0.189	1	0.1	0.0560
1,2,3,7,8-PeCDF	ND	0.0313	1	0.03	
2,3,4,7,8-PeCDF	**0.239**	0.0284	1	0.3	0.0717
1,2,3,4,7,8-HxCDF	**0.801**	0.118	1	0.1	0.0801
1,2,3,6,7,8-HxCDF	**0.304**	0.105	1	0.1	0.0304
1,2,3,7,8,9-HxCDF	ND	0.155	1	0.1	
2,3,4,6,7,8-HxCDF	**0.451**	0.126	1	0.1	0.0451
1,2,3,4,6,7,8-HpCDF	**5.87**	0.149	1	0.01	0.0587
1,2,3,4,7,8,9-HpCDF	**0.304**	0.200	1	0.01	0.00304
OCDF	**17.0**	0.0474	1	0.0003	0.00510
		Total TEQ			2.68

2005 WHO TEFs, ND = 0

Wood Duke 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS400001	**Units:**	ng/Kg
Lab Code:	E1001059-007	**Basis:**	Dry
		Percent Solids:	75.1

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1132
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.322g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137901	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.560**	J	0.189	1.29	0.83	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	544.102	54		40-135	0.81	1.060
37Cl-2,3,7,8-TCDD	800	658.718	82		40-135	NA	0.988

Ward Dick 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0955
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB400910	**Units:**	ng/Kg
Lab Code:	E1001059-008	**Basis:**	Dry
		Percent Solids:	79.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2336
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.398g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209802	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0469	1.21			1
1,2,3,7,8-PeCDD	ND	U	0.0232	3.02			1
1,2,3,4,7,8-HxCDD	ND	U	0.0800	3.02			1
1,2,3,6,7,8-HxCDD	ND	U	0.0672	3.02			1
1,2,3,7,8,9-HxCDD	**0.136**	JK	0.0803	3.02	1.62	1.008	1
1,2,3,4,6,7,8-HpCDD	**4.03**	B	0.0368	3.02	0.95	1.000	1
OCDD	**189**	B	0.0602	6.05	0.89	1.000	1
2,3,7,8-TCDF	**0.178**	CJ	0.0359	1.21	0.77	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0301	3.02			1
2,3,4,7,8-PeCDF	ND	U	0.0273	3.02			1
1,2,3,4,7,8-HxCDF	ND	U	0.0367	3.02			1
1,2,3,6,7,8-HxCDF	ND	U	0.0327	3.02			1
1,2,3,7,8,9-HxCDF	ND	U	0.0484	3.02			1
2,3,4,6,7,8-HxCDF	ND	U	0.0391	3.02			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0293	3.02			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0395	3.02			1
OCDF	ND	U	0.0421	6.05			1
Total Tetra-Dioxins	**0.283**	J	0.0469	1.21	0.74		1
Total Penta-Dioxins	**0.738**	J	0.0232	3.02	1.35		1
Total Hexa-Dioxins	**4.44**		0.0672	3.02	1.29		1
Total Hepta-Dioxins	**13.8**		0.0368	3.02	0.99		1
Total Tetra-Furans	**0.178**	J	0.0359	1.21	0.77		1
Total Penta-Furans	ND	U	0.0273	3.02			1
Total Hexa-Furans	ND	U	0.0327	3.02			1
Total Hepta-Furans	ND	U	0.0293	3.02			1

JK-Sma. nd Exclude-OT

Did not confirm by 2nd column. WD

Ward Dick 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0955
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~ SB 400910	**Units:**	Percent
Lab Code:	E1001059-008	**Basis:**	Dry
		Percent Solids:	79.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 2336
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.398g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209802	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	656.577	66		40-135	0.75	1.009
13C-1,2,3,7,8-PeCDD	1000	661.342	66		40-135	1.55	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1769.944	71		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1553.229	62		40-135	1.04	1.068
13C-OCDD	5000	2579.782	52		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	571.415	57		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	761.543	76		40-135	1.57	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1464.929	59		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1537.487	61		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	639.846	80		40-135	NA	1.010

Ward Dich 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0955
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~ SB 400910	**Units:**	ng/Kg
Lab Code:	E1001059-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0469	1	1	
1,2,3,7,8-PeCDD	ND	0.0232	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0800	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.0672	1	0.1	
1,2,3,7,8,9-HxCDD	**0.136**	0.0803	1	0.1	0.0136
1,2,3,4,6,7,8-HpCDD	**4.03**	0.0368	1	0.01	0.0403
OCDD	**189**	0.0602	1	0.0003	0.0567
2,3,7,8-TCDF	ND	0.138	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0301	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0273	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0367	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0327	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0484	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0391	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0293	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0395	1	0.01	
OCDF	ND	0.0421	1	0.0003	
		Total TEQ			0.111

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 0955
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP400910 SB	**Units:**	ng/Kg
Lab Code:	E1001059-008	**Basis:**	Dry
		Percent Solids:	79.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1209
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.398g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137902	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Did not continue

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.138	1.21			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	617.091	62		40-135	0.80	1.060
37Cl-2,3,7,8-TCDD	800	610.669	76		40-135	NA	0.988

Wael Dicka 12-23-10

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1500
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS410001	**Units:**	ng/Kg
Lab Code:	E1001059-009	**Basis:**	Dry
		Percent Solids:	82.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0024
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.655g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209803	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0376	1.04			1
1,2,3,7,8-PeCDD	**0.150**	JK	0.0305	2.61	0.98	1.001	1
1,2,3,4,7,8-HxCDD	**0.221**	JK	0.0681	2.61	0.80	0.998	1
1,2,3,6,7,8-HxCDD	**0.857**	JK	0.0571	2.61	1.49	1.000	1
1,2,3,7,8,9-HxCDD	**0.533**	JK	0.0683	2.61	1.58	1.008	1
1,2,3,4,6,7,8-HpCDD	**55.3**	~~B~~	0.0588	2.61	1.01	1.000	1
OCDD	**2690**	BEJ-LR	0.0846	5.22	0.88	1.000	1
2,3,7,8-TCDF	ND	U	0.0485	1.04			1
1,2,3,7,8-PeCDF	ND	U	0.0388	2.61			1
2,3,4,7,8-PeCDF	ND	U	0.0352	2.61			1
1,2,3,4,7,8-HxCDF	**0.178**	JK	0.0540	2.61	1.48	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0483	2.61			1
1,2,3,7,8,9-HxCDF	ND	U	0.0714	2.61			1
2,3,4,6,7,8-HxCDF	ND	U	0.0577	2.61			1
1,2,3,4,6,7,8-HpCDF	**1.10**	BJK	0.0669	2.61	0.85	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0901	2.61			1
OCDF	**4.07**	~~BJ~~ J	0.0564	5.22	0.91	1.004	1
Total Tetra-Dioxins	ND	U	0.0376	1.04			1
Total Penta-Dioxins	**1.16**	J	0.0305	2.61	1.35		1
Total Hexa-Dioxins	**23.3**		0.0571	2.61	1.22		1
Total Hepta-Dioxins	**289**		0.0588	2.61	1.04		1
Total Tetra-Furans	ND	U	0.0485	1.04			1
Total Penta-Furans	**0.319**	J	0.0352	2.61	1.38		1
Total Hexa-Furans	**0.666**	J	0.0483	2.61	1.22		1
Total Hepta-Furans	**3.20**		0.0669	2.61	1.04		1

12-23-10

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1500
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP410001 SS	**Units:**	Percent
Lab Code:	E1001059-009	**Basis:**	Dry
		Percent Solids:	82.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0024
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.655g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209803	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	566.631	57		40-135	0.80	1.008
13C-1,2,3,7,8-PeCDD	1000	525.193	53		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1568.494	63		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1324.669	53		40-135	1.04	1.068
13C-OCDD	5000	2441.701	49		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	479.165	48		40-135	0.75	0.977
13C-1,2,3,7,8-PeCDF	1000	560.157	56		40-135	1.60	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1189.031	48		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1222.369	49		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	544.893	68		40-135	NA	1.010

Chad Duke 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1500
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP410001 SS	**Units:**	ng/Kg
Lab Code:	E1001059-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0376	1	1	
1,2,3,7,8-PeCDD	**0.150**	0.0305	1	1	0.150
1,2,3,4,7,8-HxCDD	**0.221**	0.0681	1	0.1	0.0221
1,2,3,6,7,8-HxCDD	**0.857**	0.0571	1	0.1	0.0857
1,2,3,7,8,9-HxCDD	**0.533**	0.0683	1	0.1	0.0533
1,2,3,4,6,7,8-HpCDD	**55.3**	0.0588	1	0.01	0.553
OCDD	**2690**	0.0846	1	0.0003	0.807
1,2,3,7,8-PeCDF	ND	0.0388	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0352	1	0.3	
1,2,3,4,7,8-HxCDF	**0.178**	0.0540	1	0.1	0.0178
1,2,3,6,7,8-HxCDF	ND	0.0483	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0714	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0577	1	0.1	
1,2,3,4,6,7,8-HpCDF	**1.10**	0.0669	1	0.01	0.0110
1,2,3,4,7,8,9-HpCDF	ND	0.0901	1	0.01	
OCDF	**4.07**	0.0564	1	0.0003	0.00122
		Total TEQ			1.70

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1510
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB410607	**Units:**	ng/Kg
Lab Code:	E1001059-010	**Basis:**	Dry
		Percent Solids:	73.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0113
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.386g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209804	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0413	1.31			1
1,2,3,7,8-PeCDD	**0.182**	~~JK~~	0.0433	3.28	2.56	1.000	1
1,2,3,4,7,8-HxCDD	**0.325**	~~JK~~	0.0561	3.28	1.64	0.998	1
1,2,3,6,7,8-HxCDD	**0.618**	J	0.0471	3.28	1.42	1.000	1
1,2,3,7,8,9-HxCDD	**0.487**	~~JK~~	0.0563	3.28	1.46	1.008	1
1,2,3,4,6,7,8-HpCDD	**29.5**	~~B~~	0.194	3.28	1.06	1.000	1
OCDD	**1760**	~~BE~~ J-LR	0.0585	6.57	0.89	1.000	1
2,3,7,8-TCDF	**0.510**	~~CJ~~ Exclude-DT	0.0678	1.31	0.81	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0395	3.28			1
2,3,4,7,8-PeCDF	ND	U	0.0358	3.28			1
1,2,3,4,7,8-HxCDF	**0.240**	J	0.0973	3.28	1.17	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0869	3.28			1
1,2,3,7,8,9-HxCDF	ND	U	0.129	3.28			1
2,3,4,6,7,8-HxCDF	ND	U	0.104	3.28			1
1,2,3,4,6,7,8-HpCDF	**1.67**	~~BJ~~ J	0.114	3.28	0.99	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.154	3.28			1
OCDF	**5.23**	~~BJ~~ J	0.0483	6.57	0.88	1.004	1
Total Tetra-Dioxins	ND	U	0.0413	1.31			1
Total Penta-Dioxins	**0.885**	J	0.0433	3.28	1.42		1
Total Hexa-Dioxins	**7.91**		0.0471	3.28	1.28		1
Total Hepta-Dioxins	**67.8**		0.194	3.28	1.04		1
Total Tetra-Furans	**0.883**	J	0.0678	1.31	0.70		1
Total Penta-Furans	**2.91**	J	0.0358	3.28	1.59		1
Total Hexa-Furans	**1.41**	J	0.0869	3.28	1.31		1
Total Hepta-Furans	**5.29**		0.114	3.28	0.99		1

Wad Dish 12-27-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1510
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP410607 SB	**Units:**	Percent
Lab Code:	E1001059-010	**Basis:**	Dry
		Percent Solids:	73.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0113
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.386g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209804	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	623.153	62		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	560.397	56		40-135	1.59	1.181
13C-1,2,3,6,7,8-HxCDD	2500	1539.198	62		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1431.693	57		40-135	1.06	1.068
13C-OCDD	5000	2585.060	52		40-135	0.92	1.146
13C-2,3,7,8-TCDF	1000	517.587	52		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	634.421	63		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1338.977	54		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1344.602	54		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	602.134	75		40-135	NA	1.010

Ward Dick 12-23-10

Revised 12/22/2010

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1510
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP410607 SB	**Units:**	ng/Kg
Lab Code:	E1001059-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0413	1	1	
1,2,3,7,8-PeCDD	**0.182**	0.0433	1	1	0.182
1,2,3,4,7,8-HxCDD	**0.325**	0.0561	1	0.1	0.0325
1,2,3,6,7,8-HxCDD	**0.618**	0.0471	1	0.1	0.0618
1,2,3,7,8,9-HxCDD	**0.487**	0.0563	1	0.1	0.0487
1,2,3,4,6,7,8-HpCDD	**29.5**	0.194	1	0.01	0.295
OCDD	**1760**	0.0585	1	0.0003	0.528
2,3,7,8-TCDF	**0.381**	0.124	1	0.1	0.0381
1,2,3,7,8-PeCDF	ND	0.0395	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0358	1	0.3	
1,2,3,4,7,8-HxCDF	**0.240**	0.0973	1	0.1	0.0240
1,2,3,6,7,8-HxCDF	ND	0.0869	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.129	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.104	1	0.1	
1,2,3,4,6,7,8-HpCDF	**1.67**	0.114	1	0.01	0.0167
1,2,3,4,7,8,9-HpCDF	ND	0.154	1	0.01	
OCDF	**5.23**	0.0483	1	0.0003	0.00157
		Total TEQ			1.23

2005 WHO TEFs, ND = 0

Wade Duck 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1510
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP410607 SB	**Units:**	ng/Kg
Lab Code:	E1001059-010	**Basis:**	Dry
		Percent Solids:	73.3

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1323
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.386g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137904	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.381**	J	0.124	1.31	0.85	1.000	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	558.515	56		40-135	0.81	1.061
37Cl-2,3,7,8-TCDD	800	577.538	72		40-135	NA	0.989

Wash Dusk 12-27-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0855
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD13	**Units:**	ng/Kg
Lab Code:	E1001059-011	**Basis:**	Dry
		Percent Solids:	49.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0201
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209805	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0632	1.99			1
1,2,3,7,8-PeCDD	**0.0986**	JK X-EMPC	0.0717	4.98	0.87	1.001	1
1,2,3,4,7,8-HxCDD	**0.213**	JK X-IRIS	0.0827	4.98	0.99	0.999	1
1,2,3,6,7,8-HxCDD	**0.944**	J	0.0693	4.98	1.20	1.000	1
1,2,3,7,8,9-HxCDD	**0.599**	JK X-IRIS	0.0829	4.98	0.94	1.008	1
1,2,3,4,6,7,8-HpCDD	**40.4**	~~B~~	0.152	4.98	0.99	1.000	1
OCDD	**1490**	~~B~~	0.0747	9.96	0.88	1.000	1
2,3,7,8-TCDF	**0.617**	CJK Exclude-OT	0.0709	1.99	0.92	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0387	4.98			1
2,3,4,7,8-PeCDF	ND	U	0.0351	4.98			1
1,2,3,4,7,8-HxCDF	ND	U	0.0978	4.98			1
1,2,3,6,7,8-HxCDF	ND	U	0.0875	4.98			1
1,2,3,7,8,9-HxCDF	ND	U	0.130	4.98			1
2,3,4,6,7,8-HxCDF	ND	U	0.105	4.98			1
1,2,3,4,6,7,8-HpCDF	**2.98**	~~BJ~~ J	0.0932	4.98	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.126	4.98			1
OCDF	**9.44**	~~BJ~~ J	0.122	9.96	0.79	1.004	1
Total Tetra-Dioxins	**0.424**	J	0.0632	1.99	0.70		1
Total Penta-Dioxins	**0.333**	J	0.0717	4.98	1.32		1
Total Hexa-Dioxins	**8.67**		0.0693	4.98	1.08		1
Total Hepta-Dioxins	**119**		0.152	4.98	1.04		1
Total Tetra-Furans	**0.397**	J	0.0709	1.99	0.67		1
Total Penta-Furans	**0.799**	J	0.0351	4.98	1.46		1
Total Hexa-Furans	**2.93**	J	0.0875	4.98	1.19		1
Total Hepta-Furans	**9.90**		0.0932	4.98	1.00		1

Ward Dikas 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0855
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD13	**Units:**	Percent
Lab Code:	E1001059-011	**Basis:**	Dry
		Percent Solids:	49.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0201
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209805	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	674.199	67		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	613.433	61		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1531.236	61		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1531.234	61		40-135	1.05	1.068
13C-OCDD	5000	2584.598	52		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	530.486	53		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	704.877	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1386.879	55		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1420.736	57		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	652.617	82		40-135	NA	1.009

Ward Dick 12-22-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0855
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD13	**Units:**	ng/Kg
Lab Code:	E1001059-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0632	1	1	
1,2,3,7,8-PeCDD	**0.0986**	0.0717	1	1	0.0986
1,2,3,4,7,8-HxCDD	**0.213**	0.0827	1	0.1	0.0213
1,2,3,6,7,8-HxCDD	**0.944**	0.0693	1	0.1	0.0944
1,2,3,7,8,9-HxCDD	**0.599**	0.0829	1	0.1	0.0599
1,2,3,4,6,7,8-HpCDD	**40.4**	0.152	1	0.01	0.404
OCDD	**1490**	0.0747	1	0.0003	0.447
2,3,7,8-TCDF	ND	0.322	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0387	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0351	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0978	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0875	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.130	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,4,6,7,8-HpCDF	**2.98**	0.0932	1	0.01	0.0298
1,2,3,4,7,8,9-HpCDF	ND	0.126	1	0.01	
OCDF	**9.44**	0.122	1	0.0003	0.00283
		Total TEQ			1.16

2005 WHO TEFs, ND = 0

Wade Dick 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0855
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD13	**Units:**	ng/Kg
Lab Code:	E1001059-011	**Basis:**	Dry
		Percent Solids:	49.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1400
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.250g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137905	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Did not confirm. Appears to have not continued TWD

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.322	1.99			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	546.499	55		40-135	0.80	1.060
37Cl-2,3,7,8-TCDD	800	600.885	75		40-135	NA	0.988

Wade Duncan 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0910
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	1S66SD12	**Units:**	ng/Kg
Lab Code:	E1001059-012	**Basis:**	Dry
		Percent Solids:	61.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0250
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.703g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209806	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0485	1.39			1
1,2,3,7,8-PeCDD	ND	U	0.0266	3.47			1
1,2,3,4,7,8-HxCDD	ND	U	0.0811	3.47			1
1,2,3,6,7,8-HxCDD	**1.30**	J	0.0680	3.47	1.16	1.000	1
1,2,3,7,8,9-HxCDD	**0.248**	JK	0.0812	3.47	2.27	1.008	1
1,2,3,4,6,7,8-HpCDD	**69.6**	B	0.0423	3.47	1.01	1.000	1
OCDD	**1050**	B	0.0426	6.95	0.89	1.000	1
2,3,7,8-TCDF	**0.363**	CJ	0.0424	1.39	0.72	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0273	3.47			1
2,3,4,7,8-PeCDF	ND	U	0.0248	3.47			1
1,2,3,4,7,8-HxCDF	**0.113**	JK	0.0567	3.47	0.61	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0506	3.47			1
1,2,3,7,8,9-HxCDF	ND	U	0.0749	3.47			1
2,3,4,6,7,8-HxCDF	ND	U	0.0606	3.47			1
1,2,3,4,6,7,8-HpCDF	**4.92**	B	0.0901	3.47	0.93	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.394**	JK	0.122	3.47	0.80	1.033	1
OCDF	**33.0**	B	0.0567	6.95	0.85	1.004	1
Total Tetra-Dioxins	ND	U	0.0485	1.39			1
Total Penta-Dioxins	**0.591**	J	0.0266	3.47	1.55		1
Total Hexa-Dioxins	**12.8**		0.0680	3.47	1.27		1
Total Hepta-Dioxins	**253**		0.0423	3.47	1.03		1
Total Tetra-Furans	**0.363**	J	0.0424	1.39	0.72		1
Total Penta-Furans	**0.435**	J	0.0248	3.47	1.32		1
Total Hexa-Furans	**3.97**		0.0506	3.47	1.18		1
Total Hepta-Furans	**29.2**		0.0901	3.47	0.93		1

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0910
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD12	**Units:**	Percent
Lab Code:	E1001059-012	**Basis:**	Dry
		Percent Solids:	61.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/9/10 0250
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.703g	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5
Data File Name:	P209806	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209795

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	662.468	66		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	588.061	59		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1433.850	57		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1393.723	56		40-135	1.05	1.068
13C-OCDD	5000	2571.932	51		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	518.310	52		40-135	0.77	0.976
13C-1,2,3,7,8-PeCDF	1000	681.541	68		40-135	1.57	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1339.174	54		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1291.020	52		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	662.448	83		40-135	NA	1.009

Ward Decker 12-2-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0910
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD12	**Units:**	ng/Kg
Lab Code:	E1001059-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0485	1	1	
1,2,3,7,8-PeCDD	ND	0.0266	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0811	1	0.1	
1,2,3,6,7,8-HxCDD	**1.30**	0.0680	1	0.1	0.130
1,2,3,7,8,9-HxCDD	**0.248**	0.0812	1	0.1	0.0248
1,2,3,4,6,7,8-HpCDD	**69.6**	0.0423	1	0.01	0.696
OCDD	**1050**	0.0426	1	0.0003	0.315
2,3,7,8-TCDF	ND	0.233	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0273	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0248	1	0.3	
1,2,3,4,7,8-HxCDF	**0.113**	0.0567	1	0.1	0.0113
1,2,3,6,7,8-HxCDF	ND	0.0506	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0749	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0606	1	0.1	
1,2,3,4,6,7,8-HpCDF	**4.92**	0.0901	1	0.01	0.0492
1,2,3,4,7,8,9-HpCDF	**0.394**	0.122	1	0.01	0.00394
OCDF	**33.0**	0.0567	1	0.0003	0.00990
		Total TEQ			1.24

2005 WHO TEFs, ND = 0

Ward Tipton 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0910
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD12	**Units:**	ng/Kg
Lab Code:	E1001059-012	**Basis:**	Dry
		Percent Solids:	61.5

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1437
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.703g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137906	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	ND	U	0.233	1.39			1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	561.774	56		40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	675.214	84		40-135	NA	0.989

Wind Dickson 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD11	**Units:**	ng/Kg
Lab Code:	E1001059-013	**Basis:**	Dry
		Percent Solids:	67.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1328
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.097g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209817	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.0644**	~~JK~~ X-EMPC	0.0425	1.47	0.22	1.001	1
1,2,3,7,8-PeCDD	**0.165**	J	0.0434	3.67	1.47	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.0419	3.67			1
1,2,3,6,7,8-HxCDD	**0.685**	J	0.0381	3.67	1.27	1.000	1
1,2,3,7,8,9-HxCDD	**0.517**	J	0.0402	3.67	1.08	1.008	1
1,2,3,4,6,7,8-HpCDD	**18.4**	~~B~~	0.0286	3.67	1.00	1.000	1
OCDD	**495**	~~B~~	0.0259	7.35	0.89	1.000	1
2,3,7,8-TCDF	**0.488**	~~CJK~~ X-EMPC Exclude-OT	0.0338	1.47	0.62	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0710	3.67			1
2,3,4,7,8-PeCDF	**0.222**	~~JK~~ X-EMPC	0.0650	3.67	1.09	1.025	1
1,2,3,4,7,8-HxCDF	**0.182**	J	0.0975	3.67	1.21	1.000	1
1,2,3,6,7,8-HxCDF	**0.342**	J	0.0938	3.67	1.29	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.128	3.67			1
2,3,4,6,7,8-HxCDF	**0.346**	~~JK~~ X-EMPC	0.108	3.67	1.65	1.016	1
1,2,3,4,6,7,8-HpCDF	**1.72**	~~BJ~~ J	0.0778	3.67	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.169**	~~JK~~ X-EMPC	0.0950	3.67	0.71	1.033	1
OCDF	**5.64**	~~BJ~~ J	0.0192	7.35	0.90	1.004	1
Total Tetra-Dioxins	**0.390**	J	0.0425	1.47	0.82		1
Total Penta-Dioxins	**1.23**	J	0.0434	3.67	1.60		1
Total Hexa-Dioxins	**7.30**		0.0381	3.67	1.24		1
Total Hepta-Dioxins	**43.2**		0.0286	3.67	1.02		1
Total Tetra-Furans	**1.64**		0.0338	1.47	0.88		1
Total Penta-Furans	**16.8**		0.0650	3.67	1.50		1
Total Hexa-Furans	**9.59**		0.0938	3.67	1.35		1
Total Hepta-Furans	**5.87**		0.0778	3.67	1.01		1

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD11	**Units:**	Percent
Lab Code:	E1001059-013	**Basis:**	Dry
		Percent Solids:	67.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1328
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.097g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209817	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	709.853	71		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	634.241	63		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1515.603	61		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1605.143	64		40-135	1.05	1.069
13C-OCDD	5000	2991.397	60		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	574.337	57		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	767.131	77		40-135	1.56	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1520.766	61		40-135	0.51	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1639.988	66		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	611.207	76		40-135	NA	1.009

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD11	**Units:**	ng/Kg
Lab Code:	E1001059-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.0644**	0.0425	1	1	0.0644
1,2,3,7,8-PeCDD	**0.165**	0.0434	1	1	0.165
1,2,3,4,7,8-HxCDD	ND	0.0419	1	0.1	
1,2,3,6,7,8-HxCDD	**0.685**	0.0381	1	0.1	0.0685
1,2,3,7,8,9-HxCDD	**0.517**	0.0402	1	0.1	0.0517
1,2,3,4,6,7,8-HpCDD	**18.4**	0.0286	1	0.01	0.184
OCDD	**495**	0.0259	1	0.0003	0.149
2,3,7,8-TCDF	**0.402**	0.185	1	0.1	0.0402
1,2,3,7,8-PeCDF	ND	0.0710	1	0.03	
2,3,4,7,8-PeCDF	**0.222**	0.0650	1	0.3	0.0666
1,2,3,4,7,8-HxCDF	**0.182**	0.0975	1	0.1	0.0182
1,2,3,6,7,8-HxCDF	**0.342**	0.0938	1	0.1	0.0342
1,2,3,7,8,9-HxCDF	ND	0.128	1	0.1	
2,3,4,6,7,8-HxCDF	**0.346**	0.108	1	0.1	0.0346
1,2,3,4,6,7,8-HpCDF	**1.72**	0.0778	1	0.01	0.0172
1,2,3,4,7,8,9-HpCDF	**0.169**	0.0950	1	0.01	0.00169
OCDF	**5.64**	0.0192	1	0.0003	0.00169
		Total TEQ			0.897

2005 WHO TEFs, ND = 0

Dad Duke 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 0945
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD11	**Units:**	ng/Kg
Lab Code:	E1001059-013	**Basis:**	Dry
		Percent Solids:	67.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1549
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.097g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137907	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.402**	J	0.185	1.47	0.81	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	572.414	57		40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	597.700	75		40-135	NA	0.989

Dave Duncan 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1000
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD10	**Units:**	ng/Kg
Lab Code:	E1001059-014	**Basis:**	Dry
		Percent Solids:	52.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1416
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.969g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209818	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0481	1.75			1
1,2,3,7,8-PeCDD	ND	U	0.0579	4.38			1
1,2,3,4,7,8-HxCDD	ND	U	0.0569	4.38			1
1,2,3,6,7,8-HxCDD	**0.495**	JK	0.0518	4.38	1.47	1.000	1
1,2,3,7,8,9-HxCDD	**0.308**	J	0.0546	4.38	1.30	1.008	1
1,2,3,4,6,7,8-HpCDD	**22.7**	~~B~~	0.110	4.38	1.05	1.000	1
OCDD	**835**	~~B~~	0.0232	8.77	0.89	1.000	1
2,3,7,8-TCDF	**0.585**	CJK	0.0583	1.75	0.55	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0693	4.38			1
2,3,4,7,8-PeCDF	ND	U	0.0633	4.38			1
1,2,3,4,7,8-HxCDF	ND	U	0.0793	4.38			1
1,2,3,6,7,8-HxCDF	ND	U	0.0763	4.38			1
1,2,3,7,8,9-HxCDF	ND	U	0.105	4.38			1
2,3,4,6,7,8-HxCDF	ND	U	0.0872	4.38			1
1,2,3,4,6,7,8-HpCDF	**3.14**	~~BJ~~ J	0.117	4.38	1.14	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.309**	JK	0.143	4.38	0.83	1.033	1
OCDF	**14.2**	~~B~~	0.0726	8.77	0.87	1.004	1
Total Tetra-Dioxins	**0.437**	J	0.0481	1.75	0.82		1
Total Penta-Dioxins	**1.16**	J	0.0579	4.38	1.56		1
Total Hexa-Dioxins	**6.47**		0.0518	4.38	1.23		1
Total Hepta-Dioxins	**53.3**		0.110	4.38	1.04		1
Total Tetra-Furans	**0.428**	J	0.0583	1.75	0.70		1
Total Penta-Furans	**0.536**	J	0.0633	4.38	1.53		1
Total Hexa-Furans	**3.54**	J	0.0763	4.38	1.17		1
Total Hepta-Furans	**12.2**		0.117	4.38	1.14		1

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1000
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD10	**Units:**	Percent
Lab Code:	E1001059-014	**Basis:**	Dry
		Percent Solids:	52.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1416
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.969g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209818	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	650.561	65		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	549.096	55		40-135	1.56	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1486.443	59		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1639.117	66		40-135	1.04	1.069
13C-OCDD	5000	3318.064	66		40-135	0.89	1.147
13C-2,3,7,8-TCDF	1000	529.395	53		40-135	0.77	0.977
13C-1,2,3,7,8-PeCDF	1000	651.027	65		40-135	1.55	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1403.288	56		40-135	0.51	0.971
13C-1,2,3,4,6,7,8-HpCDF	2500	1573.224	63		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	579.664	72		40-135	NA	1.009

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1000
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD10	**Units:**	ng/Kg
Lab Code:	E1001059-014	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0481	1	1	
1,2,3,7,8-PeCDD	ND	0.0579	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0569	1	0.1	
1,2,3,6,7,8-HxCDD	**0.495**	0.0518	1	0.1	0.0495
1,2,3,7,8,9-HxCDD	**0.308**	0.0546	1	0.1	0.0308
1,2,3,4,6,7,8-HpCDD	**22.7**	0.110	1	0.01	0.227
OCDD	**835**	0.0232	1	0.0003	0.251
2,3,7,8-TCDF	**0.584**	0.253	1	0.1	0.0584
1,2,3,7,8-PeCDF	ND	0.0693	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0633	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0793	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0763	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.105	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0872	1	0.1	
1,2,3,4,6,7,8-HpCDF	**3.14**	0.117	1	0.01	0.0314
1,2,3,4,7,8,9-HpCDF	**0.309**	0.143	1	0.01	0.00309
OCDF	**14.2**	0.0726	1	0.0003	0.00426
		Total TEQ			0.655

2005 WHO TEFs, ND = 0

Ward Dinh 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1000
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD10	**Units:**	ng/Kg
Lab Code:	E1001059-014	**Basis:**	Dry
		Percent Solids:	52.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1615
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	10.969g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137908	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.584**	J	0.253	1.75	0.83	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	517.389	52		40-135	0.80	1.060
37Cl-2,3,7,8-TCDD	800	568.897	71		40-135	NA	0.988

12-22-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD09	**Units:**	ng/Kg
Lab Code:	E1001059-015	**Basis:**	Dry
		Percent Solids:	66.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1505
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.227g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209819	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0162	1.34			1
1,2,3,7,8-PeCDD	ND	U	0.0351	3.34			1
1,2,3,4,7,8-HxCDD	ND	U	0.0428	3.34			1
1,2,3,6,7,8-HxCDD	**0.299**	J	0.0390	3.34	1.41	1.000	1
1,2,3,7,8,9-HxCDD	**0.261**	J	0.0411	3.34	1.24	1.008	1
1,2,3,4,6,7,8-HpCDD	**12.6**	~~B~~	0.104	3.34	0.98	1.000	1
OCDD	**454**	~~B~~	0.0235	6.69	0.89	1.000	1
2,3,7,8-TCDF	**0.330**	CJ	0.0267	1.34	0.66	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.0292	3.34			1
2,3,4,7,8-PeCDF	ND	U	0.0268	3.34			1
1,2,3,4,7,8-HxCDF	**0.0728**	JK	0.0235	3.34	1.03	1.000	1
1,2,3,6,7,8-HxCDF	**0.0682**	JK	0.0225	3.34	1.50	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.0307	3.34			1
2,3,4,6,7,8-HxCDF	ND	U	0.0257	3.34			1
1,2,3,4,6,7,8-HpCDF	**0.883**	BJK	0.0747	3.34	0.78	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0913	3.34			1
OCDF	**5.21**	~~BJ~~ J	0.0153	6.69	0.80	1.004	1
Total Tetra-Dioxins	**0.549**	J	0.0162	1.34	0.77		1
Total Penta-Dioxins	**0.850**	J	0.0351	3.34	1.49		1
Total Hexa-Dioxins	**6.70**		0.0390	3.34	1.27		1
Total Hepta-Dioxins	**33.8**		0.104	3.34	0.99		1
Total Tetra-Furans	**0.560**	J	0.0267	1.34	0.76		1
Total Penta-Furans	ND	U	0.0268	3.34			1
Total Hexa-Furans	**0.320**	J	0.0225	3.34	1.08		1
Total Hepta-Furans	**2.75**	J	0.0747	3.34	1.14		1

exclude -DT

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Wade Dirk 12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD09	**Units:**	Percent
Lab Code:	E1001059-015	**Basis:**	Dry
		Percent Solids:	66.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1505
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.227g	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209819	**Blank File Name:**	P110925
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209811

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	665.245	67		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	590.652	59		40-135	1.57	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1387.319	55		40-135	1.24	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1479.461	59		40-135	1.03	1.068
13C-OCDD	5000	2613.969	52		40-135	0.90	1.146
13C-2,3,7,8-TCDF	1000	543.162	54		40-135	0.77	0.976
13C-1,2,3,7,8-PeCDF	1000	699.724	70		40-135	1.54	1.139
13C-1,2,3,4,7,8-HxCDF	2500	1312.523	53		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1482.626	59		40-135	0.43	1.045
37Cl-2,3,7,8-TCDD	800	589.222	74		40-135	NA	1.009

Ward Dunk 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD09	**Units:**	ng/Kg
Lab Code:	E1001059-015	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.0162	1	1	
1,2,3,7,8-PeCDD	ND	0.0351	1	1	
1,2,3,4,7,8-HxCDD	ND	0.0428	1	0.1	
1,2,3,6,7,8-HxCDD	**0.299**	0.0390	1	0.1	0.0299
1,2,3,7,8,9-HxCDD	**0.261**	0.0411	1	0.1	0.0261
1,2,3,4,6,7,8-HpCDD	**12.6**	0.104	1	0.01	0.126
OCDD	**454**	0.0235	1	0.0003	0.136
2,3,7,8-TCDF	**0.313**	0.131	1	0.1	0.0313
1,2,3,7,8-PeCDF	ND	0.0292	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0268	1	0.3	
1,2,3,4,7,8-HxCDF	**0.0728**	0.0235	1	0.1	0.00728
1,2,3,6,7,8-HxCDF	**0.0682**	0.0225	1	0.1	0.00682
1,2,3,7,8,9-HxCDF	ND	0.0307	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0257	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.883**	0.0747	1	0.01	0.00883
1,2,3,4,7,8,9-HpCDF	ND	0.0913	1	0.01	
OCDF	**5.21**	0.0153	1	0.0003	0.00156
		Total TEQ			0.374

2005 WHO TEFs, ND = 0

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD09	**Units:**	ng/Kg
Lab Code:	E1001059-015	**Basis:**	Dry
		Percent Solids:	66.6

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/11/10 1652
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	11.227g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137909	**Blank File Name:**	U137895
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137894

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.313**	J	0.131	1.34	0.85	1.000	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	547.350	55		40-135	0.80	1.060
37Cl-2,3,7,8-TCDD	800	566.701	71		40-135	NA	0.988

12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1045
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	1S66SD08	**Units:**	ng/Kg
Lab Code:	E1001059-016	**Basis:**	Dry
		Percent Solids:	40.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1215
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.579g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111007	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.248	2.32			1
1,2,3,7,8-PeCDD	ND	U	0.244	5.81			1
1,2,3,4,7,8-HxCDD	**0.461**	J	0.226	5.81	1.43	0.998	1
1,2,3,6,7,8-HxCDD	**1.05**	J	0.203	5.81	1.16	1.000	1
1,2,3,7,8,9-HxCDD	**0.919**	J	0.214	5.81	1.08	1.009	1
1,2,3,4,6,7,8-HpCDD	**38.9**	~~B~~	0.288	5.81	1.04	1.000	1
OCDD	**1790**	~~B~~	0.278	11.6	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.356	2.32			1
1,2,3,7,8-PeCDF	ND	U	0.191	5.81			1
2,3,4,7,8-PeCDF	ND	U	0.189	5.81			1
1,2,3,4,7,8-HxCDF	**0.493**	JK	0.243	5.81	1.02	1.000	1
1,2,3,6,7,8-HxCDF	**0.649**	J	0.230	5.81	1.41	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.309	5.81			1
2,3,4,6,7,8-HxCDF	**0.304**	JK	0.264	5.81	0.94	1.017	1
1,2,3,4,6,7,8-HpCDF	**3.35**	J	0.249	5.81	0.98	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.346	5.81			1
OCDF	**14.3**	~~B~~	0.318	11.6	0.91	1.004	1
Total Tetra-Dioxins	ND	U	0.248	2.32			1
Total Penta-Dioxins	**1.07**	J	0.244	5.81	1.37		1
Total Hexa-Dioxins	**15.1**		0.203	5.81	1.18		1
Total Hepta-Dioxins	**105**		0.288	5.81	1.01		1
Total Tetra-Furans	ND	U	0.356	2.32			1
Total Penta-Furans	**3.83**	J	0.189	5.81	1.63		1
Total Hexa-Furans	**5.35**	J	0.230	5.81	1.36		1
Total Hepta-Furans	**12.9**		0.249	5.81	0.98		1

12-23-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1045
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD08	**Units:**	Percent
Lab Code:	E1001059-016	**Basis:**	Dry
		Percent Solids:	40.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1215
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.579g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111007	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	586.199	59		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	667.470	67		40-135	1.62	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1540.710	62		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1553.645	62		40-135	1.06	1.069
13C-OCDD	5000	2350.831	47		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	573.191	57		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	707.837	71		40-135	1.60	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1485.536	59		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1553.594	62		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	596.653	75		40-135	NA	1.010

12-2-10

TWD 12/22/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1045
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD08	**Units:**	ng/Kg
Lab Code:	E1001059-016	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.248	1	1	
1,2,3,7,8-PeCDD	ND	0.244	1	1	
1,2,3,4,7,8-HxCDD	**0.461**	0.226	1	0.1	0.0461
1,2,3,6,7,8-HxCDD	**1.05**	0.203	1	0.1	0.105
1,2,3,7,8,9-HxCDD	**0.919**	0.214	1	0.1	0.0919
1,2,3,4,6,7,8-HpCDD	**38.9**	0.288	1	0.01	0.389
OCDD	**1790**	0.278	1	0.0003	0.537
2,3,7,8-TCDF	ND	0.356	1	0.1	
1,2,3,7,8-PeCDF	ND	0.191	1	0.03	
2,3,4,7,8-PeCDF	ND	0.189	1	0.3	
1,2,3,4,7,8-HxCDF	**0.493**	0.243	1	0.1	0.0493
1,2,3,6,7,8-HxCDF	**0.649**	0.230	1	0.1	0.0649
1,2,3,7,8,9-HxCDF	ND	0.309	1	0.1	
2,3,4,6,7,8-HxCDF	**0.304**	0.264	1	0.1	0.0304
1,2,3,4,6,7,8-HpCDF	**3.35**	0.249	1	0.01	0.0335
1,2,3,4,7,8,9-HpCDF	ND	0.346	1	0.01	
OCDF	**14.3**	0.318	1	0.0003	0.00429
		Total TEQ			1.35

2005 WHO TEFs. ND = 0

12-23-10

TWD 12/22/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1100
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD07	**Units:**	ng/Kg
Lab Code:	E1001062-001	**Basis:**	Dry
		Percent Solids:	69.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1438
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.183g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111010	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.261	1.29			1
1,2,3,7,8-PeCDD	ND	U	0.162	3.22			1
1,2,3,4,7,8-HxCDD	ND	U	0.166	3.22			1
1,2,3,6,7,8-HxCDD	ND	U	0.149	3.22			1
1,2,3,7,8,9-HxCDD	ND	U	0.157	3.22			1
1,2,3,4,6,7,8-HpCDD	**6.99**	~~B~~	0.143	3.22	1.04	1.000	1
OCDD	**334**	~~B~~ J-MSL	0.228	6.44	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.211	1.29			1
1,2,3,7,8-PeCDF	ND	U	0.152	3.22			1
2,3,4,7,8-PeCDF	ND	U	0.151	3.22			1
1,2,3,4,7,8-HxCDF	ND	U	0.107	3.22			1
1,2,3,6,7,8-HxCDF	ND	U	0.101	3.22			1
1,2,3,7,8,9-HxCDF	ND	U	0.136	3.22			1
2,3,4,6,7,8-HxCDF	ND	U	0.116	3.22			1
1,2,3,4,6,7,8-HpCDF	**0.753**	J	0.150	3.22	1.11	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.208	3.22			1
OCDF	**2.67**	~~BJ~~ J	0.275	6.44	0.96	1.004	1
Total Tetra-Dioxins	ND	U	0.261	1.29			1
Total Penta-Dioxins	ND	U	0.162	3.22			1
Total Hexa-Dioxins	**2.70**	J	0.149	3.22	1.29		1
Total Hepta-Dioxins	**18.3**		0.143	3.22	1.07		1
Total Tetra-Furans	ND	U	0.211	1.29			1
Total Penta-Furans	**0.324**	J	0.151	3.22	1.55		1
Total Hexa-Furans	**0.433**	J	0.101	3.22	1.23		1
Total Hepta-Furans	**2.17**	J	0.150	3.22	1.11		1

Ward Duke 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1100
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD07	**Units:**	Percent
Lab Code:	E1001062-001	**Basis:**	Dry
		Percent Solids:	69.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1438
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.183g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111010	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	536.530	54		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	641.419	64		40-135	1.59	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1534.509	61		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1523.698	61		40-135	1.06	1.069
13C-OCDD	5000	2085.262	42		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	553.071	55		40-135	0.78	0.976
13C-1,2,3,7,8-PeCDF	1000	663.837	66		40-135	1.60	1.143
13C-1,2,3,4,7,8-HxCDF	2500	1492.950	60		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1573.748	63		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	535.119	67		40-135	NA	1.010

Wade Dickinson 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1100
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD07	**Units:**	ng/Kg
Lab Code:	E1001062-001	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.261	1	1	
1,2,3,7,8-PeCDD	ND	0.162	1	1	
1,2,3,4,7,8-HxCDD	ND	0.166	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.149	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.157	1	0.1	
1,2,3,4,6,7,8-HpCDD	**6.99**	0.143	1	0.01	0.0699
OCDD	**334**	0.228	1	0.0003	0.100
2,3,7,8-TCDF	ND	0.211	1	0.1	
1,2,3,7,8-PeCDF	ND	0.152	1	0.03	
2,3,4,7,8-PeCDF	ND	0.151	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.107	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.101	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.136	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.116	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.753**	0.150	1	0.01	0.00753
1,2,3,4,7,8,9-HpCDF	ND	0.208	1	0.01	
OCDF	**2.67**	0.275	1	0.0003	0.000801
		Total TEQ			0.178

2005 WHO TEFs, ND = 0

Ward Ducker 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1115
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD06	**Units:**	ng/Kg
Lab Code:	E1001062-002	**Basis:**	Dry
		Percent Solids:	70.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1302
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.857g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111008	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.154	1.30			1
1,2,3,7,8-PeCDD	ND	U	0.152	3.25			1
1,2,3,4,7,8-HxCDD	ND	U	0.166	3.25			1
1,2,3,6,7,8-HxCDD	**0.320**	J	0.149	3.25	1.29	1.000	1
1,2,3,7,8,9-HxCDD	**0.353**	J	0.158	3.25	1.34	1.009	1
1,2,3,4,6,7,8-HpCDD	**11.3**	~~B~~	0.132	3.25	1.09	1.000	1
OCDD	**560**	~~B~~	0.249	6.50	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.188	1.30			1
1,2,3,7,8-PeCDF	ND	U	0.113	3.25			1
2,3,4,7,8-PeCDF	ND	U	0.112	3.25			1
1,2,3,4,7,8-HxCDF	**0.151**	J	0.0743	3.25	1.21	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.0703	3.25			1
1,2,3,7,8,9-HxCDF	ND	U	0.0945	3.25			1
2,3,4,6,7,8-HxCDF	ND	U	0.0807	3.25			1
1,2,3,4,6,7,8-HpCDF	**0.963**	J	0.0938	3.25	0.96	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.131	3.25			1
OCDF	**3.68**	~~BJ~~ J	0.202	6.50	0.93	1.004	1
Total Tetra-Dioxins	ND	U	0.154	1.30			1
Total Penta-Dioxins	**1.03**	J	0.152	3.25	1.43		1
Total Hexa-Dioxins	**7.14**		0.149	3.25	1.27		1
Total Hepta-Dioxins	**30.1**		0.132	3.25	1.08		1
Total Tetra-Furans	ND	U	0.188	1.30			1
Total Penta-Furans	**0.617**	J	0.112	3.25	1.58		1
Total Hexa-Furans	**0.817**	J	0.0703	3.25	1.17		1
Total Hepta-Furans	**2.87**	J	0.0938	3.25	0.96		1

Ward Dick 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1115
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD06	**Units:**	Percent
Lab Code:	E1001062-002	**Basis:**	Dry
		Percent Solids:	70.8

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1302
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.857g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111008	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	596.632	60		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	687.592	69		40-135	1.61	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1635.436	65		40-135	1.28	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1663.313	67		40-135	1.06	1.069
13C-OCDD	5000	2206.659	44		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	619.846	62		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	747.960	75		40-135	1.59	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1593.139	64		40-135	0.52	0.969
13C-1,2,3,4,6,7,8-HpCDF	2500	1639.381	66		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	609.321	76		40-135	NA	1.010

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1115
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD06	**Units:**	ng/Kg
Lab Code:	E1001062-002	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.154	1	1	
1,2,3,7,8-PeCDD	ND	0.152	1	1	
1,2,3,4,7,8-HxCDD	ND	0.166	1	0.1	
1,2,3,6,7,8-HxCDD	**0.320**	0.149	1	0.1	0.0320
1,2,3,7,8,9-HxCDD	**0.353**	0.158	1	0.1	0.0353
1,2,3,4,6,7,8-HpCDD	**11.3**	0.132	1	0.01	0.113
OCDD	**560**	0.249	1	0.0003	0.168
2,3,7,8-TCDF	ND	0.188	1	0.1	
1,2,3,7,8-PeCDF	ND	0.113	1	0.03	
2,3,4,7,8-PeCDF	ND	0.112	1	0.3	
1,2,3,4,7,8-HxCDF	**0.151**	0.0743	1	0.1	0.0151
1,2,3,6,7,8-HxCDF	ND	0.0703	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0945	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0807	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.963**	0.0938	1	0.01	0.00963
1,2,3,4,7,8,9-HpCDF	ND	0.131	1	0.01	
OCDF	**3.68**	0.202	1	0.0003	0.00110
		Total TEQ			0.374

2005 WHO TEFs, ND = 0

Ward Welch 12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1120
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD06P	**Units:**	ng/Kg
Lab Code:	E1001062-003	**Basis:**	Dry
		Percent Solids:	73.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1350
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.189g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111009	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.143	1.21			1
1,2,3,7,8-PeCDD	ND	U	0.117	3.02			1
1,2,3,4,7,8-HxCDD	ND	U	0.164	3.02			1
1,2,3,6,7,8-HxCDD	**0.263**	J	0.147	3.02	1.24	1.000	1
1,2,3,7,8,9-HxCDD	**0.303**	~~JK~~	0.156	3.02	1.75	1.009	1
1,2,3,4,6,7,8-HpCDD	**9.79**	~~B~~	0.179	3.02	1.02	1.000	1
OCDD	**576**	~~B~~	0.224	6.05	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.170	1.21			1
1,2,3,7,8-PeCDF	ND	U	0.112	3.02			1
2,3,4,7,8-PeCDF	ND	U	0.111	3.02			1
1,2,3,4,7,8-HxCDF	ND	U	0.142	3.02			1
1,2,3,6,7,8-HxCDF	ND	U	0.135	3.02			1
1,2,3,7,8,9-HxCDF	ND	U	0.181	3.02			1
2,3,4,6,7,8-HxCDF	ND	U	0.155	3.02			1
1,2,3,4,6,7,8-HpCDF	**0.896**	J	0.0886	3.02	1.10	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.123	3.02			1
OCDF	**3.31**	~~BJ~~ J	0.177	6.05	1.01	1.004	1
Total Tetra-Dioxins	**0.572**	J	0.143	1.21	0.85		1
Total Penta-Dioxins	**0.570**	J	0.117	3.02	1.41		1
Total Hexa-Dioxins	**5.05**		0.147	3.02	1.29		1
Total Hepta-Dioxins	**28.7**		0.179	3.02	1.09		1
Total Tetra-Furans	ND	U	0.170	1.21			1
Total Penta-Furans	**0.372**	J	0.111	3.02	1.50		1
Total Hexa-Furans	**1.10**	J	0.135	3.02	1.38		1
Total Hepta-Furans	**2.55**	J	0.0886	3.02	1.10		1

12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1120
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SD06P	**Units:**	Percent
Lab Code:	E1001062-003	**Basis:**	Dry
		Percent Solids:	73.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1350
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.189g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111009	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111005

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	587.381	59		40-135	0.79	1.009
13C-1,2,3,7,8-PeCDD	1000	663.038	66		40-135	1.57	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1622.244	65		40-135	1.28	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1598.948	64		40-135	1.08	1.069
13C-OCDD	5000	2200.574	44		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	594.510	59		40-135	0.80	0.976
13C-1,2,3,7,8-PeCDF	1000	679.560	68		40-135	1.64	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1545.663	62		40-135	0.52	0.969
13C-1,2,3,4,6,7,8-HpCDF	2500	1622.505	65		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	584.626	73		40-135	NA	1.010

Ward Denk 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1120
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	1S66SD06P	**Units:**	ng/Kg
Lab Code:	E1001062-003	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.143	1	1	
1,2,3,7,8-PeCDD	ND	0.117	1	1	
1,2,3,4,7,8-HxCDD	ND	0.164	1	0.1	
1,2,3,6,7,8-HxCDD	**0.263**	0.147	1	0.1	0.0263
1,2,3,7,8,9-HxCDD	**0.303**	0.156	1	0.1	0.0303
1,2,3,4,6,7,8-HpCDD	**9.79**	0.179	1	0.01	0.0979
OCDD	**576**	0.224	1	0.0003	0.173
2,3,7,8-TCDF	ND	0.170	1	0.1	
1,2,3,7,8-PeCDF	ND	0.112	1	0.03	
2,3,4,7,8-PeCDF	ND	0.111	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.142	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.135	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.181	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.155	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.896**	0.0886	1	0.01	0.00896
1,2,3,4,7,8,9-HpCDF	ND	0.123	1	0.01	
OCDF	**3.31**	0.177	1	0.0003	0.000993
		Total TEQ			0.337

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1005
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP230001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001062-004	**Basis:**	Dry
		Percent Solids:	88.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1949
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.532g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111016	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.166	1.08			1
1,2,3,7,8-PeCDD	ND	U	0.144	2.69			1
1,2,3,4,7,8-HxCDD	**0.254**	J	0.148	2.69	1.24	0.998	1
1,2,3,6,7,8-HxCDD	**0.698**	J	0.133	2.69	1.25	1.001	1
1,2,3,7,8,9-HxCDD	**0.535**	~~JK~~ X-THIS	0.141	2.69	1.51	1.009	1
1,2,3,4,6,7,8-HpCDD	**20.6**	~~B~~	0.207	2.69	1.04	1.000	1
OCDD	**1960**	~~BE~~ J-LR	0.170	5.38	0.89	1.000	1
2,3,7,8-TCDF	**1.25**	~~C~~ Exclude-OT	0.191	1.08	0.69	1.002	1
1,2,3,7,8-PeCDF	**0.378**	J	0.174	2.69	1.37	1.001	1
2,3,4,7,8-PeCDF	**0.612**	J	0.173	2.69	1.52	1.027	1
1,2,3,4,7,8-HxCDF	**1.02**	J	0.108	2.69	1.31	1.000	1
1,2,3,6,7,8-HxCDF	**0.401**	J	0.102	2.69	1.38	1.003	1
1,2,3,7,8,9-HxCDF	ND	U	0.137	2.69			1
2,3,4,6,7,8-HxCDF	**0.587**	J	0.117	2.69	1.29	1.018	1
1,2,3,4,6,7,8-HpCDF	**2.84**		0.0871	2.69	1.10	1.000	1
1,2,3,4,7,8,9-HpCDF	**0.269**	J	0.121	2.69	1.16	1.034	1
OCDF	**6.68**	~~B~~	0.187	5.38	0.84	1.004	1
Total Tetra-Dioxins	**0.711**	J	0.166	1.08	0.73		1
Total Penta-Dioxins	ND	U	0.144	2.69			1
Total Hexa-Dioxins	**7.56**		0.133	2.69	1.25		1
Total Hepta-Dioxins	**55.1**		0.207	2.69	1.08		1
Total Tetra-Furans	**3.51**		0.191	1.08	0.79		1
Total Penta-Furans	**6.76**		0.173	2.69	1.71		1
Total Hexa-Furans	**5.71**		0.102	2.69	1.27		1
Total Hepta-Furans	**4.58**		0.0871	2.69	1.10		1

Wed Duke 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1005
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS230001	**Units:**	Percent
Lab Code:	E1001062-004	**Basis:**	Dry
		Percent Solids:	88.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 1949
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.532g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111016	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	631.238	63		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	641.983	64		40-135	1.63	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1573.938	63		40-135	1.27	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1764.740	71		40-135	1.05	1.069
13C-OCDD	5000	2857.346	57		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	621.887	62		40-135	0.80	0.976
13C-1,2,3,7,8-PeCDF	1000	701.791	70		40-135	1.61	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1468.826	59		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1758.133	70		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	653.371	82		40-135	NA	1.010

Edward Dickey 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1005
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS230001	**Units:**	ng/Kg
Lab Code:	E1001062-004	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.166	1	1	
1,2,3,7,8-PeCDD	ND	0.144	1	1	
1,2,3,4,7,8-HxCDD	**0.254**	0.148	1	0.1	0.0254
1,2,3,6,7,8-HxCDD	**0.698**	0.133	1	0.1	0.0698
1,2,3,7,8,9-HxCDD	**0.535**	0.141	1	0.1	0.0535
1,2,3,4,6,7,8-HpCDD	**20.6**	0.207	1	0.01	0.206
OCDD	**1960**	0.170	1	0.0003	0.588
2,3,7,8-TCDF	**0.780**	0.162	1	0.1	0.0780
1,2,3,7,8-PeCDF	**0.378**	0.174	1	0.03	0.0113
2,3,4,7,8-PeCDF	**0.612**	0.173	1	0.3	0.184
1,2,3,4,7,8-HxCDF	**1.02**	0.108	1	0.1	0.102
1,2,3,6,7,8-HxCDF	**0.401**	0.102	1	0.1	0.0401
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	**0.587**	0.117	1	0.1	0.0587
1,2,3,4,6,7,8-HpCDF	**2.84**	0.0871	1	0.01	0.0284
1,2,3,4,7,8,9-HpCDF	**0.269**	0.121	1	0.01	0.00269
OCDF	**6.68**	0.187	1	0.0003	0.00200
		Total TEQ			1.45

2005 WHO TEFs. ND = 0

Wendi Dick 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1005
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP230001 SS	**Units:**	ng/Kg
Lab Code:	E1001062-004	**Basis:**	Dry
		Percent Solids:	88.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/16/10 1249
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.532g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137953	**Blank File Name:**	U137950
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137949

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.780**	J	0.162	1.08	0.80	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	551.870	55		40-135	0.80	1.061
37Cl-2,3,7,8-TCDD	800	611.090	76		40-135	NA	0.989

Ward Duke 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB231516	**Units:**	ng/Kg
Lab Code:	E1001062-005	**Basis:**	Dry
		Percent Solids:	80.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2037
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.221g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111017	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**0.854**	J	0.208	1.11	0.78	1.001	1
1,2,3,7,8-PeCDD	ND	U	0.191	2.77			1
1,2,3,4,7,8-HxCDD	ND	U	0.101	2.77			1
1,2,3,6,7,8-HxCDD	**1.52**	J	0.0906	2.77	1.31	1.000	1
1,2,3,7,8,9-HxCDD	**4.72**		0.0958	2.77	1.33	1.008	1
1,2,3,4,6,7,8-HpCDD	**111**	~~B~~	0.106	2.77	1.05	1.000	1
OCDD	**3960**	BJ-LR	0.158	5.54	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.188	1.11			1
1,2,3,7,8-PeCDF	ND	U	0.141	2.77			1
2,3,4,7,8-PeCDF	ND	U	0.140	2.77			1
1,2,3,4,7,8-HxCDF	ND	U	0.0720	2.77			1
1,2,3,6,7,8-HxCDF	ND	U	0.0681	2.77			1
1,2,3,7,8,9-HxCDF	ND	U	0.0915	2.77			1
2,3,4,6,7,8-HxCDF	ND	U	0.0782	2.77			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.116	2.77			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.161	2.77			1
OCDF	ND	U	0.182	5.54			1
Total Tetra-Dioxins	**118**		0.208	1.11	0.78		1
Total Penta-Dioxins	**120**		0.191	2.77	1.68		1
Total Hexa-Dioxins	**328**		0.0906	2.77	1.27		1
Total Hepta-Dioxins	**573**		0.106	2.77	1.05		1
Total Tetra-Furans	ND	U	0.188	1.11			1
Total Penta-Furans	ND	U	0.140	2.77			1
Total Hexa-Furans	ND	U	0.0681	2.77			1
Total Hepta-Furans	ND	U	0.116	2.77			1

Ward Denton 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB231516	**Units:**	Percent
Lab Code:	E1001062-005	**Basis:**	Dry
		Percent Solids:	80.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2037
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.221g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111017	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	543.262	54		40-135	0.77	1.009
13C-1,2,3,7,8-PeCDD	1000	666.036	67		40-135	1.63	1.185
13C-1,2,3,6,7,8-HxCDD	2500	1429.848	57		40-135	1.25	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1490.110	60		40-135	1.03	1.069
13C-OCDD	5000	2144.897	43		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	557.155	56		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	695.946	70		40-135	1.62	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1325.116	53		40-135	0.51	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1401.224	56		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	552.305	69		40-135	NA	1.010

Wanda Tuh 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1015
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP231516 SB	**Units:**	ng/Kg
Lab Code:	E1001062-005	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	**0.854**	0.208	1	1	0.854
1,2,3,7,8-PeCDD	ND	0.191	1	1	
1,2,3,4,7,8-HxCDD	ND	0.101	1	0.1	
1,2,3,6,7,8-HxCDD	**1.52**	0.0906	1	0.1	0.152
1,2,3,7,8,9-HxCDD	**4.72**	0.0958	1	0.1	0.472
1,2,3,4,6,7,8-HpCDD	**111**	0.106	1	0.01	1.11
OCDD	**3960**	0.158	1	0.0003	1.19
2,3,7,8-TCDF	ND	0.188	1	0.1	
1,2,3,7,8-PeCDF	ND	0.141	1	0.03	
2,3,4,7,8-PeCDF	ND	0.140	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0720	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0681	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0915	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0782	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.116	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.161	1	0.01	
OCDF	ND	0.182	1	0.0003	
		Total TEQ			3.78

2005 WHO TEFs, ND = 0

Wade Kirsh 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1105
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP220001 SS	**Units:**	ng/Kg
Lab Code:	E1001062-006	**Basis:**	Dry
		Percent Solids:	80.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2124
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.348g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111018	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.197	1.09			1
1,2,3,7,8-PeCDD	ND	U	0.143	2.73			1
1,2,3,4,7,8-HxCDD	**0.220**	J	0.154	2.73	1.34	0.998	1
1,2,3,6,7,8-HxCDD	**0.520**	J	0.138	2.73	1.37	1.000	1
1,2,3,7,8,9-HxCDD	**0.289**	~~JK~~ X-EMPC	0.146	2.73	0.78	1.008	1
1,2,3,4,6,7,8-HpCDD	**12.6**	~~B~~	0.170	2.73	1.03	1.001	1
OCDD	**802**	~~B~~	0.177	5.46	0.90	1.000	1
2,3,7,8-TCDF	**1.16**	CEXclude-DT	0.245	1.09	0.86	1.001	1
1,2,3,7,8-PeCDF	ND	U	0.164	2.73			1
2,3,4,7,8-PeCDF	ND	U	0.163	2.73			1
1,2,3,4,7,8-HxCDF	**0.660**	J	0.0781	2.73	1.41	1.000	1
1,2,3,6,7,8-HxCDF	**0.211**	~~JK~~ X-IRIS	0.0739	2.73	1.03	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.0993	2.73			1
2,3,4,6,7,8-HxCDF	**0.282**	~~JK~~ X-IRIS	0.0848	2.73	1.48	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.40**	J	0.107	2.73	1.08	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.149	2.73			1
OCDF	**2.44**	~~BJ~~ J	0.165	5.46	0.89	1.004	1
Total Tetra-Dioxins	**0.482**	J	0.197	1.09	0.85		1
Total Penta-Dioxins	**0.898**	J	0.143	2.73	1.43		1
Total Hexa-Dioxins	**5.21**		0.138	2.73	1.41		1
Total Hepta-Dioxins	**30.0**		0.170	2.73	1.08		1
Total Tetra-Furans	**1.67**		0.245	1.09	0.86		1
Total Penta-Furans	**1.71**	J	0.163	2.73	1.41		1
Total Hexa-Furans	**2.10**	J	0.0739	2.73	1.29		1
Total Hepta-Furans	**1.40**	J	0.107	2.73	1.08		1

David Duke 12-22-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1105
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SS220001	**Units:**	Percent
Lab Code:	E1001062-006	**Basis:**	Dry
		Percent Solids:	80.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2124
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.348g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111018	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	561.172	56		40-135	0.78	1.009
13C-1,2,3,7,8-PeCDD	1000	690.854	69		40-135	1.60	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1407.737	56		40-135	1.29	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1486.735	59		40-135	1.08	1.069
13C-OCDD	5000	2345.315	47		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	541.118	54		40-135	0.80	0.976
13C-1,2,3,7,8-PeCDF	1000	705.082	71		40-135	1.62	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1326.136	53		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1480.765	59		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	585.139	73		40-135	NA	1.010

12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1105
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP220001 (SS)	**Units:**	ng/Kg
Lab Code:	E1001062-006	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.197	1	1	
1,2,3,7,8-PeCDD	ND	0.143	1	1	
1,2,3,4,7,8-HxCDD	**0.220**	0.154	1	0.1	0.0220
1,2,3,6,7,8-HxCDD	**0.520**	0.138	1	0.1	0.0520
1,2,3,7,8,9-HxCDD	**0.289**	0.146	1	0.1	0.0289
1,2,3,4,6,7,8-HpCDD	**12.6**	0.170	1	0.01	0.126
OCDD	**802**	0.177	1	0.0003	0.241
2,3,7,8-TCDF	**0.703**	0.177	1	0.1	0.0703
1,2,3,7,8-PeCDF	ND	0.164	1	0.03	
2,3,4,7,8-PeCDF	ND	0.163	1	0.3	
1,2,3,4,7,8-HxCDF	**0.660**	0.0781	1	0.1	0.0660
1,2,3,6,7,8-HxCDF	**0.211**	0.0739	1	0.1	0.0211
1,2,3,7,8,9-HxCDF	ND	0.0993	1	0.1	
2,3,4,6,7,8-HxCDF	**0.282**	0.0848	1	0.1	0.0282
1,2,3,4,6,7,8-HpCDF	**1.40**	0.107	1	0.01	0.0140
1,2,3,4,7,8,9-HpCDF	ND	0.149	1	0.01	
OCDF	**2.44**	0.165	1	0.0003	0.000732
		Total TEQ			0.670

2005 WHO TEFs, ND = 0

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1105
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS220001	**Units:**	ng/Kg
Lab Code:	E1001062-006	**Basis:**	Dry
		Percent Solids:	80.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/16/10 1326
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.348g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-225
Data File Name:	U137954	**Blank File Name:**	U137950
ICAL Date:	12/17/07	**Cal Ver. File Name:**	U137949

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDF	**0.703**	JK	0.177	1.09	0.92	1.001	1

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDF	1000	467.839	47		40-135	0.81	1.060
37Cl-2,3,7,8-TCDD	800	543.478	68		40-135	NA	0.989

Ward Dish 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1110
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~22P0001 SS	**Units:**	ng/Kg
Lab Code:	E1001062-007	**Basis:**	Dry
		Percent Solids:	67.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2212
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.485g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111019	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q		EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U		0.216	1.29			1
1,2,3,7,8-PeCDD	ND	U		0.215	3.23			1
1,2,3,4,7,8-HxCDD	ND	U		0.211	3.23			1
1,2,3,6,7,8-HxCDD	ND	U		0.190	3.23			1
1,2,3,7,8,9-HxCDD	ND	U		0.201	3.23			1
1,2,3,4,6,7,8-HpCDD	**8.63**	~~B~~		0.138	3.23	0.96	1.000	1
OCDD	**700**	~~B~~		0.240	6.46	0.90	1.000	1
2,3,7,8-TCDF	ND	U		0.217	1.29			1
1,2,3,7,8-PeCDF	ND	U		0.197	3.23			1
2,3,4,7,8-PeCDF	ND	U		0.195	3.23			1
1,2,3,4,7,8-HxCDF	**0.244**	J		0.0897	3.23	1.13	1.000	1
1,2,3,6,7,8-HxCDF	ND	U		0.0848	3.23			1
1,2,3,7,8,9-HxCDF	ND	U		0.114	3.23			1
2,3,4,6,7,8-HxCDF	ND	U		0.0973	3.23			1
1,2,3,4,6,7,8-HpCDF	**0.581**	J		0.127	3.23	0.88	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U		0.176	3.23			1
OCDF	**1.30**	~~BJ~~	J	0.178	6.46	0.80	1.004	1
Total Tetra-Dioxins	ND	U		0.216	1.29			1
Total Penta-Dioxins	ND	U		0.215	3.23			1
Total Hexa-Dioxins	**1.35**	J		0.190	3.23	1.32		1
Total Hepta-Dioxins	**18.5**			0.138	3.23	1.09		1
Total Tetra-Furans	ND	U		0.217	1.29			1
Total Penta-Furans	**0.624**	J		0.195	3.23	1.64		1
Total Hexa-Furans	**0.244**	J		0.0848	3.23	1.13		1
Total Hepta-Furans	**0.232**	J		0.127	3.23	0.91		1

Ward Dirk 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1110
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP22P0001 (SS)	**Units:**	Percent
Lab Code:	E1001062-007	**Basis:**	Dry
		Percent Solids:	67.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2212
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.485g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111019	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	575.372	58		40-135	0.79	1.010
13C-1,2,3,7,8-PeCDD	1000	737.995	74		40-135	1.61	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1504.125	60		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1691.098	68		40-135	1.05	1.069
13C-OCDD	5000	2301.158	46		40-135	0.89	1.147
13C-2,3,7,8-TCDF	1000	559.864	56		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	787.601	79		40-135	1.62	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1489.168	60		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1566.855	63		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	585.121	73		40-135	NA	1.010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1110
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	SS 1S66~~FF~~22P0001	**Units:**	ng/Kg
Lab Code:	E1001062-007	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.216	1	1	
1,2,3,7,8-PeCDD	ND	0.215	1	1	
1,2,3,4,7,8-HxCDD	ND	0.211	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.190	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.201	1	0.1	
1,2,3,4,6,7,8-HpCDD	**8.63**	0.138	1	0.01	0.0863
OCDD	**700**	0.240	1	0.0003	0.210
2,3,7,8-TCDF	ND	0.217	1	0.1	
1,2,3,7,8-PeCDF	ND	0.197	1	0.03	
2,3,4,7,8-PeCDF	ND	0.195	1	0.3	
1,2,3,4,7,8-HxCDF	**0.244**	0.0897	1	0.1	0.0244
1,2,3,6,7,8-HxCDF	ND	0.0848	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.114	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0973	1	0.1	
1,2,3,4,6,7,8-HpCDF	**0.581**	0.127	1	0.01	0.00581
1,2,3,4,7,8,9-HpCDF	ND	0.176	1	0.01	
OCDF	**1.30**	0.178	1	0.0003	0.000390
		Total TEQ			0.327

2005 WHO TEFs, ND = 0

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1130
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	SB IS66DP221112	**Units:**	ng/Kg
Lab Code:	E1001062-008	**Basis:**	Dry
		Percent Solids:	74.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2300
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.387g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111020	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.207	1.30			1
1,2,3,7,8-PeCDD	ND	U	0.180	3.25			1
1,2,3,4,7,8-HxCDD	ND	U	0.131	3.25			1
1,2,3,6,7,8-HxCDD	**1.09**	J	0.118	3.25	1.34	1.001	1
1,2,3,7,8,9-HxCDD	**1.24**	JK-Y-JR15	0.125	3.25	1.03	1.009	1
1,2,3,4,6,7,8-HpCDD	**27.0**	B	0.167	3.25	1.06	1.000	1
OCDD	**248**	B	0.244	6.51	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.164	1.30			1
1,2,3,7,8-PeCDF	ND	U	0.183	3.25			1
2,3,4,7,8-PeCDF	ND	U	0.181	3.25			1
1,2,3,4,7,8-HxCDF	ND	U	0.0854	3.25			1
1,2,3,6,7,8-HxCDF	ND	U	0.0807	3.25			1
1,2,3,7,8,9-HxCDF	ND	U	0.109	3.25			1
2,3,4,6,7,8-HxCDF	ND	U	0.0927	3.25			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.106	3.25			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.147	3.25			1
OCDF	ND	U	0.241	6.51			1
Total Tetra-Dioxins	**2.91**		0.207	1.30	0.85		1
Total Penta-Dioxins	**2.93**	J	0.180	3.25	1.49		1
Total Hexa-Dioxins	**13.3**		0.118	3.25	1.28		1
Total Hepta-Dioxins	**48.9**		0.167	3.25	1.02		1
Total Tetra-Furans	ND	U	0.164	1.30			1
Total Penta-Furans	ND	U	0.181	3.25			1
Total Hexa-Furans	ND	U	0.0807	3.25			1
Total Hepta-Furans	ND	U	0.106	3.25			1

Ward, Dusk 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1130
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP221112 SB	**Units:**	Percent
Lab Code:	E1001062-008	**Basis:**	Dry
		Percent Solids:	74.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2300
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.387g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111020	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	553.772	55		40-135	0.77	1.010
13C-1,2,3,7,8-PeCDD	1000	608.039	61		40-135	1.62	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1649.870	66		40-135	1.26	0.991
13C-1,2,3,4,6,7,8-HpCDD	2500	1677.924	67		40-135	1.08	1.069
13C-OCDD	5000	2576.837	52		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	551.209	55		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	637.266	64		40-135	1.58	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1509.000	60		40-135	0.52	0.969
13C-1,2,3,4,6,7,8-HpCDF	2500	1710.325	68		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	554.669	69		40-135	NA	1.010

Ward Deeb 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1130
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP221112 SB	**Units:**	ng/Kg
Lab Code:	E1001062-008	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.207	1	1	
1,2,3,7,8-PeCDD	ND	0.180	1	1	
1,2,3,4,7,8-HxCDD	ND	0.131	1	0.1	
1,2,3,6,7,8-HxCDD	**1.09**	0.118	1	0.1	0.109
1,2,3,7,8,9-HxCDD	**1.24**	0.125	1	0.1	0.124
1,2,3,4,6,7,8-HpCDD	**27.0**	0.167	1	0.01	0.270
OCDD	**248**	0.244	1	0.0003	0.0744
2,3,7,8-TCDF	ND	0.164	1	0.1	
1,2,3,7,8-PeCDF	ND	0.183	1	0.03	
2,3,4,7,8-PeCDF	ND	0.181	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0854	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0807	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.109	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0927	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.106	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.147	1	0.01	
OCDF	ND	0.241	1	0.0003	
		Total TEQ			0.577

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1135
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~22P1112 SB	**Units:**	ng/Kg
Lab Code:	E1001062-009	**Basis:**	Dry
		Percent Solids:	75.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2347
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.319g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111021	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.163	1.16			1
1,2,3,7,8-PeCDD	ND	U	0.181	2.91			1
1,2,3,4,7,8-HxCDD	ND	U	0.150	2.91			1
1,2,3,6,7,8-HxCDD	**0.541**	J	0.134	2.91	1.22	1.000	1
1,2,3,7,8,9-HxCDD	**0.599**	J	0.142	2.91	1.21	1.008	1
1,2,3,4,6,7,8-HpCDD	**17.5**	~~B~~	0.124	2.91	1.10	1.000	1
OCDD	**189**	~~B~~	0.159	5.82	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.214	1.16			1
1,2,3,7,8-PeCDF	ND	U	0.151	2.91			1
2,3,4,7,8-PeCDF	ND	U	0.150	2.91			1
1,2,3,4,7,8-HxCDF	ND	U	0.0904	2.91			1
1,2,3,6,7,8-HxCDF	ND	U	0.0855	2.91			1
1,2,3,7,8,9-HxCDF	ND	U	0.115	2.91			1
2,3,4,6,7,8-HxCDF	ND	U	0.0982	2.91			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0637	2.91			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0885	2.91			1
OCDF	ND	U	0.193	5.82			1
Total Tetra-Dioxins	**1.46**		0.163	1.16	0.76		1
Total Penta-Dioxins	**2.15**	J	0.181	2.91	1.43		1
Total Hexa-Dioxins	**8.35**		0.134	2.91	1.33		1
Total Hepta-Dioxins	**35.8**		0.124	2.91	1.05		1
Total Tetra-Furans	ND	U	0.214	1.16			1
Total Penta-Furans	ND	U	0.150	2.91			1
Total Hexa-Furans	ND	U	0.0855	2.91			1
Total Hepta-Furans	ND	U	0.0637	2.91			1

Chad Dale 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1135
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP22P1112 SB	**Units:**	Percent
Lab Code:	E1001062-009	**Basis:**	Dry
		Percent Solids:	75.9

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/14/10 2347
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.319g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111021	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	617.383	62		40-135	0.80	1.009
13C-1,2,3,7,8-PeCDD	1000	670.896	67		40-135	1.64	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1828.363	73		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1808.438	72		40-135	1.07	1.069
13C-OCDD	5000	2635.520	53		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	625.551	63		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	661.651	66		40-135	1.65	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1580.618	63		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1880.646	75		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	609.334	76		40-135	NA	1.010

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1135
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP22P1112 SB	**Units:**	ng/Kg
Lab Code:	E1001062-009	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.163	1	1	
1,2,3,7,8-PeCDD	ND	0.181	1	1	
1,2,3,4,7,8-HxCDD	ND	0.150	1	0.1	
1,2,3,6,7,8-HxCDD	**0.541**	0.134	1	0.1	0.0541
1,2,3,7,8,9-HxCDD	**0.599**	0.142	1	0.1	0.0599
1,2,3,4,6,7,8-HpCDD	**17.5**	0.124	1	0.01	0.175
OCDD	**189**	0.159	1	0.0003	0.0567
2,3,7,8-TCDF	ND	0.214	1	0.1	
1,2,3,7,8-PeCDF	ND	0.151	1	0.03	
2,3,4,7,8-PeCDF	ND	0.150	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0904	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0855	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.115	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0982	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0637	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0885	1	0.01	
OCDF	ND	0.193	1	0.0003	
		Total TEQ			0.346

2005 WHO TEFs, ND = 0

Ward Link 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1235
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS250001	**Units:**	ng/Kg
Lab Code:	E1001062-010	**Basis:**	Dry
		Percent Solids:	65.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0035
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.509g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111022	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.290	1.46			1
1,2,3,7,8-PeCDD	ND	U	0.176	3.66			1
1,2,3,4,7,8-HxCDD	**0.297**	J	0.170	3.66	1.14	0.998	1
1,2,3,6,7,8-HxCDD	**0.529**	J	0.153	3.66	1.36	1.000	1
1,2,3,7,8,9-HxCDD	**0.576**	~~JK~~ X-IR15	0.162	3.66	1.04	1.009	1
1,2,3,4,6,7,8-HpCDD	**12.5**	~~B~~	0.220	3.66	1.03	1.000	1
OCDD	**491**	~~B~~	0.214	7.32	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.278	1.46			1
1,2,3,7,8-PeCDF	ND	U	0.167	3.66			1
2,3,4,7,8-PeCDF	ND	U	0.166	3.66			1
1,2,3,4,7,8-HxCDF	**0.593**	J	0.140	3.66	1.10	1.000	1
1,2,3,6,7,8-HxCDF	**0.262**	~~JK~~ X-IR15	0.132	3.66	1.54	1.004	1
1,2,3,7,8,9-HxCDF	ND	U	0.178	3.66			1
2,3,4,6,7,8-HxCDF	**0.386**	~~JK~~ X-IR15	0.152	3.66	1.49	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.70**	J	0.0817	3.66	1.02	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.114	3.66			1
OCDF	**4.60**	~~BJ~~ J	0.294	7.32	0.85	1.004	1
Total Tetra-Dioxins	ND	U	0.290	1.46			1
Total Penta-Dioxins	ND	U	0.176	3.66			1
Total Hexa-Dioxins	**5.71**		0.153	3.66	1.14		1
Total Hepta-Dioxins	**33.9**		0.220	3.66	1.05		1
Total Tetra-Furans	ND	U	0.278	1.46			1
Total Penta-Furans	**2.60**	J	0.166	3.66	1.72		1
Total Hexa-Furans	**2.43**	J	0.132	3.66	1.21		1
Total Hepta-Furans	**1.70**	J	0.0817	3.66	1.02		1

12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1235
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP250001 (SS)	**Units:**	Percent
Lab Code:	E1001062-010	**Basis:**	Dry
		Percent Solids:	65.0

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0035
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.509g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111022	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	611.748	61		40-135	0.79	1.010
13C-1,2,3,7,8-PeCDD	1000	747.062	75		40-135	1.65	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1538.103	62		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1534.448	61		40-135	1.07	1.070
13C-OCDD	5000	2179.049	44		40-135	0.92	1.148
13C-2,3,7,8-TCDF	1000	614.987	61		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	768.589	77		40-135	1.62	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1415.578	57		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1534.017	61		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	610.237	76		40-135	NA	1.010

Ward Duke 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1235
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS250001	**Units:**	ng/Kg
Lab Code:	E1001062-010	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.290	1	1	
1,2,3,7,8-PeCDD	ND	0.176	1	1	
1,2,3,4,7,8-HxCDD	**0.297**	0.170	1	0.1	0.0297
1,2,3,6,7,8-HxCDD	**0.529**	0.153	1	0.1	0.0529
1,2,3,7,8,9-HxCDD	**0.576**	0.162	1	0.1	0.0576
1,2,3,4,6,7,8-HpCDD	**12.5**	0.220	1	0.01	0.125
OCDD	**491**	0.214	1	0.0003	0.147
2,3,7,8-TCDF	ND	0.278	1	0.1	
1,2,3,7,8-PeCDF	ND	0.167	1	0.03	
2,3,4,7,8-PeCDF	ND	0.166	1	0.3	
1,2,3,4,7,8-HxCDF	**0.593**	0.140	1	0.1	0.0593
1,2,3,6,7,8-HxCDF	**0.262**	0.132	1	0.1	0.0262
1,2,3,7,8,9-HxCDF	ND	0.178	1	0.1	
2,3,4,6,7,8-HxCDF	**0.386**	0.152	1	0.1	0.0386
1,2,3,4,6,7,8-HpCDF	**1.70**	0.0817	1	0.01	0.0170
1,2,3,4,7,8,9-HpCDF	ND	0.114	1	0.01	
OCDF	**4.60**	0.294	1	0.0003	0.00138
		Total TEQ			0.555

2005 WHO TEFs, ND = 0

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1245
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB251011	**Units:**	ng/Kg
Lab Code:	E1001062-011	**Basis:**	Dry
		Percent Solids:	78.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0123
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.411g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111023	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.253	1.22			1
1,2,3,7,8-PeCDD	ND	U	0.247	3.05			1
1,2,3,4,7,8-HxCDD	ND	U	0.364	3.05			1
1,2,3,6,7,8-HxCDD	ND	U	0.327	3.05			1
1,2,3,7,8,9-HxCDD	**1.32**	J	0.346	3.05	1.34	1.008	1
1,2,3,4,6,7,8-HpCDD	**30.3**	~~B~~	0.129	3.05	1.08	1.000	1
OCDD	**651**	~~B~~	0.201	6.10	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.180	1.22			1
1,2,3,7,8-PeCDF	ND	U	0.205	3.05			1
2,3,4,7,8-PeCDF	ND	U	0.203	3.05			1
1,2,3,4,7,8-HxCDF	ND	U	0.104	3.05			1
1,2,3,6,7,8-HxCDF	ND	U	0.0976	3.05			1
1,2,3,7,8,9-HxCDF	ND	U	0.132	3.05			1
2,3,4,6,7,8-HxCDF	ND	U	0.112	3.05			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.106	3.05			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.146	3.05			1
OCDF	ND	U	0.238	6.10			1
Total Tetra-Dioxins	**37.5**		0.253	1.22	0.80		1
Total Penta-Dioxins	**14.0**		0.247	3.05	1.36		1
Total Hexa-Dioxins	**45.8**		0.327	3.05	1.24		1
Total Hepta-Dioxins	**120**		0.129	3.05	1.08		1
Total Tetra-Furans	ND	U	0.180	1.22			1
Total Penta-Furans	ND	U	0.203	3.05			1
Total Hexa-Furans	ND	U	0.0976	3.05			1
Total Hepta-Furans	ND	U	0.106	3.05			1

12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1245
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP251011 SB	**Units:**	Percent
Lab Code:	E1001062-011	**Basis:**	Dry
		Percent Solids:	78.7

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0123
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	10.411g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111023	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	521.370	52		40-135	0.81	1.010
13C-1,2,3,7,8-PeCDD	1000	528.295	53		40-135	1.65	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1584.679	63		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1616.794	65		40-135	1.07	1.070
13C-OCDD	5000	2403.324	48		40-135	0.91	1.147
13C-2,3,7,8-TCDF	1000	527.691	53		40-135	0.81	0.978
13C-1,2,3,7,8-PeCDF	1000	583.204	58		40-135	1.67	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1394.471	56		40-135	0.53	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1659.617	66		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	514.763	64		40-135	NA	1.010

Ward Winkler 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1245
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SB251011	**Units:**	ng/Kg
Lab Code:	E1001062-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.253	1	1	
1,2,3,7,8-PeCDD	ND	0.247	1	1	
1,2,3,4,7,8-HxCDD	ND	0.364	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.327	1	0.1	
1,2,3,7,8,9-HxCDD	**1.32**	0.346	1	0.1	0.132
1,2,3,4,6,7,8-HpCDD	**30.3**	0.129	1	0.01	0.303
OCDD	**651**	0.201	1	0.0003	0.195
2,3,7,8-TCDF	ND	0.180	1	0.1	
1,2,3,7,8-PeCDF	ND	0.205	1	0.03	
2,3,4,7,8-PeCDF	ND	0.203	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.104	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0976	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.132	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.112	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.106	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.146	1	0.01	
OCDF	ND	0.238	1	0.0003	
		Total TEQ			0.630

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1345
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66~~DP~~SS240001	**Units:**	ng/Kg
Lab Code:	E1001062-012	**Basis:**	Dry
		Percent Solids:	81.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0210
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.221g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111024	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.223	1.10			1
1,2,3,7,8-PeCDD	ND	U	0.174	2.74			1
1,2,3,4,7,8-HxCDD	**0.363**	J	0.104	2.74	1.18	0.998	1
1,2,3,6,7,8-HxCDD	**0.641**	~~JK~~ EMPC	0.0926	2.74	1.45	1.000	1
1,2,3,7,8,9-HxCDD	**0.565**	J	0.0979	2.74	1.40	1.009	1
1,2,3,4,6,7,8-HpCDD	**24.5**	~~B~~	0.292	2.74	1.07	1.000	1
OCDD	**1790**	~~BE~~ J-LR	0.219	5.49	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.228	1.10			1
1,2,3,7,8-PeCDF	ND	U	0.139	2.74			1
2,3,4,7,8-PeCDF	ND	U	0.138	2.74			1
1,2,3,4,7,8-HxCDF	**0.426**	J	0.160	2.74	1.19	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.151	2.74			1
1,2,3,7,8,9-HxCDF	ND	U	0.203	2.74			1
2,3,4,6,7,8-HxCDF	**0.232**	J	0.173	2.74	1.12	1.018	1
1,2,3,4,6,7,8-HpCDF	**1.71**	J	0.0886	2.74	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.124	2.74			1
OCDF	**5.45**	~~BJ~~ J	0.235	5.49	1.00	1.004	1
Total Tetra-Dioxins	ND	U	0.223	1.10			1
Total Penta-Dioxins	**0.494**	J	0.174	2.74	1.36		1
Total Hexa-Dioxins	**5.78**		0.0926	2.74	1.10		1
Total Hepta-Dioxins	**54.6**		0.292	2.74	1.10		1
Total Tetra-Furans	**0.715**	J	0.228	1.10	0.88		1
Total Penta-Furans	**1.69**	J	0.138	2.74	1.68		1
Total Hexa-Furans	**1.83**	J	0.151	2.74	1.19		1
Total Hepta-Furans	**3.67**		0.0886	2.74	1.00		1

Ward Dick 12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1345
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP240001 SS	**Units:**	Percent
Lab Code:	E1001062-012	**Basis:**	Dry
		Percent Solids:	81.2

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0210
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.221g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111024	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	575.436	58		40-135	0.78	1.010
13C-1,2,3,7,8-PeCDD	1000	689.768	69		40-135	1.59	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1326.414	53		40-135	1.28	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1403.160	56		40-135	1.07	1.070
13C-OCDD	5000	2089.511	42		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	534.970	53		40-135	0.79	0.977
13C-1,2,3,7,8-PeCDF	1000	727.481	73		40-135	1.64	1.145
13C-1,2,3,4,7,8-HxCDF	2500	1291.690	52		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1371.702	55		40-135	0.44	1.046
37Cl-2,3,7,8-TCDD	800	597.841	75		40-135	NA	1.011

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1345
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66SP240001	**Units:**	ng/Kg
Lab Code:	E1001062-012	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.223	1	1	
1,2,3,7,8-PeCDD	ND	0.174	1	1	
1,2,3,4,7,8-HxCDD	**0.363**	0.104	1	0.1	0.0363
1,2,3,6,7,8-HxCDD	**0.641**	0.0926	1	0.1	0.0641
1,2,3,7,8,9-HxCDD	**0.565**	0.0979	1	0.1	0.0565
1,2,3,4,6,7,8-HpCDD	**24.5**	0.292	1	0.01	0.245
OCDD	**1790**	0.219	1	0.0003	0.537
2,3,7,8-TCDF	ND	0.228	1	0.1	
1,2,3,7,8-PeCDF	ND	0.139	1	0.03	
2,3,4,7,8-PeCDF	ND	0.138	1	0.3	
1,2,3,4,7,8-HxCDF	**0.426**	0.160	1	0.1	0.0426
1,2,3,6,7,8-HxCDF	ND	0.151	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.203	1	0.1	
2,3,4,6,7,8-HxCDF	**0.232**	0.173	1	0.1	0.0232
1,2,3,4,6,7,8-HpCDF	**1.71**	0.0886	1	0.01	0.0171
1,2,3,4,7,8,9-HpCDF	ND	0.124	1	0.01	
OCDF	**5.45**	0.235	1	0.0003	0.00164
		Total TEQ			1.02

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1350
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP240708 SB	**Units:**	ng/Kg
Lab Code:	E1001062-013	**Basis:**	Dry
		Percent Solids:	93.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0258
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.913g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111025	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.193	0.899			1
1,2,3,7,8-PeCDD	ND	U	0.164	2.25			1
1,2,3,4,7,8-HxCDD	ND	U	0.270	2.25			1
1,2,3,6,7,8-HxCDD	**0.430**	J	0.242	2.25	1.14	1.000	1
1,2,3,7,8,9-HxCDD	**0.749**	J	0.256	2.25	1.09	1.008	1
1,2,3,4,6,7,8-HpCDD	**22.2**	~~B~~	0.201	2.25	1.08	1.000	1
OCDD	**1250**	BEJ-2R	0.180	4.49	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.183	0.899			1
1,2,3,7,8-PeCDF	ND	U	0.145	2.25			1
2,3,4,7,8-PeCDF	ND	U	0.143	2.25			1
1,2,3,4,7,8-HxCDF	ND	U	0.0878	2.25			1
1,2,3,6,7,8-HxCDF	ND	U	0.0830	2.25			1
1,2,3,7,8,9-HxCDF	ND	U	0.112	2.25			1
2,3,4,6,7,8-HxCDF	ND	U	0.0953	2.25			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0994	2.25			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.138	2.25			1
OCDF	ND	U	0.179	4.49			1
Total Tetra-Dioxins	**0.438**	J	0.193	0.899	0.82		1
Total Penta-Dioxins	**3.09**		0.164	2.25	1.78		1
Total Hexa-Dioxins	**28.0**		0.242	2.25	1.23		1
Total Hepta-Dioxins	**86.0**		0.201	2.25	1.06		1
Total Tetra-Furans	ND	U	0.183	0.899			1
Total Penta-Furans	ND	U	0.143	2.25			1
Total Hexa-Furans	ND	U	0.0830	2.25			1
Total Hepta-Furans	ND	U	0.0994	2.25			1

Wendi Dicker 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1350
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP240708 SB	**Units:**	Percent
Lab Code:	E1001062-013	**Basis:**	Dry
		Percent Solids:	93.4

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/15/10 0258
Prep Method:	Method	**Date Extracted:**	10/6/10
Sample Amount:	11.913g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5
Data File Name:	P111025	**Blank File Name:**	P111006
ICAL Date:	09/11/09	**Cal Ver. File Name:**	P111013

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	520.795	52		40-135	0.76	1.009
13C-1,2,3,7,8-PeCDD	1000	741.792	74		40-135	1.65	1.186
13C-1,2,3,6,7,8-HxCDD	2500	1532.329	61		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1522.207	61		40-135	1.07	1.069
13C-OCDD	5000	2012.244	40		40-135	0.90	1.147
13C-2,3,7,8-TCDF	1000	528.925	53		40-135	0.80	0.977
13C-1,2,3,7,8-PeCDF	1000	782.102	78		40-135	1.61	1.144
13C-1,2,3,4,7,8-HxCDF	2500	1388.903	56		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1519.592	61		40-135	0.44	1.045
37Cl-2,3,7,8-TCDD	800	533.473	67		40-135	NA	1.010

12-23-10

Client:	CH2M Hill	**Service Request:**	E1001062
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1350
Sample Matrix:	Soil	**Date Received:**	10/ 2/10
Sample Name:	IS66DP240708 SB	**Units:**	ng/Kg
Lab Code:	E1001062-013	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.193	1	1	
1,2,3,7,8-PeCDD	ND	0.164	1	1	
1,2,3,4,7,8-HxCDD	ND	0.270	1	0.1	
1,2,3,6,7,8-HxCDD	**0.430**	0.242	1	0.1	0.0430
1,2,3,7,8,9-HxCDD	**0.749**	0.256	1	0.1	0.0749
1,2,3,4,6,7,8-HpCDD	**22.2**	0.201	1	0.01	0.222
OCDD	**1250**	0.180	1	0.0003	0.375
2,3,7,8-TCDF	ND	0.183	1	0.1	
1,2,3,7,8-PeCDF	ND	0.145	1	0.03	
2,3,4,7,8-PeCDF	ND	0.143	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.0878	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0830	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.112	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0953	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.0994	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.138	1	0.01	
OCDF	ND	0.179	1	0.0003	
		Total TEQ			0.715

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	Service Request:	E1001042
Project:	Indian Head - Site 39 Feb'10	Date Collected:	9/27/10 1445
Sample Matrix:	Water	Date Received:	9/28/10
Sample Name:	ISo6FB092710	Units:	pg/L
Lab Code:	E1001042-009	Basis:	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.271	1	1	
1,2,3,7,8-PeCDD	ND	0.301	1	1	
1,2,3,4,7,8-HxCDD	ND	0.288	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.252	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.275	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.295	1	0.01	
OCDD	3.54	0.421 B-MB4	1	0.0003	0.00106
2,3,7,8-TCDF	ND	0.411	1	0.1	
1,2,3,7,8-PeCDF	ND	0.381	1	0.03	
2,3,4,7,8-PeCDF	ND	0.377	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.110	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.105	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.137	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.117	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.228	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.309	1	0.01	
OCDF	ND	0.568	1	0.0003	
		Total TEQ			0.00106

2005 WHO TEFs, ND = 0

Ward Link 12-23-10

TWD 12/23/2010

Analytical Report

Client: CH2M Hill
Project: Indian Head - Site on SWMU
Sample Matrix: Water

Sample Name: ISooFB092710
Lab Code: E1001042-009

Service Request: E1001042
Date Collected: 9/27/10 1445
Date Received: 9/28/10

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method
Sample Amount: 1020mL

Data File Name: P209715
ICAL Date: 08/01/08

Date Analyzed: 10/5/10 1256
Date Extracted: 9/30/10
Instrument Name: E-HRMS-04
GC Column: DB-5
Blank File Name: P209714
Cal Ver. File Name: P209713

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	641.773	64		40-135	0.79	1.008
13C-1,2,3,7,8-PeCDD	1000	747.011	75		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1812.083	72		40-135	1.27	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1602.195	64		40-135	1.06	1.068
13C-OCDD	5000	2165.257	43		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	607.162	61		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	697.334	70		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1658.315	66		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1484.918	59		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	644.137	81		40-135	NA	1.010

Ward Denk 12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	pg/L
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2239
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209777	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.331	10.4			1
1,2,3,7,8-PeCDD	ND	U	0.263	26.0			1
1,2,3,4,7,8-HxCDD	ND	U	0.322	26.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.269	26.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.325	26.0			1
1,2,3,4,6,7,8-HpCDD	**0.691**	JK	0.178	26.0	1.49	1.000	1
OCDD	**4.43**	BJ	0.266	52.1	1.02	1.000	1
2,3,7,8-TCDF	ND	U	0.363	10.4			1
1,2,3,7,8-PeCDF	ND	U	0.225	26.0			1
2,3,4,7,8-PeCDF	ND	U	0.207	26.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.211	26.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.196	26.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.291	26.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.234	26.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.356	26.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.470	26.0			1
OCDF	ND	U	0.481	52.1			1
Total Tetra-Dioxins	ND	U	0.331	10.4			1
Total Penta-Dioxins	ND	U	0.263	26.0			1
Total Hexa-Dioxins	ND	U	0.269	26.0			1
Total Hepta-Dioxins	ND	U	0.178	26.0			1
Total Tetra-Furans	ND	U	0.363	10.4			1
Total Penta-Furans	ND	U	0.207	26.0			1
Total Hexa-Furans	ND	U	0.196	26.0			1
Total Hepta-Furans	ND	U	0.356	26.0			1

Wmd. Dlw 12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	Percent
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/7/10 2239
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	960mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209777	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	625.226	63		40-135	0.78	1.008
13C-1,2,3,7,8-PeCDD	1000	596.233	60		40-135	1.58	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1386.414	55		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1318.265	53		40-135	1.07	1.068
13C-OCDD	5000	2189.523	44		40-135	0.91	1.146
13C-2,3,7,8-TCDF	1000	539.006	54		40-135	0.79	0.976
13C-1,2,3,7,8-PeCDF	1000	666.513	67		40-135	1.59	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1402.965	56		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1421.445	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	654.623	82		40-135	NA	1.009

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-01

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	10/ 1/10 1535
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB01-100110	**Units:**	pg/L
Lab Code:	E1001059-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.331	1	1	
1,2,3,7,8-PeCDD	ND	0.263	1	1	
1,2,3,4,7,8-HxCDD	ND	0.322	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.269	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.325	1	0.1	
1,2,3,4,6,7,8-HpCDD	**0.691**	0.178	1	0.01	0.00691
OCDD	**4.43**	0.266	1	0.0003	0.00133
2,3,7,8-TCDF	ND	0.363	1	0.1	
1,2,3,7,8-PeCDF	ND	0.225	1	0.03	
2,3,4,7,8-PeCDF	ND	0.207	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.211	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.196	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.291	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.234	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.356	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.470	1	0.01	
OCDF	ND	0.481	1	0.0003	
		Total TEQ			0.00824

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	pg/L
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0016
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209779	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.395	9.80			1
1,2,3,7,8-PeCDD	ND	U	0.227	24.5			1
1,2,3,4,7,8-HxCDD	ND	U	0.306	24.5			1
1,2,3,6,7,8-HxCDD	ND	U	0.255	24.5			1
1,2,3,7,8,9-HxCDD	ND	U	0.309	24.5			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.206	24.5			1
OCDD	2.88	BJK	0.457	49.0	1.09	1.000	1
2,3,7,8-TCDF	ND	U	0.525	9.80			1
1,2,3,7,8-PeCDF	ND	U	0.174	24.5			1
2,3,4,7,8-PeCDF	ND	U	0.159	24.5			1
1,2,3,4,7,8-HxCDF	ND	U	0.100	24.5			1
1,2,3,6,7,8-HxCDF	ND	U	0.0932	24.5			1
1,2,3,7,8,9-HxCDF	ND	U	0.139	24.5			1
2,3,4,6,7,8-HxCDF	ND	U	0.111	24.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.224	24.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.296	24.5			1
OCDF	ND	U	0.610	49.0			1
Total Tetra-Dioxins	ND	U	0.395	9.80			1
Total Penta-Dioxins	ND	U	0.227	24.5			1
Total Hexa-Dioxins	ND	U	0.255	24.5			1
Total Hepta-Dioxins	ND	U	0.206	24.5			1
Total Tetra-Furans	ND	U	0.525	9.80			1
Total Penta-Furans	ND	U	0.159	24.5			1
Total Hexa-Furans	ND	U	0.0932	24.5			1
Total Hepta-Furans	ND	U	0.224	24.5			1

12-23-10

TWD 12/23/2010

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	Percent
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	10/8/10 0016
Prep Method:	Method	**Date Extracted:**	10/5/10
Sample Amount:	1020mL	**Instrument Name:**	E-HRMS-04
		GC Column:	db5
Data File Name:	P209779	**Blank File Name:**	P209772
ICAL Date:	08/01/08	**Cal Ver. File Name:**	P209770

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	1000	626.031	63		40-135	0.77	1.008
13C-1,2,3,7,8-PeCDD	1000	608.620	61		40-135	1.60	1.180
13C-1,2,3,6,7,8-HxCDD	2500	1407.642	56		40-135	1.26	0.992
13C-1,2,3,4,6,7,8-HpCDD	2500	1340.209	54		40-135	1.06	1.068
13C-OCDD	5000	1967.896	39	Y	40-135	0.89	1.146
13C-2,3,7,8-TCDF	1000	527.206	53		40-135	0.78	0.977
13C-1,2,3,7,8-PeCDF	1000	684.703	68		40-135	1.58	1.140
13C-1,2,3,4,7,8-HxCDF	2500	1400.047	56		40-135	0.52	0.970
13C-1,2,3,4,6,7,8-HpCDF	2500	1427.592	57		40-135	0.45	1.045
37Cl-2,3,7,8-TCDD	800	664.453	83		40-135	NA	1.009

12-23-10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

EB-02

Client:	CH2M Hill	**Service Request:**	E1001059
Project:	Indian Head - Site 66/386329	**Date Collected:**	9/30/10 1235
Sample Matrix:	Water	**Date Received:**	10/ 2/10
Sample Name:	IS66EB02-093010	**Units:**	pg/L
Lab Code:	E1001059-003	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method: 8290
Prep Method: Method

Analyte Name	Result	DL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.395	1	1	
1,2,3,7,8-PeCDD	ND	0.227	1	1	
1,2,3,4,7,8-HxCDD	ND	0.306	1	0.1	
1,2,3,6,7,8-HxCDD	ND	0.255	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.309	1	0.1	
1,2,3,4,6,7,8-HpCDD	ND	0.206	1	0.01	
OCDD	**2.88**	0.457	1	0.0003	0.000864
2,3,7,8-TCDF	ND	0.525	1	0.1	
1,2,3,7,8-PeCDF	ND	0.174	1	0.03	
2,3,4,7,8-PeCDF	ND	0.159	1	0.3	
1,2,3,4,7,8-HxCDF	ND	0.100	1	0.1	
1,2,3,6,7,8-HxCDF	ND	0.0932	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.139	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.111	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.224	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.296	1	0.01	
OCDF	ND	0.610	1	0.0003	
		Total TEQ			0.000864

2005 WHO TEFs, ND = 0

12-23-10

TWD 12/23/2010

Appendix F
Raw Analytical Data

Table F-1
Surface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001	IS66SS290001	IS66SS300001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10
Chemical Name																				
Volatile Organic Compounds (UG/KG)																				
1,1,1-Trichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,1,2,2-Tetrachloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,1,2-Trichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,1-Dichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,1-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2,4-Trichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2-Dibromo-3-chloropropane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2-Dibromoethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2-Dichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,2-Dichloropropane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,3-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
1,4-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
2-Butanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	14 UJ	14 UJ	15 UJ	12 J	18 UJ	15 UL	15 UL	12 U	15 UL	14 UL
2-Hexanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	14 UJ	14 UJ	15 UJ	15 UJ	18 UJ	15 UL	15 UL	12 U	15 UL	14 UL
4-Methyl-2-pentanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	14 UJ	14 UJ	15 UJ	15 U	18 UJ	15 UL	15 UL	12 U	15 UL	14 UL
Acetone	12 U	10 U	10 U	13 U	10 U	7 B	15 B	10 U	10 U	7 B	45 J	54 J	67 J	380 J	55 J	15 B	19 B	76 J	16 B	18 L
Benzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Bromodichloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Bromoform	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Bromomethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
Carbon disulfide	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	1.2 B	1.2 B	1.3 B	1.7 B	2.2 B	1.6 B	1.7 B	1.6 B	1.7 B	1.3 B
Carbon tetrachloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Chlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Chloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
Chloroform	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	3 J	4.6 J	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Chloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
cis-1,2-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
cis-1,3-Dichloropropene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Cyclohexane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Dibromochloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Dichlorodifluoromethane (Freon-12)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
Ethylbenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Isopropylbenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Methyl acetate	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	3.3 UJ	3.3 UJ	3.7 J	3.6 U	4.2 UJ	3.6 UL	3.6 UL	3 U	3.6 UL	3.3 UL
Methylcyclohexane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Methylene chloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	14 UJ	14 UJ	15 UJ	15 U	18 UJ	15 UL	15 UL	12 U	15 UL	14 UL
Methyl-tert-butyl ether (MTBE)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Styrene	12 U	10 U	10 U	13 U	10 U	10 U	16	10 U	10 U	11 U	2.8 UJ	2.8 UJ	5.6 J	3 UJ	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Tetrachloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	8.6 J	6.9 J	6.3 J	7.6 J	10 J	11 J	5.4 J	5.8 J	7.1 J	3.1 J
Toluene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	7.1 J	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
trans-1,2-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
trans-1,3-Dichloropropene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Trichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	2.8 UJ	2.8 UJ	3 UJ	3 U	3.5 UJ	3 UL	3 UL	2.5 U	3 UL	2.8 UL
Trichlorofluoromethane (Freon-11)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
Vinyl chloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	5.5 UJ	5.5 UJ	6 UJ	6 U	7 UJ	6 UL	6 UL	5 U	6 UL	5.5 UL
Xylene, total	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	8.2 UJ	8.2 UJ	9 UJ	9 UJ	10 UJ	9 UL	9 UL	7.5 U	9 UL	8.2 UL
Semivolatile Organic Compounds (UG/KG)																				
1,1-Biphenyl	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
2,2'-Oxybis(1-chloropropane)	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
2,4,5-Trichlorophenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	56 U	58 U	55 U	3.9 J	63 U	54 U	54 U	4.5 J	55 U	54 U
2,4,6-Trichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	13 J	58 U	55 U	16 J	15 J	54 U	10 J	14 J	55 U	6.6 J
2,4-Dichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 UJ	12 UJ	11 UJ	14 J	14 J	11 U	11 U	7 J	11 U	11 U
2,4-Dimethylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 UL	12 UL	11 UL	11 R	12 R	11 U	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	690 U	710 U	680 U	700 U	770 U	660 U	660 U	660 U	680 U	670 U
2,4-Dinitrotoluene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
2,6-Dinitrotoluene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
2-Chloronaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 UL	280 UL	270 UL	280 U	310 U	270 U	270 U	270 UL	270 U	270 U
2-Chlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	56 U	58 U	55 U	57 U	63 U	54 U	54 U	54 U	55 U	54 U
2-Methylnaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	3.2 L	3.9 L	3.9 L	4.6 L	7.8 L	11 U	11 U	11 UL	11 U	11 U
2-Methylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	56 U	58 U	55 U	57 U	63 U	54 UJ	54 UL	54 UL	55 UJ	54 U
2-Nitroaniline	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	690 U	710 U	680 U	700 U	770 U	660 U	660 U	660 U	680 U	670 U
2-Nitrophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U

Table F-1
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66S220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001	IS66SS290001	IS66SS300001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10
Chemical Name																				
3- and 4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	56 U	58 U	55 U	57 U	63 U	54 U	54 U	54 U	55 U	54 U
3,3'-Dichlorobenzidine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 UJ	12 UJ	11 UJ	11 R	12 R	11 R	11 R	11 R	11 R	11 U
3-Nitroaniline	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	690 U	710 U	680 U	700 U	770 U	660 U	660 U	660 UL	680 U	670 U
4,6-Dinitro-2-methylphenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	170 U	170 U	160 U	170 U	190 U	160 UL	160 UL	160 UL	160 UL	160 U
4-Bromophenyl-phenylether	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
4-Chloro-3-methylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
4-Chloroaniline	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 R	270 U	270 U
4-Chlorophenyl-phenylether	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
4-Methylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	690 U	710 U	680 U	700 U	770 U	660 U	660 U	660 UL	680 U	670 U
4-Nitrophenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	56 UJ	58 UJ	55 UJ	57 UJ	63 UJ	54 UJ	54 UJ	54 UJ	55 UJ	54 U
Acenaphthene	430 U	130 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	2.9 J	13 J	23	37	110	34 L	11 UL	7 L	38 L	21 J
Acenaphthylene	220 J	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 UL	11 UL	1.6 L	11 UL	11 U
Acetophenone	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 UL	280 UL	270 UL	280 U	310 U	270 U	270 U	270 UL	270 U	270 U
Anthracene	110 J	360 J	110 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	3.5 J	12 J	37	56	120	44	11 U	12 J	60	25
Atrazine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	1.2 J	12 U	1.3 J	1.9 J	2.5 J	11 U	11 U
Benzaldehyde	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 UJ	280 UJ	270 UJ	280 R	310 R	270 UJ	270 UJ	270 UJ	270 UJ	270 UJ
Benzo(a)anthracene	530	1,700	370 J	400 U	420 U	390 U	400 U	390	410 U	420 U	26	53	140	250 B	390	210	150 J	79	220	99
Benzo(a)pyrene	670	1,700	340 J	400 U	420 U	390 U	400 U	310 J	410 U	420 U	22 J	45 J	120	240	330	160 J	110 J	72	170 J	95 J
Benzo(b)fluoranthene	680	1,900	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	32 J	61 J	160	290	480	230 J	170 J	100	240 J	150 J
Benzo(g,h,i)perylene	510	1,100	230 J	400 U	420 U	390 U	400 U	160 J	410 U	420 U	19 J	31	96	180	200	97 J	11 UJ	42	99 J	69 J
Benzo(k)fluoranthene	670	1,600	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	12 J	18 J	52	110	160	91 J	38 J	29	90 J	49 J
bis(2-Chloroethoxy)methane	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 UL	280 UL	270 UJ	280 U	310 U	270 U	270 U	270 UL	270 U	270 U
bis(2-Chloroethyl)ether	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
bis(2-Ethylhexyl)phthalate	630 B	270 B	120 B	400 U	420 U	390 U	400 U	27,000	410 U	420 U	58 K	46 K	83 B	440 B	60 B	270 B	220 B	82 B	76 B	1,200 B
Butylbenzylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Caprolactam	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Carbazole	430 U	300 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Chrysene	710	1,800	410	400 U	420 U	390 U	400 U	420	410 U	420 U	16 J	34	92	170	260	160	73 J	54	180	83
Dibenz(a,h)anthracene	170 J	400 J	86 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	4.9 J	9.1 J	32	53	71	32 J	18 J	16 J	31 J	20 J
Dibenzofuran	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Diethylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Dimethyl phthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	2.3 J	2 J	2.4 J	3.9 B	47 B	2 J	11 U	2.7 J	5.9 J	2.4 B
Di-n-butylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Di-n-octylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	56 U	58 U	55 U	57 U	63 U	54 U	54 UJ	54 U	55 U	54 U
Fluoranthene	1,000	3,200	590	400 U	420 U	390 U	400 U	780	410 U	420 U	43 J	100 J	300	470	840	380 J	11 U	130 K	420 J	210
Fluorene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	7.6 J	16 J	29	73	22 L	11 UL	5.8 L	26 L	9.2 J
Hexachlorobenzene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
Hexachlorobutadiene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 UL	11 UL	4.4 L	11 UL	11 U
Hexachloroethane	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 U	270 U	270 U
Indeno(1,2,3-cd)pyrene	570	1,300	260 J	400 U	420 U	390 U	400 U	200 J	410 U	420 U	16 J	29	94	170	210	150	61 J	46	160	62
Isophorone	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 UL	270 U	270 U
Naphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	5.8 B	11 U	5.9 B	45 L	3.4 B	4.3 B	11 UL	9.3 B	5.8 B
n-Nitroso-di-n-propylamine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
n-Nitrosodiphenylamine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	280 U	280 U	270 U	280 U	310 U	270 U	270 U	270 UL	270 U	270 U
Nitrobenzene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	11 U	12 U	11 U	11 U	12 U	11 U	11 U	11 U	11 U	11 U
Pentachlorophenol	1,100 U	1,000 U	1,000 U	1,000 U	1,100 U	990 U	1,000 U	930 U	1,000 U	1,100 U	56 UL	58 UL	55 UL	57 UL	63 UL	54 U	54 U	54 U	55 U	54 U
Phenanthrene	340 J	1,400	270 J	400 U	420 U	390 U	400 U	250 J	410 U	420 U	23 J	71 J	210	330	640	240	11 U	65	270	140
Phenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	56 U	58 U	55 U	57 U	63 U	54 UJ	54 U	54 U	55 UJ	54 U
Pyrene	1,200	2,800	570	400 U	420 U	390 U	400 U	720	410 U	420 U	42 J	86 J	220	420	590	260	11 UJ	79	290	210

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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001	IS66SS290001	IS66SS300001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10
Chemical Name																				
Pesticide/Polychlorinated Biphenyls (UG/KG)																				
4,4'-DDD	45	5.4 B	7.7	3 B	30	1.8 B	4 U	3.7 U	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	0.66 J	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
4,4'-DDE	52	7.7 J	4.4	4 U	1.9 J	3.9 U	4 U	10	4.1 U	4.2 U	1.3 J	1.6 J	6.2 J	1.5 J	1.4 J	3.3 L	0.84 L	0.37 L	1.8 UL	0.26 J
4,4'-DDT	68	18 J	8.2	4 U	6.8 J	3.9 U	4 U	19	1.4 J	4.2 U	1.8 J	2.1 J	3.5 J	1.9 J	1.3 J	1.9 L	1.8 UL	1.3 L	1.8 UL	0.87 J
Aldrin	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
alpha-BHC	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	2.1 J	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
alpha-Chlordane	1.5 J	2.1 U	2.1 U	1.3 J	23 J	0.89 J	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
Aroclor-1016	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
Aroclor-1221	88 U	84 U	83 U	82 U	86 U	80 U	81 U	75 U	84 U	85 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
Aroclor-1232	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	11 U	11 U	12 U	12 UJ	13 U	10 UJ	11 UJ	11 UJ	11 UJ	10 U
Aroclor-1242	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
Aroclor-1248	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
Aroclor-1254	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
Aroclor-1260	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	9.6 U	9.6 U	9.8 U	10 UJ	11 U	9 UJ	9.2 UJ	9.2 UJ	9.2 UJ	8.8 U
beta-BHC	1.1 J	1.8 J	0.31 J	2.1 U	0.26 J	2 U	2 U	1.1 J	0.65 J	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
delta-BHC	0.64 J	2.1 U	2.1 U	2.1 U	0.53 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
Dieldrin	2.3 J	0.95 J	4.1 U	4.7 J	4.2 U	3.9 U	4 U	1.6 J	4.1 U	4.2 U	1.8 UJ	0.88 J	1.3 J	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
Endosulfan I	2.2 U	0.72 J	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1.8 J	1.3 J	0.9 UL	1 L	0.92 UL	0.92 UL	0.88 UJ
Endosulfan II	1.1 J	4.1 U	4.1 U	4 U	4.2 U	3.9 U	4 U	1.3 J	11 J	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
Endosulfan sulfate	1.3 J	2.2 J	4.1 U	4 U	4.2 U	3.9 U	8.3 J	3.7 U	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
Endrin	4.3 U	4.1 U	4.1 U	4 U	4.2 U	3.9 U	4 U	0.8 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
Endrin aldehyde	2 J	9.2 J	1.2 J	4 U	4.2 U	1.1 J	4 U	2.2 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
Endrin ketone	5.4	17	3.9 J	4 U	4.2 U	3.9 U	4 U	4.1 J	4.1 U	4.2 U	1.8 UJ	1.9 UJ	1.9 UJ	2 UJ	2.1 UJ	1.7 UL	1.8 UL	1.8 UL	1.8 UL	1.7 UJ
gamma-BHC (Lindane)	2.2 U	2.1 U	2.1 U	2.1 U	2.2 U	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.44 J
gamma-Chlordane	2 J	6.9 J	0.41 J	0.46 J	2.5 J	0.28 J	2 U	0.99 J	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
Heptachlor	1.1 J	0.95 J	2.1 U	2.1 U	0.84 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
Heptachlor epoxide	0.95 J	2.1 U	2.1 U	2.1 U	0.62 J	2 U	2 U	1.9 U	2.1 U	2.2 U	0.96 UJ	0.96 UJ	0.98 UJ	1 UJ	1.1 UJ	0.9 UL	0.92 UL	0.92 UL	0.92 UL	0.88 UJ
Methoxychlor	10 J	13 J	17 J	21 U	22 U	8.1 J	20 U	19 U	21 U	22 U	9.6 UJ	9.6 UJ	9.8 UJ	10 UJ	11 UJ	9 UL	9.2 UL	9.2 UL	9.2 UL	8.8 UJ
Toxaphene	220 U	210 U	210 U	210 U	220 U	200 U	200 U	190 U	210 U	220 U	18 UJ	18 UJ	18 UJ	19 UJ	20 UJ	17 UL	17 UL	17 UL	17 UL	17 UJ
Dioxin/Furans (PG/G)																				
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4 J	0.581 J	2.84	1.71 J	1.7 J	3.61	4.12	1.85 J	2.99	3.27
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.6	8.63	20.6	24.5	12.5	85.3	35.8	37.7 K	36.7	42
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.269 J	2.74 U	3.66 U	2.74 U	0.375 J	0.208 J	0.142 J	0.351 J
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.66 J	0.244 J	1.02 J	0.426 J	0.593 J	1.38 J	1.74 J	0.43 J	1.25 J	0.601 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.22 J	3.23 U	0.254 J	0.363 J	0.297 J	1.7 J	0.767 J	0.429 X	0.769 J	0.484 X
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.211 X	3.23 U	0.401 J	2.74 U	0.262 X	0.592 X	0.696 J	0.155 X	0.42 X	0.276 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.52 J	3.23 U	0.698 J	0.641 X	0.529 J	2.57 J	1.46 J	0.703 J	1.15 X	0.982 J
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	2.69 U	2.74 U	3.66 U	2.74 U	2.32 U	2.69 U	2.66 U	2.56 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.289 X	3.23 U	0.535 X	0.565 J	0.576 X	2 J	1.53 J	0.787 J	0.972 J	0.799 X
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.378 J	2.74 U	3.66 U	0.722 J	0.655 X	2.69 U	0.529 J	0.129 X
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	2.69 U	2.74 U	3.66 U	0.599 X	0.454 X	0.124 X	0.358 X	0.201 J
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.282 X	3.23 U	0.587 J	0.232 J	0.386 X	0.662 X	0.764 J	0.133 X	0.33 X	0.32 X
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.73 U	3.23 U	0.612 J	2.74 U	3.66 U	0.88 J	0.92 J	2.69 U	0.741 J	0.234 X
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.09 U	1.29 U	1.08 U	1.1 U	1.46 U	1.1 U	0.928 U	1.08 U	1.06 U	1.02 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.703 X	1.29 U	0.78 J	1.1 U	1.46 U	1 J	0.947	1.08 U	0.813 J	1.02 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.44 J	1.3 J	6.68	5.45 J	4.6 J	7.71	9.53	4.6 J	6.72	7.03
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	802	700	1,960 J	1,790 J	491	3,610 J	1,820 J	3,530 K	2,230 J	3,460 J
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.4 J	0.232 J	4.58	3.67	1.7 J	5.81	6.94	4.92	5.1	6.7
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	30	18.5	55.1	54.6	33.9	234	90.7	87	86.3	92.2
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1 J	0.244 J	5.71	1.83 J	2.43 J	6.73	9.37	2.42 J	4.98	3.4
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.21	1.35 J	7.56	5.78	5.71	36.7	19.2	8.41	14.6	9.11
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.71 J	0.624 J	6.76	1.69 J	2.6 J	12.5	12.5	0.511 J	8.4	1.81 J
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.898 J	3.23 U	2.69 U	0.494 J	3.66 U	5.87	5.12	0.824 J	3.97	1.02 J
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.67	1.29 U	3.51	0.715 J	1.46 U	9.5	9.41	0.171 J	4.82	1.32
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.482 J	1.29 U	0.711 J	1.1 U	1.46 U	0.409 J	1.66	1.08 U	0.784 J	1.02 U
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.67	0.327	1.45	1.02	0.555	3.85	2.49	1.85	2.24	2.12

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS220001	IS66SS22P0001	IS66SS230001	IS66SS240001	IS66SS250001	IS66SS260001	IS66SS270001	IS66SS280001	IS66SS290001	IS66SS300001
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10
Chemical Name																				
Explosives (UG/KG)																				
1,3,5-Trinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
1,3-Dinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
2,4,6-Trinitrotoluene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
2-Amino-4,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
2-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
3-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
4-Amino-2,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
4-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
HMX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 UL	48 U	54 U
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 UJ	4,000 U	4,000 U	340 U	350 U	410 U	430 U	480 U	380 U	380 U	420 U	390 U	430 U
Nitroguanidine	120 U	120 U	110 U	110 U	130 U	120 U	130 U	140 U	120 U	110 U	40 U	40 U	40 U	38 U	39 U	39 U	40 U	40 U	39 U	40 U
Perchlorate	17 J	4.1 J	2.9 J	3.9 J	5.3 J	1.4 J	18 J	3 J	14 J	1.7 J	0.82 J	0.71 J	0.86 J	0.61 J	1.5 J	2 J	2.3 J	2.5 J	3.7 J	66
RDX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
Tetryl	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	43 U	44 U	52 U	53 U	60 U	48 U	47 U	52 U	48 U	54 U
Total Metals (MG/KG)																				
Aluminum	5,710	7,520	6,470	8,290	15,100	10,500	9,390	4,760	5,170	13,000	7,280	5,840	2,720	9,280	5,770	8,540	7,370	11,400	6,570	9,370
Antimony	1.1 B	1.4 B	0.83 B	0.48 UJ	0.51 UJ	0.53 B	0.48 B	1.5 B	0.51 UJ	0.51 UJ	0.36 U	0.38 U	0.45 U	0.15 J	0.5 U	0.4 U	0.43 U	0.42 R	0.11 J	0.41 U
Arsenic	17.9	10.1	10.6	0.64 U	6	3.1	2.6	34.9	2.1 J	3.1	3 J	1.7 J	1.1 B	1.8	2.1	3.1	2.2	2.3	2.1	5.5
Barium	41.9 J	108	51.9	33.5 J	64.4	40.8 J	66.2	92.3	43.1 J	57	36.5	31.4	11.6	39.4	33.4	30.8	32.7	43.4	32.7	46.3
Beryllium	0.29 B	0.38 B	0.39 B	0.57 B	0.51 B	0.41 B	0.63 J	0.94 J	0.34 B	0.46 B	0.63	0.27 J	0.08 B	0.28 J	0.26 J	0.38 J	0.44	0.46	0.3 J	0.51
Cadmium	0.23 B	0.095 U	0.092 U	0.091 U	0.097 U	0.092 U	0.088 U	0.087 U	0.098 U	0.098 U	0.22 U	0.23 U	0.27 U	0.29 U	0.02 B	0.07 B	0.06 B	0.03 B	0.09 B	0.04 J
Calcium	766 J	2,360	1,370	402 J	293 J	249 J	445 J	15,900	2,990	94 B	94.3	85	50.2	162	129	129	214	216 K	120	286
Chromium	15.7	19.4	13.3	22.8	16.7	14.8	14	11	12.9	16.1	22.2 J	7.6 J	4.4	12.2	6.8	14.6	8.8	13.4	9.4	13.7
Cobalt	3.6 J	5.8 J	3.9 J	1.6 J	4.7 J	5.3 J	7.3 J	3.9 J	4.7 J	4.2 J	9.7 J	4.8 J	0.94	4	3.2	5.4	5.1	5.1	7.1	8.6
Copper	28.1	26.8	14.1	22.9	10.8	9.7	9.8	20.6	11.3	7.3	9.9	8	9.9	17.7	28	36.6	29.7	18.7	39.5	34.8
Cyanide	0.082 J	0.16 J	0.093 J	0.074 U	0.077 U	0.072 U	0.072 U	0.18 J	0.077 U	0.076 U	0.48 U	0.48 U	0.44 U	0.44 U	0.48 U	0.44 U	0.44 U	0.44 U	0.44 U	0.4 U
Iron	11,000	22,300	13,900	35,500	29,000	19,500	18,000	17,300	11,400	16,600	16,100 J	5,800 J	2,540	7,850	4,730	11,100	5,920	13,100	6,890	11,600
Lead	73.6	160	112	12.1	13.5	12.3	11.6	41.8	14.1	10.6	24.3	19.3	15.6	24.6	30.8	40.3	37.8	20.9	41.6	29.5
Magnesium	584 J	743 J	685 J	762 J	882 J	816 J	987 J	2,310	875 J	912 J	466	421	179	678	400	593	543	782 K	514	722
Manganese	134	405	112	34.7	56	111	380	207	142	69.9	232 J	70.6 J	11.3	72.4	37.1	112	120	82.2	447	274
Mercury	0.21 B	0.3 B	1.1 J	0.051 UJ	0.076 B	0.052 UJ	0.055 UJ	0.25 B	0.083 B	0.068 B	0.05	0.05	0.03	0.04	0.06	0.06	0.08	0.04	0.01 J	0.06
Nickel	7.9 J	90.4	6.9 J	5.5 J	7.3 J	7.2 J	9.7	27.7	8.9 J	6.8 J	7.1	6.2	2.5 J	6.2	6.1	6.7	7.9	7.3	5.9	7.3
Potassium	308 J	446 J	357 J	708 J	605 J	600 J	562 J	590 J	560 J	509 J	400	347	316	652	371	502	551	837 K	484	650
Selenium	0.66 U	0.64 U	0.62 U	0.62 U	0.65 U	0.62 U	0.59 U	0.59 U	0.66 U	0.66 U	0.42	0.3 J	0.17 J	0.3 J	0.46 J	0.45	0.37 J	0.36 J	0.32 J	0.4 J
Silver	0.29 U	0.28 U	0.28 U	0.27 U	0.29 U	0.28 U	0.27 U	0.26 U	0.29 U	0.29 U	0.05 J	0.05 J	0.04 J	0.04 J	0.05 J	0.07 J	0.06 J	0.04 J	0.05 J	0.04 J
Sodium	110 B	74.2 B	80.9 B	69.2 B	101 B	89.5 B	105 B	210 B	110 B	85.5 B	38.5 J	21.3 B	39 J	37.2 J	29.4 J	32.7 B	50.2 B	37.9 B	33.1 B	28.3 J
Thallium	0.71 U	0.69 U	0.67 U	0.66 U	0.7 U	0.66 U	0.64 U	0.82 B	0.71 U	0.71 U	0.09 J	0.09 J	0.06 J	0.13 J	0.1 J	0.12 J	0.12 J	0.14 J	0.1 J	0.12 J
Vanadium	32.5	31	25.8	26.7	30.9	26.8	24.2	75.9	19.3	29.9	47.1	41.9	19.8	36.7	29	39.3	32.9	28.9	24.7	26.4
Zinc	129	120	83.6	33.4	28	26.5	35.8	47.3	47.2	25.1	19.2	16.9	6	23.9	18.9	24	21.6	29.2	18.7	25.8
Wet Chemistry																				
pH (ph)	5.98	5.88	5.76	4.63	4.78	4.84	4.95	8.19	7.53	4.45	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	23,300	30,300	34,700	11,800	8,570	37,400	12,200	120,000	30,400	7,490	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

PH - pH units

UG/KG - Micrograms per kilogram

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16
Sample ID	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001
Sample Date	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07
Chemical Name																				
Volatile Organic Compounds (UG/KG)																				
1,1,1-Trichloroethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,1,2,2-Tetrachloroethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,1,2-Trichloroethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,1-Dichloroethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,1-Dichloroethene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2,4-Trichlorobenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2-Dibromo-3-chloropropane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2-Dibromoethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2-Dichlorobenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2-Dichloroethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,2-Dichloropropane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,3-Dichlorobenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
1,4-Dichlorobenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
2-Butanone	29 J	12 U	14 U	14 U	12 UJ	14 U	18 UJ	14 U	NA	15 UL	15 U	15 UJ	18 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
2-Hexanone	15 UJ	12 U	14 U	14 U	12 UJ	14 U	18 UJ	14 U	NA	15 UL	15 U	15 UJ	18 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
4-Methyl-2-pentanone	15 UJ	12 U	14 U	14 U	12 UJ	14 U	18 UJ	14 U	NA	15 UL	15 U	15 UJ	18 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Acetone	210 J	5.7 B	14 U	8 B	12 B	13 B	62 J	10 B	NA	34 J	15 U	15 B	18 U	25 B	12 U	7 B	25 U	48 B	22 B	24 B
Benzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Bromodichloromethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Bromoform	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Bromomethane	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Carbon disulfide	1.8 B	2.5 U	2.8 U	1.6 B	1.6 B	2.8 U	2 B	0.9 J	NA	2.1 B	1.8 B	1.4 B	1.3 B	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Carbon tetrachloride	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Chlorobenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Chloroethane	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Chloroform	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Chloromethane	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
cis-1,2-Dichloroethene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
cis-1,3-Dichloropropene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Cyclohexane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Dibromochloromethane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Dichlorodifluoromethane (Freon-12)	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Ethylbenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Isopropylbenzene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 UJ	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Methyl acetate	3.6 UJ	3 U	3.3 U	3.3 U	3 UJ	3.3 U	4.2 UJ	3.3 U	NA	3.6 UL	3.6 U	3.6 UJ	4.2 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Methylcyclohexane	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Methylene chloride	15 UJ	12 U	14 U	14 U	12 UJ	14 U	18 UJ	14 U	NA	15 UL	15 U	15 UJ	18 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Methyl-tert-butyl ether (MTBE)	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Styrene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	1.2 J	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Tetrachloroethene	14 J	5.1 J	5 J	3.6 J	5.8 J	3.2 J	6.9 J	7 J	NA	7.8 J	5.4 J	7.3 J	6 J	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Toluene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
trans-1,2-Dichloroethene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
trans-1,3-Dichloropropene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Trichloroethene	3 UJ	2.5 U	2.8 U	2.8 U	2.5 UJ	2.8 U	3.5 UJ	2.8 U	NA	3 UL	3 U	3 UJ	3.5 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Trichlorofluoromethane (Freon-11)	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Vinyl chloride	6 UJ	5 U	5.5 U	5.5 U	5 UJ	5.5 U	7 UJ	5.5 U	NA	6 UL	6 U	6 UJ	7 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Xylene, total	9 UJ	7.5 U	8.2 U	8.2 U	7.5 UJ	8.2 U	10 UJ	8.2 U	NA	9 UL	9 U	9 UJ	10 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U
Semivolatile Organic Compounds (UG/KG)																				
1,1-Biphenyl	260 U	270 U	260 U	250 U	290 U	270 UL	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2,2'-Oxybis(1-chloropropane)	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2,4,5-Trichlorophenol	52 U	54 U	3.4 J	51 U	59 U	55 U	61 U	2.7 J	50 U	NA	57 U	59 U	77 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
2,4,6-Trichlorophenol	10 J	54 U	12 J	51 U	59 U	55 U	61 U	11 J	50 U	NA	57 U	59 U	77 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2,4-Dichlorophenol	10 U	11 U	10 U	10 U	12 U	11 U	12 U	5.6 J	9.9 U	NA	11 U	12 UJ	15 UJ	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2,4-Dimethylphenol	10 U	11 U	10 U	10 UL	12 UL	11 UL	12 U	10 U	9.9 U	NA	11 U	12 UL	15 UL	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2,4-Dinitrophenol	640 U	670 U	650 U	620 U	720 U	680 U	750 U	650 U	610 U	NA	700 U	720 U	950 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
2,4-Dinitrotoluene	10 U	11 U	10 U	10 U	12 U	11 U	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	490 U	460 U	670 U	1,200 U	1,200 U	540 U
2,6-Dinitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	720 U	490 U	460 U	670 U	1,200 U	1,200 U	540 U
2-Chloronaphthalene	260 U	270 UL	260 UL	250 UL	290 UL	270 UL	300 U	260 U	240 U	NA	280 U	290 UL	380 UL	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2-Chlorophenol	52 U	54 U	53 U	51 U	59 U	55 U	61 U	53 U	50 U	NA	57 U	59 U	77 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2-Methylnaphthalene	10 U	11 UL	10 UL	10 U	12 U	11 UL	12 U	10 U	9.9 U	NA	11 U	12 UL	15 UL	720 U	130 J	460 U	670 U	710 J	18,000 U	540 U
2-Methylphenol	52 UL	54 U	53 U	51 UL	59 UL	55 U	61 UL	53 UL	50 U	NA	57 UL	59 U	77 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
2-Nitroaniline	640 U	670 U	650 U	620 U	720 U	680 U	750 U	650 U	610 U	NA	700 U	720 U	950 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
2-Nitrophenol	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U

Table F-1
Surface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16
Sample ID	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001
Sample Date	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07
Chemical Name																				
3- and 4-Methylphenol	52 U	54 U	53 U	51 U	59 U	55 U	61 U	53 U	50 U	NA	57 U	59 U	77 U	NA	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	10 R	11 UL	10 UL	10 UJ	12 UJ	11 R	12 R	10 R	9.9 U	NA	11 R	12 UJ	15 UJ	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
3-Nitroaniline	640 U	670 U	650 U	620 U	720 U	680 U	750 U	650 U	610 U	NA	700 U	720 U	950 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
4,6-Dinitro-2-methylphenol	160 UL	160 U	160 U	150 U	180 U	160 U	180 UL	160 UL	150 U	NA	170 UL	180 U	230 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
4-Bromophenyl-phenylether	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
4-Chloro-3-methylphenol	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
4-Chloroaniline	260 U	270 U	260 U	250 U	290 U	270 R	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
4-Chlorophenyl-phenylether	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
4-Nitroaniline	640 U	670 U	650 U	620 U	720 U	680 U	750 U	650 U	610 U	NA	700 U	720 U	950 U	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
4-Nitrophenol	52 UJ	54 UJ	53 UJ	51 U	59 U	55 UJ	61 UJ	53 UJ	50 U	NA	57 UJ	59 UJ	77 UJ	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
Acenaphthene	4 L	11 UL	10 UL	10 UL	12 UL	11 UL	12 UL	10 UL	9.9 U	NA	11 UL	2.8 J	3.1 J	720 U	1,100	460 U	670 U	8,500 J	26,000 J	190 J
Acenaphthylene	10 UL	11 UL	10 UL	10 U	7.6 J	11 UL	4.2 L	10 UL	9.9 U	NA	11 UL	12 U	4.1 J	720 U	120 J	460 U	670 U	1,800 U	18,000 U	540 U
Acetophenone	260 U	270 UL	260 UL	250 UL	290 UL	270 UL	300 U	260 U	240 U	NA	280 U	290 UL	380 UL	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Anthracene	9 J	11 U	2.1 J	10 U	11 J	14 L	3.2 J	1.3 J	1.4 J	NA	11 U	3.9 J	21 J	720 U	2,500	460 U	670 U	21,000 J	56,000 J	500 J
Atrazine	10 U	11 U	3.8 B	10 U	12 U	2.6 B	12 U	1.6 J	9.9 U	NA	11 U	12 U	15 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Benzaldehyde	260 UJ	270 UJ	260 UJ	250 UJ	290 UJ	270 UJ	300 UJ	260 UJ	240 UJ	NA	280 UJ	290 UJ	380 UJ	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Benzo(a)anthracene	36	11 U	10 B	10 U	100	46 L	27	5.6 J	10 J	NA	5 J	31	220	720 U	9,800	100 J	670 U	69,000 J	170,000 J	1,800
Benzo(a)pyrene	35	11 U	4.2 B	10 U	120	36 B	29	10 U	9.6 J	NA	11 U	26	94	720 U	11,000	460 U	670 U	58,000 J	180,000 J	2,000
Benzo(b)fluoranthene	53	11 U	3.9 B	10 U	180	51	42	6.8 J	19 J	NA	6.3 J	37	180	720 U	8,900	110 J	670 U	130,000 J	180,000 J	1,800
Benzo(g,h,i)perylene	17 J	11 U	10 U	10 U	84	24 B	22 J	2.2 J	8 J	NA	11 U	15 J	45	720 U	9,500	460 U	670 U	2,500 J	92,000 J	1,100
Benzo(k)fluoranthene	14 J	11 U	3.4 B	10 U	50	17 B	13 J	10 U	7.2 J	NA	11 U	10 J	46	720 U	11,000	460 U	670 U	130,000 J	150,000 J	2,000
bis(2-Chloroethoxy)methane	260 U	270 UL	260 UL	250 UL	290 UL	270 UL	300 U	260 U	240 U	NA	280 U	290 UJ	380 UJ	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
bis(2-Chloroethyl)ether	10 U	11 U	10 U	10 U	12 U	11 U	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
bis(2-Ethylhexyl)phthalate	57 B	70 B	120 B	540 K	290 B	89 B	120 B	170 B	190 B	NA	110 B	59 B	82 B	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Butylbenzylphthalate	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Caprolactam	260 U	270 U	260 U	250 U	290 U	270 UL	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Carbazole	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	1,900	460 U	670 U	18,000 J	45,000 J	350 J
Chrysene	25	11 U	4.1 B	10 U	98	31 L	20 J	2 J	12 J	NA	11 U	15 J	130	720 U	10,000	110 J	670 U	70,000 J	180,000 J	1,900
Dibenz(a,h)anthracene	3.9 J	11 U	10 U	10 U	22 J	8.2 B	7 J	2.4 J	9.9 U	NA	11 U	9.5 J	23 J	720 U	1,700	460 U	670 U	9,000 J	44,000 J	580
Dibenzofuran	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	420 J	460 U	670 U	3,000 J	9,200 J	540 U
Diethylphthalate	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Dimethyl phthalate	10 U	11 U	2.7 B	10 U	2 J	3.4 B	12 U	2 J	1.7 B	NA	11 U	12 U	3.1 J	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Di-n-butylphthalate	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	540 J	18,000 U	540 U
Di-n-octylphthalate	52 U	54 U	53 U	51 U	59 U	55 U	61 U	53 U	50 U	NA	57 U	59 U	77 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Fluoranthene	68	11 U	3.8 J	2.9 L	140 L	94 L	39	2.2 J	23	NA	11 U	42	370	720 U	19,000	240 J	670 U	130,000 J	350,000 J	3,300
Fluorene	10 UL	11 UL	10 UL	10 UL	12 UL	11 UL	12 UL	10 UL	9.9 U	NA	11 UL	12 U	15 U	720 U	720	460 U	670 U	4,200 J	14,000 J	130 J
Hexachlorobenzene	10 U	11 U	10 U	10 U	12 U	11 U	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Hexachlorobutadiene	10 U	11 U	10 U	10 U	12 U	11 U	12 U	10 U	9.9 U	NA	11 U	12 UJ	15 UJ	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Hexachlorocyclopentadiene	10 UL	11 U	10 U	10 U	12 U	11 U	12 UL	3.9 L	9.9 U	NA	11 UL	12 U	15 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Hexachloroethane	260 U	270 U	260 U	250 U	290 U	270 U	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Indeno(1,2,3-cd)pyrene	18 J	11 U	10 U	10 U	68	22 B	20 J	2 J	6.6 J	NA	11 U	17 J	47	720 U	9,600	460 U	670 U	58,000 J	120,000 J	1,500
Isophorone	260 U	270 U	260 U	250 U	290 U	270 UL	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Naphthalene	10 U	11 U	10 U	10 UL	12 UL	11 UL	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	360 J	460 U	670 U	2,300 J	6,100 J	540 U
n-Nitroso-di-n-propylamine	10 U	11 U	10 U	10 U	12 U	11 U	12 U	10 U	9.9 U	NA	11 U	12 U	15 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
n-Nitrosodiphenylamine	260 U	270 U	260 U	250 U	290 U	270 UL	300 U	260 U	240 U	NA	280 U	290 U	380 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Nitrobenzene	10 U	11 U	10 U	10 U	12 U	11 U	12 UJ	10 U	9.9 U	NA	11 UJ	12 U	15 U	620 U	490 U	460 U	620 U	620 U	620 U	540 U
Pentachlorophenol	52 U	54 U	53 U	51 U	59 U	55 U	61 U	53 U	50 U	NA	57 U	59 UL	77 UL	1,800 U	1,200 U	1,200 U	1,700 U	4,400 U	45,000 U	1,400 U
Phenanthrene	33	11 U	2.6 J	10 U	55	59 L	16 J	2 J	12 J	NA	11 U	19 J	96	720 U	11,000	160 J	670 U	72,000 J	210,000 J	1,800
Phenol	52 U	54 U	53 U	51 U	59 U	55 U	61 U	53 U	50 U	NA	57 U	59 U	77 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U
Pyrene	42	11 U	4.5 J	2.7 J	180	82 L	31	10 U	22	NA	11 U	44	350	720 U	16,000	190 J	670 U	100,000 J	280,000 J	2,800

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16
Sample ID	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001
Sample Date	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07
Chemical Name																				
Pesticide/Polychlorinated Biphenyls (UG/KG)																				
4,4'-DDD	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	2.7 J	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	1.1 J	640	1.7 B	6.7 B	1 B	6.7 U	8.5 J	14 J	3.5 B
4,4'-DDE	0.43 L	1.8 UJ	1.7 UJ	0.65 J	4.3 J	0.84 L	9.2 L	1.7 UL	0.22 J	NA	1.9 UL	0.97 J	230	2.2 J	9.6	7.9	6.7 U	250 J	210 J	11
4,4'-DDT	0.84 L	1.8 UJ	1.7 UJ	1.6 UJ	4.8 J	0.99 L	2.2 L	1.7 UL	1.6 UJ	NA	1.9 UL	2.2 J	460	7.2 U	35	8 J	6.7 U	230 J	260 J	21
Aldrin	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U	2.4 U	3.5 U	5.2 J	12 J	2.8 U
alpha-BHC	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	3.2	2.4 U	3.5 U	3 U	3 U	0.77 J
alpha-Chlordane	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	1 J	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	2.1 J	2.5 U	0.78 J	3.5 U	3 U	3 U	1.5 J
Aroclor-1016	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
Aroclor-1221	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	150 U	99 U	93 U	140 U	120 U	120 U	110 U
Aroclor-1232	9.5 U	11 U	11 U	10 U	12 U	11 UJ	13 UJ	10 U	9.6 UJ	NA	11 UJ	12 U	17 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
Aroclor-1242	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
Aroclor-1248	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
Aroclor-1254	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
Aroclor-1260	8.1 U	9.3 U	9 U	8.5 U	9.8 U	9.1 UJ	11 UJ	9 U	8.1 UJ	NA	9.6 UJ	10 U	14 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U
beta-BHC	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.2 J	4.5 J	1.8 J	3.5 U	9.6 J	3 U	2.1 J
delta-BHC	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U	2.4 U	3.5 U	3 U	3 U	2.8 U
Dieldrin	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	0.73 J	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	71 J	7.2 U	2.2 J	0.97 J	6.7 U	5.9 J	40 J	1.8 J
Endosulfan I	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	5.1 J	3.7 U	0.88 J	2.4 U	3.5 U	3.8 J	15 J	2.8 U
Endosulfan II	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	1.9 J	4.6 U	6.7 U	23 J	5.9 U	5.4 U
Endosulfan sulfate	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	4 J	4.6 U	6.7 U	38 J	9.8 J	5.4 U
Endrin	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	1.2 J	4.6 U	6.7 U	5.9 U	5.9 U	5.4 U
Endrin aldehyde	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	13	1.3 J	6.7 U	52 J	62 J	6.9
Endrin ketone	1.6 UL	1.8 UJ	1.7 UJ	1.6 UJ	1.9 UJ	1.8 UL	2.1 UL	1.7 UL	1.6 UJ	NA	1.9 UL	2 UJ	2.8 UJ	7.2 U	23	1.1 J	6.7 U	78 J	96 J	7.6
gamma-BHC (Lindane)	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U	2.4 U	3.5 U	3 U	3 U	2.8 U
gamma-Chlordane	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.76 J	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	9.6	2.4 U	3.5 U	12 J	3 U	0.93 J
Heptachlor	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U	2.4 U	3.5 U	3 U	3 U	2.8 U
Heptachlor epoxide	0.81 UL	0.93 UJ	0.9 UJ	0.85 UJ	0.98 UJ	0.93 UL	1.1 UL	0.9 UL	0.85 UJ	NA	0.96 UL	1 UJ	1.4 UJ	3.7 U	2.5 U	2.4 U	3.5 U	3.3 J	5.3 J	2.8 U
Methoxychlor	8.1 UL	9.3 UJ	9 UJ	8.5 UJ	9.8 UJ	9.3 UL	11 UL	9 UL	8.5 UJ	NA	9.6 UL	10 UJ	14 UJ	37 U	60 J	24 U	35 U	230 J	30 U	13 J
Toxaphene	15 UL	17 UJ	17 UJ	16 UJ	18 UJ	18 UL	20 UL	17 UL	16 UJ	NA	18 UL	19 UJ	27 UJ	370 U	250 U	240 U	350 U	300 U	300 U	280 U
Dioxin/Furans (PG/G)																				
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.17 J	0.0938 B	0.296 B	1.16 J	11.3	1.61 J	4.57	0.142 J	9.55 J	NA	0.159 X	5.87	1.1 X	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	21.5	65.1 J	21.5 J	24.8	56	22.8	66.7	35.5	120 J	NA	76.8	57.2	55.3	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.149 X	2.71 U	2.51 U	2.15 U	0.759 J	2.77 U	0.332 J	2.41 U	0.704 J	NA	2.68 U	0.304 X	2.61 U	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	1.01 J	2.71 U	0.127 J	0.436 J	1.02 J	0.649 J	1.17 J	2.41 U	1.44 J	NA	2.68 U	0.801 X	0.178 X	NA	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.367 J	0.233 J	2.51 U	0.265 X	0.813 J	0.308 J	0.827 J	2.41 U	1.63 J	NA	0.406 J	0.573 X	0.221 X	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	0.386 J	2.71 U	2.51 U	0.216 J	0.751 J	0.26 X	0.499 J	2.41 U	0.649 J	NA	2.68 U	0.304 X	2.61 U	NA	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.64 J	0.691 J	0.312 J	0.489 J	1.78 J	0.464 X	1.63 J	0.18 X	2.92 J	NA	0.694 J	1.46 J	0.857 X	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	2.7 U	2.71 U	2.51 U	2.15 U	2.62 U	2.77 U	2.71 U	2.41 U	2.47 UJ	NA	2.68 U	3.23 U	2.61 U	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.987 J	0.889 J	0.384 J	0.631 J	1.84 J	0.695 J	1.61 J	2.41 U	3.89 J	NA	1.4 J	1.36 J	0.533 X	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	0.419 J	2.71 U	2.51 U	0.147 X	0.286 J	2.77 U	0.402 J	2.41 U	0.382 J	NA	2.68 U	3.23 U	2.61 U	NA	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0.22 X	2.71 U	2.51 U	0.171 J	0.462 J	0.227 J	0.39 J	2.41 U	0.882 J	NA	2.68 U	0.341 X	0.15 X	NA	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	0.39 X	2.71 U	2.51 U	0.191 X	0.917 J	0.34 J	0.46 J	2.41 U	0.619 J	NA	2.68 U	0.451 J	2.61 U	NA	NA	NA	NA	NA	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	0.459 J	2.71 U	2.51 U	0.266 J	0.393 X	0.341 J	0.439 J	2.41 U	0.347 X	NA	2.68 U	0.239 X	2.61 U	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD (dioxin)	1.08 U	1.08 U	1 U	0.861 U	1.05 U	1.11 U	1.08 U	0.962 U	0.139 X	NA	1.07 U	1.29 U	1.04 U	NA	NA	NA	NA	NA	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	0.834 J	1.08 U	1 U	0.518 J	1.05 U	0.584 J	0.661 X	0.962 UJ	0.438 J	NA	1.07 U	0.56 J	1.04 U	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	3.98 B	0.639 J	0.7 J	2.07 J	41	3.06 J	10.2	4.81 U	20.8	NA	0.532 B	17	4.07 J	NA	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-dioxin	1,170 K	12,500 J	4,340 J	4,310 K	2,350 K	2,360 J	4,410 K	12,400 K	3,350 J	NA	16,900 K	3,590 J	2,690 J	NA	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzofuran	3.62	2.71 U	2.51 U	2.05 J	36.2	2.44 J	10.3	0.142 J	27.2	NA	2.68 U	17	3.2	NA	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzo-p-dioxin	55.2	132	43.2	53.4	123	51.6	153	68.2	399	NA	198	139	289	NA	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzofuran	3.73	2.71 U	0.127 J	1.83 J	20.6	2.73 J	7.87	2.41 U	14.5	NA	2.68 U	7.4	0.666 J	NA	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzo-p-dioxin	10.2	10.2	2.51 J	5.54	17.3	5.69	17.5	0.487 J	38.5	NA	17.6	15.3	23.3	NA	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzofuran	5.66	2.71 U	0.312 J	2.62	15.4	3.58	7.06	2.41 U	6.11	NA	2.68 U	2.12 J	0.319 J	NA	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzo-p-dioxin	3.3	0.582 J	2.51 U	1.16 J	1.3 J	1.97 J	3.24	2.41 U	4.14	NA	0.814 J	2.28 J	1.16 J	NA	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzofuran	5.27	1.08 U	1 U	2.12	6.2	2.06	3.3	0.962 U	4.27	NA	1.07 U	1.41	1.04 U	NA	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzo-p-dioxin	0.425 J	1.08 U	1 U	0.295 J	0.362 J	0.407 J	0.549 J	0.962 U	0.272 J	NA	0.23 J	1.29 U	1.04 U	NA	NA	NA	NA	NA	NA	NA
Toxic Equivalents (Total TEQ)	1.42	4.58	1.6	2.08	2.7	1.61	3.26	4.09	4.61	NA	6.09	2.68	1.7	NA	NA	NA	NA	NA	NA	NA

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66DP31	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16
Sample ID	IS66SS310001	IS66SS320001	IS66SS32P0001	IS66SS330001	IS66SS340001	IS66SS350001	IS66SS360001	IS66SS370001	IS66SS380001	IS66SS380001-01	IS66SS390001	IS66SS400001	IS66SS410001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001
Sample Date	09/23/10	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07
Chemical Name																				
Explosives (UG/KG)																				
1,3,5-Trinitrobenzene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
1,3-Dinitrobenzene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
2,4,6-Trinitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
2-Amino-4,6-dinitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
2-Nitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
3-Nitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
4-Amino-2,6-dinitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
4-Nitrotoluene	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
HMX	45 UL	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
Nitroglycerin	1,900	370 U	330 U	400 U	460 U	350 U	460 U	380 U	380 U	NA	420 U	410 U	640 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U
Nitroguanidine	40 U	40 U	38 U	39 U	38 U	39 U	39 U	38 U	40 U	NA	40 U	39 U	40 U	170 U	150 U	130 U	190 U	170 U	160 U	150 U
Perchlorate	2.6 J	4.3 J	2.7 J	0.46 J	0.47 U	3.2 J	0.44 U	0.57 J	0.7 J	NA	1.3 J	0.47 U	0.52 U	11 J	1.5 J	4.2 J	4.1 J	2.4 J	4.6 J	3.2 U
RDX	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
Tetryl	45 U	46 U	41 U	51 U	58 U	44 U	58 U	48 U	48 U	NA	53 U	51 U	80 U	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ
Total Metals (MG/KG)																				
Aluminum	7,520	14,300	11,200	8,840	13,600	6,290	10,100	10,200	5,550	NA	15,200	12,400	17,600	6,100	4,550	5,060	5,560	7,030	6,800	6,200
Antimony	0.11 J	0.32 U	0.29 U	0.37 U	0.09 J	0.36 UJ	0.51 U	0.43 U	0.43 U	NA	0.4 U	0.42 U	0.46 U	1.6 B	3.2 B	0.41 UJ	0.78 UJ	3.5 B	2.6 B	0.97 B
Arsenic	1.7	2.7	2.4	3.1	14.4	1.2	8.1	1.9	1.8	NA	3.3	3	4.2	1.4 J	5	2.3 J	108	30.5	33.1	9.8
Barium	39.5	51.2	49.8	46.3	142	36	66.1	51.9	23.4	NA	47	44.1	82.3	180	126	62.5	64.4 J	200	206	111
Beryllium	0.35 J	0.51	0.48	0.56	1.2	0.26 J	0.62	0.46	0.27 J	NA	0.59	0.48	0.66	2.9	0.28 B	0.29 B	1.6 J	1 J	1.1 J	0.32 B
Cadmium	0.27 U	0.19 U	0.17 U	0.22 U	1.1	0.02 B	0.12 B	0.07 B	0.26 U	NA	0.12 B	0.25 U	0.05 B	0.4 B	0.5 B	0.055 U	0.15 U	0.21 B	0.23 B	0.59 B
Calcium	116	102	88.1	211	2,720	220	289	95.1	218	NA	62.4	298	1,380	3,220	4,440	412 J	1,950	2,930	3,050	6,510
Chromium	8.9	17	14.4	13.8	28.1	7.5	12.3	13.2	10.2	NA	23	16.8	23.1	10.1	11.9	8.2	15.5	18.9	17.8	11.9
Cobalt	3.9	6.9	6.3	11	8.5	5	15.1	5.5	2.9	NA	6	9.6	10.6	17.9 J	3.7 J	4 J	10.3 J	5.6 J	5.3 J	4.5 J
Copper	14.8	8.4	7.2	20.7	22.2	7.8	14.2	5.1	8.2	NA	13.7	7.4	11.4	23	31.4	29	33.3	56.9	59.6	19.7
Cyanide	0.4 U	0.44 U	0.44 U	0.4 U	0.44 U	0.44 U	0.48 U	0.4 U	0.4 U	NA	0.48 U	0.48 U	0.64 U	0.13 U	0.12 J	0.084 U	0.2 J	0.28 J	0.2 J	0.098 U
Iron	6,990	14,800	13,300	10,700	16,000	4,960	10,100	10,300	8,740	NA	17,000	11,100	16,500	5,550	10,900	10,100	31,600	23,400	22,500	13,700
Lead	23.4	8.3	8.1	29.6	35.1	12.9	15.4	7.9	18.1	NA	11.4	18.3	18.1	20.8	267	42.6	12.1	305	225	188
Magnesium	552	817	641	634	2,170	477 J	931	864	428	NA	1,670	877	1,350	1,060 J	894 J	398 J	237 B	690 J	732 J	708 J
Manganese	64.1	54.8	49.4	232	155	209	150	71.5	77.1	NA	42.6	174	322	110	305	152	74.8	521	448	368
Mercury	0.06	0.02 J	0.02 J	0.06	0.05	0.04	0.05	0.02 J	0.03	NA	0.03 J	0.06	0.04	0.15 B	0.5 J	0.14 B	0.45 B	1.3 J	1.1 J	0.56 J
Nickel	6.9	10.8	8.5	7.4	20.8	5.9	10	8.8	5	NA	11.2	9.4	11.7	31.9	10.8 J	5.4 J	28.1	24	25.3	7.7 J
Potassium	447	1,100	789	529	1,130	468 J	710	640	492	NA	1,200	736	1,110	373 J	345 J	359 J	290 J	456 J	462 J	835 J
Selenium	0.29 J	0.35	0.32	0.56	0.63	0.26 J	0.38 J	0.19 J	0.26 J	NA	0.39 J	1.1	0.51	1.1 U	0.76 U	0.8 U	1.7 J	3.4	2.6	0.96 U
Silver	0.05 J	0.01 J	0.01 J	0.07 J	0.08	0.04 J	0.08 J	0.02 J	0.07 J	NA	0.01 J	0.07 J	0.04 J	0.5 U	0.36 J	0.14 U	0.45 U	0.48 J	0.42 U	0.19 J
Sodium	31.3 B	36.2 J	22.2 B	23.8 B	204	34.9 J	59.4 J	34.2 B	19.8 B	NA	44.4 B	59.5 J	51 J	243 B	114 B	113 B	90 B	165 B	177 B	112 B
Thallium	0.1 J	0.17	0.12	0.11 J	0.32	0.1 J	0.13 J	0.12 J	0.08 J	NA	0.15 J	0.18	0.22	1.2 U	0.82 U	1.4 U	1.1 U	1 U	1 U	1.6 U
Vanadium	25.4	26.8	21.4	33.7	38.2	15.8	23.7	18.9	19.7	NA	31.1	32.7	34.2	19.9 J	27.5	36.5	115	87	89	27.8
Zinc	19.8	31	26.3	23.7	63.5	18.7	49.2	28.8	24.1	NA	38	28.9	45.3	114	244	16.5	36.9	203	177	373
Wet Chemistry																				
pH (ph)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.53	6.99	4.37	6.22	5.8	6.05	5.79
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	70,400	71,200	93,700	202 U	173,000	145,000	82,700

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

PH - pH units

UG/KG - Micrograms per kilogram

Table F-1
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Station ID	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name										
Volatile Organic Compounds (UG/KG)										
1,1,1-Trichloroethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,1,2,2-Tetrachloroethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,1,2-Trichloroethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,1-Dichloroethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,1-Dichloroethene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2,4-Trichlorobenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2-Dibromo-3-chloropropane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2-Dibromoethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2-Dichlorobenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2-Dichloroethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,2-Dichloropropane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,3-Dichlorobenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
1,4-Dichlorobenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
2-Butanone	11 U	10 U	11 U	17 U	69 R	16 UL	15 UL	14 UL	16 UL	16 UL
2-Hexanone	11 U	10 U	11 U	17 U	18 U	16 UL	15 UL	14 UL	16 UL	16 UL
4-Methyl-2-pentanone	11 U	10 U	11 U	17 U	18 U	16 UL	15 UL	14 UL	16 UL	16 UL
Acetone	7 B	10 U	11 U	20 B	380 R	16 UL	15 UL	10 L	17 L	14 L
Benzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Bromodichloromethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Bromoform	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Bromomethane	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
Carbon disulfide	11 U	10 U	11 U	17 U	18 U	1.6 B	1.5 B	1.3 B	1.7 B	1.6 B
Carbon tetrachloride	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Chlorobenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Chloroethane	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
Chloroform	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Chloromethane	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
cis-1,2-Dichloroethene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
cis-1,3-Dichloropropene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Cyclohexane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Dibromochloromethane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Dichlorodifluoromethane (Freon-12)	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
Ethylbenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Isopropylbenzene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Methyl acetate	11 U	10 U	11 U	17 U	18 U	3.9 UL	3.6 UL	3.3 UL	3.9 UL	3.9 UL
Methylcyclohexane	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Methylene chloride	11 U	10 U	11 U	17 U	18 U	16 UL	15 UL	14 UL	16 UL	16 UL
Methyl-tert-butyl ether (MTBE)	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Styrene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Tetrachloroethene	11 U	10 U	11 U	17 U	18 U	4.8 J	3.1 J	5 J	5.1 J	4.6 J
Toluene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
trans-1,2-Dichloroethene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
trans-1,3-Dichloropropene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Trichloroethene	11 U	10 U	11 U	17 U	18 U	3.2 UL	3 UL	2.8 UL	3.2 UL	3.2 UL
Trichlorofluoromethane (Freon-11)	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
Vinyl chloride	11 U	10 U	11 U	17 U	18 U	6.5 UL	6 UL	5.5 UL	6.5 UL	6.5 UL
Xylene, total	11 U	10 U	11 U	17 U	18 U	9.8 UL	9 UL	8.2 UL	9.8 UL	9.8 UL
Semivolatile Organic Compounds (UG/KG)										
1,1-Biphenyl	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
2,2'-Oxybis(1-chloropropane)	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
2,4,5-Trichlorophenol	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	58 U	51 U	54 U	52 U	52 U
2,4,6-Trichlorophenol	520 U	410 U	400 U	540 U	800 U	58 U	5.5 J	54 U	52 U	52 U
2,4-Dichlorophenol	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
2,4-Dimethylphenol	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
2,4-Dinitrophenol	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	710 U	630 U	660 U	640 U	640 U
2,4-Dinitrotoluene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
2,6-Dinitrotoluene	520 U	410 U	400 U	540 U	800 U	54 U	51 U	49 U	57 U	52 U
2-Chloronaphthalene	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
2-Chlorophenol	520 U	410 U	400 U	540 U	800 U	58 U	51 U	54 U	52 U	52 U
2-Methylnaphthalene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
2-Methylphenol	520 U	410 U	400 U	540 U	800 U	58 U	51 U	54 U	52 U	52 U
2-Nitroaniline	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	710 U	630 U	660 U	640 U	640 U
2-Nitrophenol	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name										
3- and 4-Methylphenol	NA	NA	NA	NA	NA	58 U	51 U	54 U	52 U	52 U
3,3'-Dichlorobenzidine	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
3-Nitroaniline	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	710 U	630 U	660 U	640 U	640 U
4,6-Dinitro-2-methylphenol	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	170 U	150 U	160 U	160 U	160 U
4-Bromophenyl-phenylether	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
4-Chloro-3-methylphenol	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
4-Chloroaniline	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
4-Chlorophenyl-phenylether	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
4-Methylphenol	520 U	410 U	400 U	540 U	800 U	NA	NA	NA	NA	NA
4-Nitroaniline	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	710 U	630 U	660 U	640 U	640 U
4-Nitrophenol	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	58 U	51 U	54 U	52 U	52 U
Acenaphthene	520 U	410 U	110 J	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Acenaphthylene	520 U	410 U	400 U	540 U	340 J	12 U	10 U	11 U	10 U	10 U
Acetophenone	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Anthracene	520 U	410 U	170 J	540 U	530 J	1.6 J	10 U	11 U	3.4 J	10 U
Atrazine	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Benzaldehyde	520 U	410 U	400 U	540 U	800 U	280 UJ	250 UJ	270 UJ	260 UJ	260 UJ
Benzo(a)anthracene	530	220 J	320 J	350 J	3,100	11 J	6.4 J	4.8 J	32	12 J
Benzo(a)pyrene	540	200 J	1,400 J	440 J	4,400	11 J	7.4 J	6.2 J	29	9.4 J
Benzo(b)fluoranthene	660 J	320 J	260 J	620 J	7,200 J	24	15 J	11 J	68	18 J
Benzo(g,h,i)perylene	210 J	94 J	390 J	270 J	2,000	8.4 J	2.5 J	11 UJ	19 J	5.6 J
Benzo(k)fluoranthene	570	310 J	240 J	710	5,100	6.5 J	5.1 J	11 UJ	22	5.8 J
bis(2-Chloroethoxy)methane	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
bis(2-Chloroethyl)ether	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	520 U	410 U	400 U	540 U	800 U	210 B	530 B	290 B	100 B	86 B
Butylbenzylphthalate	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Caprolactam	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Carbazole	520 U	410 U	140 J	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Chrysene	600	260 J	250 J	550	3,100	12 J	8.8 J	6 J	33	12 J
Dibenz(a,h)anthracene	110 J	410 U	400 U	540 U	950	12 U	10 UJ	11 UJ	6.3 J	10 U
Dibenzofuran	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Diethylphthalate	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Dimethyl phthalate	520 U	410 U	400 U	540 U	800 U	2.7 B	2 B	1.7 B	1.6 B	1.9 B
Di-n-butylphthalate	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Di-n-octylphthalate	520 U	410 U	400 U	540 U	800 U	58 U	51 U	54 U	52 U	52 U
Fluoranthene	840	330 J	570	740	1,700	20 J	12 J	10 J	42	19 J
Fluorene	520 U	410 U	140 J	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Hexachlorobenzene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Hexachlorobutadiene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Hexachlorocyclopentadiene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
Hexachloroethane	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Indeno(1,2,3-cd)pyrene	360 J	120 J	560	320 J	2,700	8 J	6.5 J	4.4 J	19 J	5.2 J
Isophorone	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Naphthalene	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
n-Nitroso-di-n-propylamine	520 U	410 U	400 U	540 U	800 U	12 U	10 U	11 U	10 U	10 U
n-Nitrosodiphenylamine	520 U	410 U	400 U	540 U	800 U	280 U	250 U	270 U	260 U	260 U
Nitrobenzene	520 U	410 U	400 U	540 U	620 U	12 U	10 U	11 U	10 U	10 U
Pentachlorophenol	1,300 U	1,000 U	1,000 U	1,400 U	2,000 U	58 U	51 U	54 U	52 U	52 U
Phenanthrene	290 J	88 J	440 J	270 J	800 U	10 J	5.3 J	4.9 J	16 J	7 J
Phenol	520 U	410 U	400 U	540 U	800 U	58 U	51 U	54 U	52 U	52 U
Pyrene	860	410 J	950 J	670	3,200	20 J	17 J	12 J	54	23

Table F-1
Surface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name										
Pesticide/Polychlorinated Biphenyls (UG/KG)										
4,4'-DDD	5.2 U	1.6 B	4.3 B	4.7 B	30	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
4,4'-DDE	10	5.5 J	7.4	23	58	1.9 UJ	1.6 UJ	1.7 UJ	1.2 J	1.8 UJ
4,4'-DDT	18	30 J	40	60	16 J	1.9 UJ	1.6 UJ	0.6 J	2.1 J	1.8 UJ
Aldrin	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
alpha-BHC	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
alpha-Chlordane	2.7 U	0.63 J	0.49 J	0.78 J	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Aroclor-1016	52 U	41 U	40 U	54 U	80 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
Aroclor-1221	110 U	84 U	82 U	110 U	160 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
Aroclor-1232	52 U	41 U	40 U	54 U	80 U	11 U	11 U	11 U	11 U	10 UJ
Aroclor-1242	52 U	41 U	40 U	54 U	80 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
Aroclor-1248	52 U	41 U	40 U	54 U	80 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
Aroclor-1254	52 U	41 U	40 U	54 U	80 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
Aroclor-1260	52 U	41 U	40 U	54 U	80 U	9.7 U	9.1 U	9.3 U	9.1 U	8.7 UJ
beta-BHC	3.1 J	2.1 U	1.4 J	2 J	2.5 J	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
delta-BHC	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Dieldrin	1.2 J	2.4 J	2.8 J	1.2 J	6.3 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endosulfan I	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.42 J	0.9 UJ
Endosulfan II	5.2 U	4.1 U	8.3 J	5.4 U	3.9 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endosulfan sulfate	5.2 U	4.1 U	4 U	5.4 U	6.8 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin	5.2 U	4.1 U	4 U	5.4 U	8 U	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin aldehyde	5.2 U	4.1 U	4 U	5.4 U	2 J	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
Endrin ketone	3.4 J	1.8 J	4.7 J	2.3 J	16	1.9 UJ	1.6 UJ	1.7 UJ	1.8 UJ	1.8 UJ
gamma-BHC (Lindane)	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.35 J	0.9 UJ	0.93 UJ	0.9 UJ
gamma-Chlordane	1.2 J	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Heptachlor	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Heptachlor epoxide	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U	0.99 UJ	0.84 UJ	0.9 UJ	0.93 UJ	0.9 UJ
Methoxychlor	27 U	27	23 J	28 U	51 J	9.9 UJ	8.4 UJ	9 UJ	9.3 UJ	9 UJ
Toxaphene	270 U	210 U	210 U	280 U	410 U	19 UJ	16 UJ	17 UJ	17 UJ	17 UJ
Dioxin/Furans (PG/G)										
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	2.17 J	2.52 J	1.62 J	1.93 J	2.06 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	33	38.2	37.1	43.7	91.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	2.41 U	2.8 U	2.41 U	2.52 U	0.136 X
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	0.774 J	1.02 J	0.646 J	0.61 J	0.96 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	0.402 J	0.507 X	0.322 X	0.25 X	0.629 X
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	0.258 X	0.352 J	0.231 X	0.203 J	0.313 X
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	0.691 J	0.986 J	0.617 J	0.709 J	1.24 J
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	2.41 U	0.0983 X	2.41 U	0.0667 J	0.114 X
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	0.795 X	1.15 X	0.796 X	0.551 X	1.47 J
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	0.256 X	0.413 J	0.277 J	2.52 U	0.297 X
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	0.195 J	0.28 J	0.164 X	0.151 X	0.356 J
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	0.378 J	0.612 J	0.113 J	0.311 J	0.221 X
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	0.401 X	0.444 X	0.269 X	0.315 J	0.39 X
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	0.963 U	1.12 U	0.965 U	1.01 U	1.13 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	0.357 X	0.453 J	0.965 U	1.01 U	1.13 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	3.66 J	4.22 J	2.96 J	3.55 J	3.08 J
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	3,870 J	3,370 J	4,920 J	4,600 J	9,360 J
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	3.93	5.22	2.8	4.68	1.97 J
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	83.7	97.1	93.3	98.5	213
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	3.4	5.29	2.15 J	3.54	4.28
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	12.5	14	10.8	3.96	21.1
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	3.62	3.91	2.83	2.55	4.15
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	2.6	3.63	2.29 J	0.483 J	4.26
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	3.88	5.25	3.58	1.9	6.46
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	1.16	1.08 J	0.733 J	0.356 J	1.48
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	2.2	2.36	2.39	2.35	4.72

Table F-1
Surface Soil Raw Analytical Results
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Station ID	IS66SO17	IS66SO19		IS66SO20	IS66SO21	IS66SO42		IS66SO43	IS66SO44	IS66SO45
Sample ID	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001	IS66SS420001	IS66SS42P0001	IS66SS430001	IS66SS440001	IS66SS450001
Sample Date	04/12/07	04/12/07	04/12/07	04/12/07	04/12/07	09/22/10	09/22/10	09/22/10	09/22/10	09/22/10
Chemical Name										
Explosives (UG/KG)										
1,3,5-Trinitrobenzene	620 U	620 U	620 U	620 U	620 U	54 U	51 U	49 U	57 U	52 U
1,3-Dinitrobenzene	620 U	620 U	620 U	620 U	620 U	54 U	51 U	49 U	57 U	52 U
2,4,6-Trinitrotoluene	620 U	620 U	620 U	620 U	620 U	54 U	51 U	49 U	57 U	52 U
2-Amino-4,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	54 U	51 U	49 U	57 U	52 U
2-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	54 U	51 U	49 U	57 U	52 U
3-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	54 U	51 U	49 U	57 U	52 U
4-Amino-2,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	54 U	51 U	49 U	57 U	52 U
4-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	54 U	51 U	49 U	57 U	52 U
HMX	620 U	620 U	620 U	620 U	620 U	54 U	51 U	49 U	57 U	52 U
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	430 U	410 U	390 U	460 U	420 U
Nitroguanidine	140 U	140 U	120 U	130 U	200 U	39 U	39 U	40 U	39 U	39 U
Perchlorate	3.5 U	2.6 U	2.4 U	1.2 J	1.8 J	0.98 J	0.77 J	0.78 J	2.8 J	2.3 J
RDX	620 U	620 U	620 U	620 U	620 U	54 U	51 U	49 U	57 U	52 U
Tetryl	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	1,200 UJ	54 U	51 U	49 U	57 U	52 U
Total Metals (MG/KG)										
Aluminum	5,660	4,700	4,000	6,290	9,790	10,900	10,800	10,800	10,700	13,600
Antimony	1.9 B	0.69 B	0.48 UJ	1.4 B	2.5 B	0.4 U	0.4 U	0.32 U	0.36 U	0.42 U
Arsenic	22.2	6.6	6.1	5.5	3.5 J	2.9	2.4	2.8	5.6	2.6
Barium	93.6	50.7	43.5 J	73.8	98.1	60.2	55.7	33.6	58.5	64
Beryllium	0.35 B	0.35 B	0.27 B	0.29 B	0.56 B	0.46	0.42	0.33	0.47	0.49
Cadmium	0.3 B	0.1 U	0.091 U	0.12 B	0.24 B	0.17 B	0.03 B	0.07 B	0.15 B	0.23 J
Calcium	4,410	2,130 J	4,750 J	5,100	6,150	2,260 J	814 J	669	2,280	2,090
Chromium	10.9	11	8.6	13.9	14	13.7	12	13.4	14.6	18.6
Cobalt	5 J	9.8 J	3.6 J	3.1 J	9.5 J	5.8 J	3.7 J	4	6.3	5.7
Copper	32.4	9.7	10.1	27.8	41.5	11	10.3	8.4	12	12.1
Cyanide	0.1 J	0.075 U	0.083 J	0.25 J	0.57 J	0.48 U	0.44 U	0.4 U	0.44 U	0.44 U
Iron	10,500	12,700	9,740	12,900	18,500	13,900	14,800	13,700	14,600	17,700
Lead	121	27.4	28.4	182	38.7	18.6 J	38 J	14.1	17	13.7
Magnesium	726 J	424 J	549 J	897 J	1,700 J	883	786	705	969	1,080
Manganese	518	345	263	350	381	217 J	97.2 J	44.3	193	388
Mercury	0.33 B	0.41 J	0.53 J	22.1 J	1.9 J	0.09 J	0.05 J	0.05	0.07	0.08
Nickel	9.2 J	6.5 J	6.4 J	10.7 J	15 J	10.2	8.4	8.1	8.6	10.5
Potassium	434 J	324 J	298 J	651 J	1,140 J	991	998	815	928	1,120
Selenium	0.85 U	0.68 U	0.61 U	0.83 U	1.3 U	0.42	0.26 J	0.31 J	0.41	0.4 J
Silver	0.38 U	0.34 J	0.49 J	0.55 J	0.58 U	0.05 J	0.04 J	0.03 J	0.06 J	0.03 J
Sodium	149 B	88.3 B	86.2 B	109 B	172 B	36.2 J	27 J	33.5 J	33.8 J	32.8 J
Thallium	0.92 U	0.73 U	0.66 U	0.89 U	1.4 U	0.12 J	0.1 J	0.13 J	0.11 J	0.15 J
Vanadium	33.9	26.4	24.6	32.4	40	29.6	27	28.2	26.4	31.7
Zinc	373	35.1	37.4	149	211	35.5	27.6	24	41.9	38.7
Wet Chemistry										
pH (ph)	5.96	7.62	7.54	6.86	6.11	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	76,100	706 J	25,500 J	47,000	148,000	NA	NA	NA	NA	NA

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

PH - pH units

UG/KG - Micrograms per kilogram

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30	IS66DP31
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607	IS66SB291617	IS66SB300910	IS66SB311415
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10	09/23/10
Chemical Name																						
Volatile Organic Compounds (UG/KG)																						
1,1,1-Trichloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,1,2,2-Tetrachloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,1,2-Trichloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,1-Dichloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	3 L	3 U	2.5 UL	2.5 UL	2.5 UJ
1,1-Dichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	1.4 J	2.5 U	1.1 J	2.5 UL	2.8 L	3 U	2.5 UL	2.5 UL	2.5 UJ
1,2,4-Trichlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 UL	2.5 UL	2.5 UL	2.5 UJ
1,2-Dibromo-3-chloropropane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,2-Dibromoethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,2-Dichlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,2-Dichloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,2-Dichloropropane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,3-Dichlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
1,4-Dichlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
2-Butanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	14 U	15 U	12 U	12 UJ	12 UJ	12 UL	12 UL	15 U	12 UL	12 UL	12 UJ
2-Hexanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	14 U	15 U	12 U	12 U	12 UJ	12 UL	12 UL	15 U	12 UL	12 UL	12 UJ
4-Methyl-2-pentanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	14 U	15 U	12 U	12 U	12 UJ	12 UL	12 UL	15 U	12 UL	12 UL	12 UJ
Acetone	12 U	12 U	18 UJ	99 B	22 U	19 U	73 B	15 U	15 B	17 B	26 B	9.2 B	11 B	12 U	11 B	9 B	12 UL	8.5 B	8.7 B	12 UL	24 L	12 UJ
Benzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Bromodichloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Bromoform	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Bromomethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
Carbon disulfide	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	1.4 B	1.7 B	1.1 B	2.1 B	1.4 B	1.4 B	1.5 B	1.7 B	1.4 B	1.3 B	1.5 B
Carbon tetrachloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Chlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Chloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
Chloroform	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Chloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
cis-1,2-Dichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
cis-1,3-Dichloropropene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Cyclohexane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Dibromochloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Dichlorodifluoromethane (Freon-12)	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
Ethylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Isopropylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Methyl acetate	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	3.3 U	3.6 U	3 U	3 U	2.9 UJ	3 UL	3 UL	3.6 UL	3 UL	3 UL	3 UJ
Methylcyclohexane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 UL	2.5 UL	2.5 UL	2.5 UJ
Methylene chloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	14 U	15 U	12 U	12 U	12 UJ	12 UL	12 UL	15 U	12 UL	12 UL	12 UJ
Methyl-tert-butyl ether (MTBE)	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Styrene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Tetrachloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	6.7 J	2.1 J	4.8 J	4.6 J	5.6 J	9.8 J	10 J	7 J	6.1 J	2.9 J	5.9 J
Toluene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	13	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
trans-1,2-Dichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
trans-1,3-Dichloropropene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Trichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	2.8 U	3 U	2.5 U	2.5 U	2.4 UJ	2.5 UL	2.5 UL	3 U	2.5 UL	2.5 UL	2.5 UJ
Trichlorofluoromethane (Freon-11)	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
Vinyl chloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	5.5 U	6 U	5 U	5 U	4.8 UJ	5 UL	5 UL	6 U	5 UL	5 UL	5 UJ
Xylene, total	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U	8.2 U	9 U	7.5 U	7.5 U	7.2 UJ	7.4 UL	7.5 UL	9 U	7.5 UL	7.5 UL	7.5 UJ

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30	IS66DP31
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607	IS66SB291617	IS66SB300910	IS66SB311415
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10	09/23/10
Chemical Name																						
Semivolatile Organic Compounds (UG/KG)																						
1,1-Biphenyl	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
2,2'-Oxybis(1-chloropropane)	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
2,4,5-Trichlorophenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	63 U	61 U	61 U	2.9 J	59 U	55 U	58 U	52 U	58 U	56 U	62 U
2,4,6-Trichlorophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	14 J	16 J	13 J	59 U	8.8 J	9.2 J	10 J	58 U	56 U	62 U
2,4-Dichlorophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 UJ	14 J	14 J	12 J	12 U	11 U	12 U	5.5 J	12 U	11 U	12 U
2,4-Dimethylphenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 UL	12 UL	12 UL	9.3 R	12 R	11 U	12 U	10 UL	12 U	11 U	12 U
2,4-Dinitrophenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	770 U	760 UJ	750 U	570 U	730 U	670 U	720 U	650 U	710 U	690 U	760 U
2,4-Dinitrotoluene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
2,6-Dinitrotoluene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
2-Chloronaphthalene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 UL	310 UJ	300 UL	230 U	290 U	270 U	290 U	260 UL	290 U	280 U	300 U
2-Chlorophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 U	58 U	52 U	58 U	56 U	62 U
2-Methylnaphthalene	420 U	410 U	520 U	210 J	650 U	550 U	420 U	210 J	420 U	420 U	410 U	12 UL	3.3 L	12 UL	2.8 L	12 UL	11 U	12 U	10 U	12 U	11 U	12 U
2-Methylphenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 UL	58 UL	52 UL	58 UJ	56 U	62 UL
2-Nitroaniline	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	770 U	760 UJ	750 U	570 U	730 U	670 U	720 U	650 U	710 U	690 U	760 U
2-Nitrophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
3- and 4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	63 U	61 U	61 U	46 U	16 J	55 U	58 U	52 U	58 U	56 U	62 U
3,3'-Dichlorobenzidine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 UJ	12 UJ	12 UJ	9.3 R	12 R	11 R	12 R	10 R	12 R	11 U	12 R
3-Nitroaniline	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	770 U	760 UJ	750 U	570 U	730 U	670 U	720 U	650 U	710 U	690 U	760 U
4,6-Dinitro-2-methylphenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	190 U	180 U	180 U	140 U	180 U	160 UL	180 UL	160 UL	170 UL	170 U	180 UL
4-Bromophenyl-phenylether	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
4-Chloro-3-methylphenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
4-Chloroaniline	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
4-Chlorophenyl-phenylether	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
4-Methylphenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	770 U	760 UJ	750 U	570 U	730 U	670 U	720 U	650 U	710 U	690 U	760 U
4-Nitrophenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	63 UJ	61 UJ	61 UJ	46 UJ	59 UJ	55 UJ	58 UJ	52 UJ	58 UJ	56 U	62 UJ
Acenaphthene	420 U	150 J	520 U	830	650 U	550 U	420 U	1,700	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL	12 UL	11 U	12 UL
Acenaphthylene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	170 J	420 U	420 U	410 U	12 U	3.7 J	4 J	3.4 J	12 U	11 UL	12 UL	10 UL	12 UL	11 U	12 UL
Acetophenone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	110 J	420 U	420 U	410 U	310 UL	310 UJ	300 UL	230 U	290 U	270 U	290 U	260 UL	290 U	280 U	300 U
Anthracene	420 U	440	520 U	180 J	650 U	110 J	420 U	4,700 J	420 U	420 U	410 U	12 U	12 U	2 J	1.4 J	12 U	11 U	12 U	1.8 J	12 U	1.4 J	12 U
Atrazine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	1.5 J	3.6 J	2.2 J	1.5 J	11 U	12 U	2 J	12 U	11 U	12 U
Benzaldehyde	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 UJ	310 UJ	300 UJ	230 R	290 R	270 UJ	290 UJ	260 UJ	290 UJ	280 UJ	300 UJ
Benzo(a)anthracene	420 U	1,000	270 J	820	650 U	280 J	420 U	15,000	170 J	420 U	410 U	7.3 J	7.6 J	8.5 J	6.5 B	5.4 B	6.1 J	5.2 J	8.6 J	12 U	5.6 J	8.1 J
Benzo(a)pyrene	420 U	850	320 J	600 J	650 U	200 J	420 U	15,000	110 J	420 U	410 U	12 U	12 U	4.3 J	9.3 U	12 U	5.6 J	5.2 J	7.9 J	12 UJ	5.9 J	12 U
Benzo(b)fluoranthene	420 U	920	470 J	640	650 U	240 J	420 U	15,000	160 J	420 U	410 U	8.4 J	7.4 J	8.1 J	6.3 J	12 U	9.9 J	9.5 J	12 B	12 UJ	9 J	12 U
Benzo(g,h,i)perylene	420 U	340 J	230 J	350 J	650 U	550 U	420 U	11,000 J	420 U	420 U	410 U	5.9 J	12 U	12 U	2.4 J	12 U	11 UJ	12 UJ	2.8 J	12 UJ	11 U	12 U
Benzo(k)fluoranthene	420 U	920	310 J	570 J	650 U	180 J	420 U	13,000	120 J	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UJ	12 UJ	10 U	12 UJ	11 U	12 U
bis(2-Chloroethoxy)methane	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 UL	310 UJ	300 UJ	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
bis(2-Chloroethyl)ether	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
bis(2-Ethylhexyl)phthalate	420 U	410 U	520 U	170 B	650 U	550 U	420 U	510 U	420 U	98 B	410 U	50 K	78 B	150 K	96 B	190 B	89 B	1,900 B	550 B	100 B	1,100 B	90 B
Butylbenzylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Caprolactam	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Carbazole	420 U	360 J	220 J	610 U	650 U	550 U	420 U	2,900	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Chrysene	420 U	1,200	350 J	850	650 U	290 J	420 U	15,000	190 J	420 U	410 U	12 U	12 U	3.9 J	2.2 J	12 U	11 UJ	12 UJ	2 J	12 U	5.4 J	12 U
Dibenz(a,h)anthracene	420 U	230 J	520 U	150 J	650 U	550 U	420 U	2,600 J	420 U	420 U	410 U	3.9 J	12 U	12 U	9.3 U	12 U	11 UJ	12 UJ	2.4 J	12 UJ	11 U	12 U
Dibenzofuran	420 U	170 J	520 U	410 J	650 U	550 U	420 U	710	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Diethylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Dimethyl phthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	2.3 J	2.9 J	2.8 B	2.5 B	11 U	12 U	2.2 J	12 U	1.8 B	12 U
Di-n-butylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Di-n-octylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 UJ	58 UJ	52 U	58 U	56 U	62 U
Fluoranthene	420 U	2,500	770	1,600	200 J	720	120 J	27,000	340 J	420 U	410 U	12 U	12 U	3.9 J	2.4 J	12 U	11 U	12 U	7.1 K	12 U	11 J	12 U
Fluorene	420 U	280 J	120 J	610 U	650 U	550 U	420 U	1,200	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL	12 UL	11 U	12 UL
Hexachlorobenzene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
Hexachlorobutadiene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
Hexachlorocyclopentadiene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 UL	12 UL	10 UL	12 UL	11 U	12 UL
Hexachloroethane	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Indeno(1,2,3-cd)pyrene	420 U	540	290 J	390 J	650 U	130 J	420 U	11,000 J	420 U	420 U	410 U	5.3 J	12 U	12 U	2.2 J	12 U	11 UJ	12 UJ	3.2 J	12 U	4.2 J	12 U
Isophorone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Naphthalene	420 U	110 J	140 J	610 U	650 U	550 U	420 U	630	420 U	420 U	410 U	12 U	12 U	12 U	9.3 UL	12 UL	11 U	12 U	10 U	12 U	11 U	12 U
n-Nitroso-di-n-propylamine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
n-Nitrosodiphenylamine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	310 U	310 UJ	300 U	230 U	290 U	270 U	290 U	260 U	290 U	280 U	300 U
Nitrobenzene	420 U	410 U	520 U	610 U	620 U	550 U	420 U	510 U	420 U	420 U	410 U	12 U	12 U	12 U	9.3 U	12 U	11 U	12 U	10 U	12 U	11 U	12 U
Pentachlorophenol	1,100 U	1,000 U	1,300 U	1,500 U	1,600 U	1,400 U	1,100 U	1,300 U	1,100 U	1,100 U	1,000 U	63 UL	61 UL	61 UL	46 UL	59 UL	55 U	58 U	52 U	58 U	56 U	62 U
Phenanthrene	420 U	1,900	510 J	1,400	650 U	500 J	230 J	17,000	100 J	420 U	410 U	12 U	12 U	3.1 J	2 J	12 U	11 U	12 U	3.4 J	12 U	7.5 J	12 U
Phenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U	63 U	61 U	61 U	46 U	59 U	55 U	58 U	52 U	58 UJ	56 U	62 U
Pyrene	420 U	1,900	580	1,600	150 J	590	420 U	25,000	300 J	420 U	410 U	12 U	12 U	4.6 J	3.1 J	12 U	11 UJ	12 UJ	6.4 J	12 U	12 J	12 U

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30	IS66DP31
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607	IS66SB291617	IS66SB300910	IS66SB311415
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10	09/23/10
Chemical Name																						
Pesticide/Polychlorinated Biphenyls (UG/KG)																						
4,4'-DDD	14	18	33	83,000	580 J	50 J	9.6	14 J	1.6 J	4.2 U	57	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
4,4'-DDE	4.2 U	13	5.4	280 J	6.2 J	5.5 U	4.2 U	14	2.6 J	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
4,4'-DDT	4.2 U	24	5.6 B	620	10	2 B	4.2 U	40 J	10	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Aldrin	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
alpha-BHC	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	4 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
alpha-Chlordane	2.2 U	2.1 U	2.7 U	160 U	3.9	1.9 J	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Aroclor-1016	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
Aroclor-1221	85 U	84 U	110 U	6,200 U	130 U	110 U	86 U	100 U	86 U	86 U	84 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
Aroclor-1232	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	13 U	12 U	12 UJ	10 U	11 U	11 UJ	11 UJ	10 U	11 U	11 U	12 U
Aroclor-1242	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
Aroclor-1248	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
Aroclor-1254	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
Aroclor-1260	42 U	41 U	52 U	3,100 U	65 U	55 U	42 U	51 U	42 U	42 U	41 U	11 U	10 U	10 UJ	8.7 U	9.2 U	9.6 UJ	9.8 UJ	8.9 U	9.3 U	9.1 U	10 U
beta-BHC	2.2 U	2.1 U	0.82 J	160 U	3.3 U	2.8 U	2.2 U	8.5 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
delta-BHC	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Dieldrin	4.2 U	4.1 U	2 J	310 U	6.5 U	5.5 U	4.2 U	2 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Endosulfan I	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	1.3 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Endosulfan II	4.2 U	4.1 U	1.2 J	310 U	6.5 U	5.5 U	4.2 U	1.2 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Endosulfan sulfate	4.2 U	4.1 U	5.2 U	310 U	6.5 U	5.5 U	4.2 U	7.7 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Endrin	4.2 U	0.91 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	5.1 U	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Endrin aldehyde	4.2 U	1.8 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	19 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
Endrin ketone	4.2 U	2.4 J	5.2 U	310 U	6.5 U	5.5 U	4.2 U	29 J	4.2 U	4.2 U	4.1 U	2.1 UJ	2 UJ	2 UL	1.7 U	1.8 UJ	1.9 UL	1.9 UL	1.7 UL	1.8 UL	1.8 UJ	2 UL
gamma-BHC (Lindane)	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
gamma-Chlordane	2.2 U	0.57 J	2.7 U	240 J	0.99 J	0.62 J	2.2 U	14 J	0.5 J	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Heptachlor	2.2 U	2.1 U	2.7 U	160 U	3.3 U	2.8 U	2.2 U	2.6 U	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Heptachlor epoxide	2.2 U	2.1 U	0.74 J	210 J	2.8 J	2.8 U	2.2 U	0.83 J	2.2 U	2.2 U	2.1 U	1.1 UJ	1 UJ	1 UL	0.87 U	0.92 UJ	0.96 UL	0.98 UL	0.89 UL	0.93 UL	0.93 UJ	1 UL
Methoxychlor	22 U	21 U	27 U	1,600 U	33 U	28 U	22 U	77 J	8.3 J	22 U	21 U	11 UJ	10 UJ	10 UL	8.7 U	9.2 UJ	9.6 UL	9.8 UL	8.9 UL	9.3 UL	9.3 UJ	10 UL
Toxaphene	220 U	210 U	270 U	16,000 U	330 U	280 U	220 U	260 U	220 U	220 U	210 U	20 UJ	19 UJ	19 UL	16 U	17 UJ	18 UL	18 UL	17 UL	18 UL	17 UJ	19 UL
Dioxin/Furans (PG/G)																						
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.137 J	0.232 J	2.92 U	2.66 U	2.85 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	27	17.5	111	22.2	30.3	8.81	148	18.3	37.7	10.5	12
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	0.0983 J	2.92 U	2.66 U	2.85 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	0.13 J	0.494 J	0.163 X	0.285 J	0.145 X	2.85 U
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.09 J	0.541 J	1.52 J	0.43 J	3.05 U	0.197 J	2.17 J	0.229 X	0.883 X	0.294 X	2.85 U
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.24 X	0.599 J	4.72	0.749 J	1.32 J	0.352 X	3.51 X	0.414 J	2.04 J	0.44 J	1.95 J
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	0.304 X	2.66 U	2.85 U
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	2.76 U	2.57 U	2.92 U	2.66 U	2.85 U
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	0.854 J	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U	0.766 J	1.06 UJ	1.14 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	1.11 U	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U	1.17 U	1.06 UJ	1.14 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.51 U	5.82 U	5.54 U	4.49 U	6.1 U	0.512 X	0.841 J	0.606 B	0.506 J	5.32 U	5.7 U
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	248	189	3,960 J	1,250 J	651	386	5,040 J	2,630 K	2,220 J	1,340 J	616 K
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.137 J	0.312 J	2.92 U	2.66 U	2.85 U
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	48.9	35.8	573	86	120	40.2	362	50.6	228	26.8	58.5
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.394 J	0.252 J	2.92 U	2.66 U	0.166 J
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	13.3	8.35	328	28	45.8	12.2	64.1	8.24	70.7	4.87	28.9
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.25 U	2.91 U	2.77 U	2.25 U	3.05 U	2.37 U	0.0896 J	2.57 U	2.92 U	2.66 U	2.85 U
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.93 J	2.15 J	120	3.09	14	2.37 U	5.25	0.297 J	15.1	0.375 J	2.69 J
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.3 U	1.16 U	1.11 U	0.899 U	1.22 U	0.947 U	1.11 U	1.03 U	1.17 U	1.06 U	1.14 U
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.91	1.46	118	0.438 J	37.5	0.947 U	1.5	0.165 J	22.4	1.06 U	3.97
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.577	0.346	3.78	0.715	0.63	0.272	3.61	1.06	2.43	0.595	0.5
Explosives (UG/KG)																						
1,3,5-Trinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
1,3-Dinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
2,4,6-Trinitrotoluene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
2-Amino-4,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
2-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
3-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
4-Amino-2,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
4-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
HMX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 UL	52 U	50 U	59 UL
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 UJ	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	450 U	460 U	480 U	370 U	470 U	360 U	400 U	380 U	420 U	400 U	470 U
Nitroguanidine	120 U	120 U	150 U	140 U	200 U	160 U	120 U	120 U	120 U	130 U	130 U	39 U	40 U	39 U	39 U	41 U	40 U	39 U	40 U	40 U	40 U	39 U
Perchlorate	2.6 U	0.85 J	2.8 U	2.8 J	3.1 U	3.9 U	2.6 U	1.2 J	1 J	1.7 J	0.9 J	0.53 U	0.5 U	0.48 U	0.42 U	0.49 U	0.32 J	0.47 U	1.1 J	0.47 U	230	0.86 J
RDX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U
Tetryl	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	56 U	58 U	60 U	47 U	58 U	45 U	50 U	47 U	52 U	50 U	59 U

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66DP22		IS66DP23	IS66DP24	IS66DP25	IS66DP26	IS66DP27	IS66DP28	IS66DP29	IS66DP30	IS66DP31
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214	IS66SB221112	IS66SB22P1112	IS66SB231516	IS66SB240708	IS66SB251011	IS66SB260708	IS66SB270910	IS66SB280607	IS66SB291617	IS66SB300910	IS66SB311415
Sample Date	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/11/07	04/12/07	04/11/07	04/12/07	04/11/07	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/24/10	09/24/10	09/23/10	09/24/10	09/22/10	09/23/10
Chemical Name																						
Total Metals (MG/KG)																						
Aluminum	6,490	7,200	8,780	9,990	6,830	4,930	8,630	10,900	7,090	8,510	9,340	17,600	15,400	13,700	5,860	16,100	12,600	17,200	6,520	11,600	13,100	15,800
Antimony	0.38 UJ	0.37 UJ	0.48 B	0.56 UJ	0.57 UJ	0.5 UJ	0.38 UJ	0.43 UJ	0.38 UJ	0.39 UJ	0.38 UJ	0.82 U	0.36 U	0.84 U	0.34 U	0.28 J	0.4 U	0.41 U	0.42 R	0.17 J	0.45 U	0.87 U
Arsenic	6.5	1.2 J	17.1	6.6	53.2 J	36.6 J	2.3 J	2.7 J	6.1	3	1.1 J	7.2 J	2 J	3.6	3.5	0.76 B	6.2	1.7	1.6	0.48 B	3.3	1.5
Barium	63.4	47.7 J	131	87.8	85.3	126	66	46.3 J	34.5 J	66.8	48 J	63.9	72.7	67.9	45.2	103	50.7	61.9	20.9	88.9	52.2	166
Beryllium	0.79 J	0.98 J	2.3	0.48 B	1.5 J	0.91 J	0.43 B	0.67 B	0.38 B	0.6 B	0.55 B	1.3	0.98	0.77	0.31 J	0.9 J	0.59	0.63	0.22 J	0.82	0.68	1.2
Cadmium	0.05 U	0.072 B	0.55 B	0.074 U	0.21 B	1.6 J	0.051 U	0.057 U	0.051 U	0.051 U	0.05 U	0.48 J	0.22 U	0.18 B	0.2 U	0.57 U	0.05 B	0.1 B	0.25 U	0.42 U	0.27 U	0.52 U
Calcium	311 J	3,710	22,600	2,550	2,000	965 J	858 J	255 J	597 J	1,630	35.3 B	205	246	284	58.5	532	46.5	153	103	459	119	523
Chromium	11.8	17.4	26.2	13.3	16.8	14.4	11	19.1	13.3	16	13.6	26.2	20.6	19.3	11.2	24	18.9	18.5	9.5	19.4	21.9	21.2
Cobalt	5.9 J	4 J	8 J	13.7 J	7.1 J	10.6 J	6 J	12.8 J	4.4 J	6.4 J	5.2 J	9.6	9.3	11.7	2.8	16.6	7	4.8	2.1	10.5	7.7	16.3
Copper	17.2	21.5	40.4	10.6	31	31.5	9.9	12.7	11.1	18.4	12	14.8	11.7	10.3	4.4	14	9.5	12.9	4.9	13.4	13	13.9
Cyanide	0.074 U	0.075 U	0.097 U	0.21 J	0.12 U	0.1 U	0.077 U	0.093 U	0.078 U	0.08 U	0.076 U	0.48 U	0.52 U	0.48 U	0.4 U	0.44 U	0.48 U	0.48 U	0.44 U	0.44 U	0.48 U	0.48 U
Iron	60,000	32,200	28,500	12,500	24,200 J	16,000 J	11,600	28,600	20,200	19,100	13,000	30,500 J	18,700 J	26,100	6,110	31,000	8,290	17,800	6,120	27,700	11,100	21,800
Lead	10.8	31.5	186	37.5	242 J	1,420 J	16	10.3	18.7	11.5	11.3	15.4 J	9.5 J	17.2	5.8	12.3	8.7	10.8	6.1	9.3	11.1	8.6
Magnesium	981 J	668 J	1,350 J	856 J	1,250 J	695 J	689 J	1,210 J	838 J	2,120	1,010 J	1,420	1,180	824	666	2,230	1,170	1,160	566 K	2,070	1,460	2,790
Manganese	64.8	71.9	272	106	79	73.8	139	278	78.4	93.1	24.6	50.5	57.3	105	17.2	53.2	24.4	28.4	24.4	91.4	59.3	81.3
Mercury	0.099 B	0.075 B	0.63	0.11 B	0.32 B	0.41 B	0.1 B	0.11 B	0.082 B	0.086 B	0.066 B	0.03 J	0.03 J	0.02 J	0.01 J	0.02 J	0.03 J	0.006 J	0.02 J	0.01 J	0.02 J	0.004 J
Nickel	10.9	5.3 J	25.4	9.5 J	42.2 J	28.9 J	5.8 J	11.3 J	7.2 J	14.7	7.5 J	15.5	13.6	11.4	3.8	22.7	8	9.5	5.5	22.1	10.2	30.6
Potassium	714 J	552 J	913 J	722 J	552 J	370 J	547 J	680 J	641 J	1,010 J	778 J	1,300	1,300	818	649	1,370	1,080	1,140	720 K	957	1,220	904
Selenium	0.73 U	0.71 U	3	1.1 U	1.6 J	0.96 U	0.74 U	0.82 U	0.74 U	0.75 U	0.73 U	0.58	0.4	0.5	0.28 J	0.65	0.28 J	0.35 J	0.09 J	0.27 J	0.35 J	0.38 J
Silver	0.13 U	0.12 U	0.15 U	0.18 U	0.19 U	0.17 U	0.13 U	0.14 U	0.13 U	0.13 U	0.12 U	0.03 J	0.02 J	0.04 J	0.02 J	0.01 J	0.03 J	0.05 J	0.02 J	0.02 J	0.03 J	0.03 J
Sodium	127 B	83.3 B	293 B	201 B	294 B	243 B	170 B	136 B	155 B	104 B	143 B	90.9	86.2	68 J	71.9	248	109	78.7 J	58.8 J	69.4 J	48.1 J	166
Thallium	1.2 U	1.2 U	1.5 U	1.8 U	1.9 U	1.6 U	1.3 U	1.4 U	1.3 U	1.3 U	1.2 U	0.22	0.18	0.2	0.07 J	0.2	0.14 J	0.22	0.08 J	0.12 J	0.14 J	0.16 J
Vanadium	19	62.2	156	31.5	166 J	73.4 J	21.7	26.2	25.4	22	23	40.2 J	22.8 J	27.5	17.6	30.9	32.4	29.5	15.5	25.7	29.6	28.8
Zinc	35.3	36.2	391	61.5	201 J	429 J	30.7	35	28.8	47.6	27.4	52.4	46.5	44.8	13.1	59.1	31.4	37.8	14	50.7	37.5	63
Wet Chemistry																						
pH (ph)	5.13	8.12	8.52	8.3	6.67	6.17	7.58	4.97	6.06	6.76	5.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	5,260	9,850	73,100	134,000	139,000	163,000	37,000	11,800	16,400	6,660	5,710	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

PH - pH units

UG/KG - Micrograms per kilogram

Table F-2
Subsurface Soil Raw Analytical Results
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Station ID	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name												
Volatile Organic Compounds (UG/KG)												
1,1,1-Trichloroethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1,2,2-Tetrachloroethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1,2-Trichloroethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1-Dichloroethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,1-Dichloroethene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2,4-Trichlorobenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2-Dibromo-3-chloropropane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2-Dibromoethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2-Dichlorobenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2-Dichloroethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,2-Dichloropropane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,3-Dichlorobenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
1,4-Dichlorobenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
2-Butanone	12 U	12 U	14 UJ	12 U	12 U	12 UJ	12 U	NA	15 U	14 UJ	15 UJ	22 J
2-Hexanone	12 U	12 U	14 UJ	12 U	12 U	12 UJ	12 U	NA	15 U	14 UJ	15 UJ	16 U
4-Methyl-2-pentanone	12 U	12 U	14 UJ	12 U	12 U	12 UJ	12 U	NA	15 U	14 UJ	15 UJ	16 U
Acetone	12 U	12 U	8.8 B	47 B	12 U	17 B	12 U	NA	6.5 J	14 UJ	6.6 B	95 J
Benzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Bromodichloromethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Bromoform	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Bromomethane	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
Carbon disulfide	0.85 B	2.5 U	1.6 B	1.4 B	0.98 B	1.4 B	1.4 B	NA	2.2 B	1.5 B	1.2 B	2.3 B
Carbon tetrachloride	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Chlorobenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Chloroethane	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
Chloroform	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Chloromethane	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
cis-1,2-Dichloroethene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
cis-1,3-Dichloropropene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Cyclohexane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Dibromochloromethane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Dichlorodifluoromethane (Freon-12)	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
Ethylbenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	9.3
Isopropylbenzene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	22
Methyl acetate	3 U	3 U	3.3 UJ	3 U	3 U	3 UJ	3 U	NA	3.6 U	3.3 UJ	3.6 UJ	3.9 U
Methylcyclohexane	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Methylene chloride	12 U	12 U	14 UJ	12 U	12 U	12 UJ	12 U	NA	15 U	14 UJ	15 UJ	16 U
Methyl-tert-butyl ether (MTBE)	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Styrene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Tetrachloroethene	6.4 J	4.4 J	6.1 J	6.6 J	7.4 J	4.6 J	4.5 J	NA	10 J	5.2 J	5.1 J	9.6 J
Toluene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
trans-1,2-Dichloroethene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
trans-1,3-Dichloropropene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Trichloroethene	2.5 U	2.5 U	2.8 UJ	2.5 U	2.5 U	2.5 UJ	2.5 U	NA	3 U	2.8 UJ	3 UJ	3.2 U
Trichlorofluoromethane (Freon-11)	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
Vinyl chloride	5 U	5 U	5.5 UJ	5 U	5 U	5 UJ	5 U	NA	6 U	5.5 UJ	6 UJ	6.5 U
Xylene, total	7.5 U	7.5 U	8.2 UJ	7.5 U	7.5 U	7.4 UJ	7.5 U	NA	9 U	8.2 UJ	9 UJ	50

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name												
Semivolatile Organic Compounds (UG/KG)												
1,1-Biphenyl	290 U	260 U	290 U	280 U	280 UL	270 U	280 U	280 U	NA	270 U	330 U	280 U
2,2'-Oxybis(1-chloropropane)	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
2,4,5-Trichlorophenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	13 J	57 U
2,4,6-Trichlorophenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	7.9 J	57 U
2,4-Dichlorophenol	12 U	10 UJ	12 U	2.6 J	12 UJ	11 U	11 U	11 U	NA	11 U	8.3 J	11 UJ
2,4-Dimethylphenol	12 U	10 U	12 UL	11 UL	12 UL	11 U	11 U	11 U	NA	11 UL	13 UL	11 UL
2,4-Dinitrophenol	720 U	640 U	730 U	690 U	710 U	670 U	700 U	700 U	NA	670 U	810 U	700 U
2,4-Dinitrotoluene	12 U	10 U	12 U	8.2 J	12 U	11 U	11 U	11 U	NA	11 U	13 U	11 U
2,6-Dinitrotoluene	46 U	42 U	61 U	53 U	50 UL	56 U	54 U	54 U	NA	51 U	54 U	62 U
2-Chloronaphthalene	290 UL	260 UL	290 UL	280 UL	280 UL	270 U	280 U	280 U	NA	270 UL	330 UL	280 UL
2-Chlorophenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	66 U	57 U
2-Methylnaphthalene	12 UL	10 UL	12 U	11 U	12 UL	11 U	11 U	11 U	NA	11 U	13 UL	100 L
2-Methylphenol	58 U	52 U	59 UL	56 UL	58 U	55 UL	57 UL	57 U	NA	55 UL	66 U	57 U
2-Nitroaniline	720 U	640 U	730 U	690 U	710 U	670 U	700 U	700 U	NA	670 U	810 U	700 U
2-Nitrophenol	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
3- and 4-Methylphenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	66 U	14 J
3,3'-Dichlorobenzidine	12 UL	10 UL	12 UJ	11 U	12 R	11 R	11 R	11 U	NA	11 UJ	13 UJ	11 UJ
3-Nitroaniline	720 U	640 U	730 U	690 U	710 U	670 U	700 U	700 U	NA	670 U	810 U	700 U
4,6-Dinitro-2-methylphenol	180 U	160 U	180 U	170 U	170 U	160 UL	170 UL	170 U	NA	160 U	200 U	170 U
4-Bromophenyl-phenylether	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
4-Chloro-3-methylphenol	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
4-Chloroaniline	290 U	260 U	290 U	280 U	280 UL	270 U	280 U	280 U	NA	270 U	330 U	280 U
4-Chlorophenyl-phenylether	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	720 U	640 U	730 U	690 U	710 U	670 U	700 U	700 U	NA	670 U	810 U	700 U
4-Nitrophenol	58 UJ	52 UJ	59 U	56 U	58 UJ	55 UJ	57 UJ	57 U	NA	55 U	66 UJ	57 UJ
Acenaphthene	12 UL	10 UL	12 UL	5.6 L	12 UL	11 UL	11 UL	11 U	NA	11 UL	3.6 J	18 J
Acenaphthylene	12 UL	10 UL	12 U	6.6 J	12 UL	11 UL	11 UL	11 U	NA	11 U	6.2 J	3.9 J
Acetophenone	290 UL	260 UL	290 UL	280 UL	280 UL	270 U	280 U	280 U	NA	270 UL	330 UL	280 UL
Anthracene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	4.7 J	5 J
Atrazine	12 U	10 U	12 U	1.9 J	12 U	11 U	11 U	11 U	NA	11 U	4.8 J	11 U
Benzaldehyde	290 UJ	260 UJ	290 UJ	280 UJ	280 UJ	270 UJ	280 UJ	280 UJ	NA	270 UJ	330 UJ	280 UJ
Benzo(a)anthracene	12 U	10 U	12 U	11 U	12 U	4.7 J	4.7 J	11 U	NA	11 U	7.5 J	30
Benzo(a)pyrene	12 U	6.1 B	12 U	11 U	6.5 B	11 U	11 U	11 U	NA	11 U	12 J	28
Benzo(b)fluoranthene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	6 J	45
Benzo(g,h,i)perylene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	5.3 J	20 J
Benzo(k)fluoranthene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	4.4 J	13 J
bis(2-Chloroethoxy)methane	290 UL	260 UL	290 UL	280 UL	280 UL	270 U	280 U	280 U	NA	270 UL	330 UJ	280 UJ
bis(2-Chloroethyl)ether	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	13 U	11 U
bis(2-Ethylhexyl)phthalate	150 B	76 B	650 K	38 B	200 B	51 B	100 B	250 B	NA	530 K	140 B	190 B
Butylbenzylphthalate	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Caprolactam	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Carbazole	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Chrysene	12 U	10 U	12 U	2 J	12 U	11 U	11 U	11 U	NA	11 U	13 U	23 J
Dibenz(a,h)anthracene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	11 J	11 J
Dibenzofuran	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Diethylphthalate	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Dimethyl phthalate	12 U	2 B	12 U	3.1 J	2.5 B	11 U	11 U	2.1 B	NA	11 U	5.4 J	11 U
Di-n-butylphthalate	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Di-n-octylphthalate	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	96 J	57 U
Fluoranthene	12 U	10 U	12 UL	2.4 L	12 U	11 U	11 U	11 U	NA	11 UL	6.5 J	59
Fluorene	12 UL	10 UL	12 UL	11 UL	12 UL	11 UL	11 UL	11 U	NA	11 UL	13 U	9.2 J
Hexachlorobenzene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	3.5 J	11 U
Hexachlorobutadiene	12 U	10 UJ	12 U	11 U	12 UJ	11 U	11 U	11 U	NA	11 U	13 UJ	11 UJ
Hexachlorocyclopentadiene	12 U	10 U	12 U	11 U	12 U	11 UL	11 UL	11 U	NA	11 U	5.3 J	11 U
Hexachloroethane	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Indeno(1,2,3-cd)pyrene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	10 J	21 J
Isophorone	290 U	260 U	290 U	280 U	280 UL	270 U	280 U	280 U	NA	270 U	330 U	280 U
Naphthalene	12 U	10 U	12 UL	11 UL	12 U	11 U	11 U	11 U	NA	11 UL	13 U	1,300
n-Nitroso-di-n-propylamine	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	13 U	11 U
n-Nitrosodiphenylamine	290 U	260 U	290 U	280 U	280 U	270 U	280 U	280 U	NA	270 U	330 U	280 U
Nitrobenzene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	11 U	NA	11 U	13 U	11 U
Pentachlorophenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	66 UL	57 UL
Phenanthrene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	7.7 J	NA	11 U	6.9 J	27
Phenol	58 U	52 U	59 U	56 U	58 U	55 U	57 U	57 U	NA	55 U	8.6 J	57 U
Pyrene	12 U	10 U	12 U	11 U	12 U	11 U	11 U	3.4 J	NA	11 U	8.5 J	54

Table F-2
Subsurface Soil Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name												
Pesticide/Polychlorinated Biphenyls (UG/KG)												
4,4'-DDD	1.9 UJ	1.8 UJ	2 UJ	0.68 J	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	120
4,4'-DDE	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	180
4,4'-DDT	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	5.7 J
Aldrin	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
alpha-BHC	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
alpha-Chlordane	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Aroclor-1016	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
Aroclor-1221	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
Aroclor-1232	11 U	11 U	12 U	12 U	12 U	11 U	12 U	12 U	NA	11 UJ	13 U	13 U
Aroclor-1242	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
Aroclor-1248	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
Aroclor-1254	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
Aroclor-1260	9.6 U	9.4 U	10 U	10 U	10 U	9 U	10 U	9.9 U	NA	9.3 UJ	11 U	11 U
beta-BHC	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
delta-BHC	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Dieldrin	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	27 J
Endosulfan I	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.5 J
Endosulfan II	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endosulfan sulfate	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin aldehyde	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
Endrin ketone	1.9 UJ	1.8 UJ	2 UJ	2 UJ	2 UJ	1.8 UL	1.9 UL	1.8 UJ	NA	1.7 UJ	2.1 UJ	2.1 UJ
gamma-BHC (Lindane)	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
gamma-Chlordane	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Heptachlor	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Heptachlor epoxide	0.96 UJ	0.94 UJ	1 UJ	1 UJ	1 UJ	0.9 UL	1 UL	0.96 UJ	NA	0.89 UJ	1.1 UJ	1.1 UJ
Methoxychlor	9.6 UJ	9.4 UJ	10 UJ	10 UJ	10 UJ	9 UL	10 UL	9.6 UJ	NA	8.9 UJ	11 UJ	11 UJ
Toxaphene	18 UJ	18 UJ	19 UJ	19 UJ	19 UJ	17 UL	19 UL	18 UJ	NA	17 UJ	20 UJ	21 UJ
Dioxin/Furans (PG/G)												
1,2,3,4,6,7,8-Heptachlorodibenzofuran	2.74 U	3.06 U	3.21 U	0.188 J	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	1.67 J
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	12.8 J	19 J	7.44	65	56.5 K	17.2	4.85	73.6	NA	4.58	4.03	29.5
1,2,3,4,7,8,9-Heptachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
1,2,3,4,7,8-Hexachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	0.24 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	2.74 U	3.06 U	3.21 U	0.503 J	2.78 U	3.03 U	2.67 U	0.584 J	NA	2.72 U	3.02 U	0.325 X
1,2,3,6,7,8-Hexachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.218 J	0.319 J	3.21 U	0.888 J	0.567 X	0.366 J	2.67 U	1.12 J	NA	2.72 U	3.02 U	0.618 J
1,2,3,7,8,9-Hexachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.566 J	0.623 J	3.21 U	0.938 X	1.3 J	1.27 J	2.67 U	1.63 J	NA	2.72 U	0.136 X	0.487 X
1,2,3,7,8-Pentachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	2.74 U	3.06 U	3.21 U	0.328 J	2.78 U	3.03 U	2.67 U	0.15 X	NA	2.72 U	3.02 U	0.182 X
2,3,4,6,7,8-Hexachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
2,3,4,7,8-Pentachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	3.28 U
2,3,7,8-TCDD (dioxin)	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	1.07 U	0.354 X	NA	1.09 U	1.21 U	1.31 U
2,3,7,8-Tetrachlorodibenzofuran	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	1.07 U	1.1 U	NA	1.09 U	1.21 U	0.381 J
Octachlorodibenzofuran	5.48 U	6.13 U	6.43 U	0.371 B	0.261 X	6.05 U	5.34 U	5.51 U	NA	5.44 U	6.05 U	5.23 J
Octachlorodibenzo-p-dioxin	632 J	1,200 J	543 K	13,300 K	2,590 J	471 K	275 K	3,470 J	NA	286 K	189	1,760 J
Total heptachlorodibenzofuran	2.74 U	3.06 U	3.21 U	0.188 J	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	5.29
Total heptachlorodibenzo-p-dioxin	49.2	69.7	41.2	142	228	79.4	31.3	400	NA	20	13.8	67.8
Total hexachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	0.0917 J	NA	2.72 U	3.02 U	1.41 J
Total hexachlorodibenzo-p-dioxin	11.6	17.2	14.8	16	107	27.8	15.2	144	NA	5.34	4.44	7.91
Total pentachlorodibenzofuran	2.74 U	3.06 U	3.21 U	3.11 U	2.78 U	3.03 U	2.67 U	2.75 U	NA	2.72 U	3.02 U	2.91 J
Total pentachlorodibenzo-p-dioxin	0.526 J	0.949 J	2.48 J	0.558 J	24	4.54	4.16	32.6	NA	2.72 U	0.738 J	0.885 J
Total tetrachlorodibenzofuran	1.1 U	1.23 U	1.29 U	1.24 U	1.11 U	1.21 U	0.505 J	1.1 U	NA	1.09 U	0.178 J	0.883 J
Total tetrachlorodibenzo-p-dioxin	1.1 U	1.23 U	3.53	1.24 U	17.4	4.32	8.82	26.1	NA	1.09 U	0.283 J	1.31 U
Toxic Equivalents (Total TEQ)	0.396	0.644	0.237	5.2	1.53	0.477	0.131	2.61	NA	0.132	0.111	1.23
Explosives (UG/KG)												
1,3,5-Trinitrobenzene	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
1,3-Dinitrobenzene	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
2,4,6-Trinitrotoluene	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
2-Amino-4,6-dinitrotoluene	46 U	42 U	61 U	53 U	50 UL	56 U	54 U	54 U	NA	51 U	54 U	62 U
2-Nitrotoluene	46 U	42 U	61 U	53 U	50 UL	56 U	54 U	54 U	NA	51 U	54 U	62 U
3-Nitrotoluene	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
4-Amino-2,6-dinitrotoluene	46 U	42 U	61 U	53 U	50 UL	56 U	54 U	54 U	NA	51 U	54 U	62 U
4-Nitrotoluene	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
HMX	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
Nitroglycerin	370 U	340 U	490 U	420 U	400 U	440 U	440 U	430 U	NA	400 U	430 U	490 U
Nitroguanidine	36 U	39 U	38 U	40 U	40 U	36 U	39 U	39 U	NA	38 U	40 U	40 U
Perchlorate	2.6 J	5.7 J	1 J	0.46 U	0.48 U	0.44 U	0.47 U	1.1 J	NA	0.29 J	0.49 U	0.51 U
RDX	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U
Tetryl	46 U	42 U	61 U	53 U	50 U	56 U	54 U	54 U	NA	51 U	54 U	62 U

Table F-2
Subsurface Soil Raw Analytical Results
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NSF-IH, Indian Head, Maryland

Station ID	IS66DP32		IS66DP33	IS66DP34	IS66DP35	IS66DP36	IS66DP37	IS66DP38		IS66DP39	IS66DP40	IS66DP41
Sample ID	IS66SB320809	IS66SB32P0809	IS66SB331415	IS66SB340809	IS66SB351415	IS66SB360809	IS66SB371314	IS66SB381213	IS66SB381213-01	IS66SB391213	IS66SB400910	IS66SB410607
Sample Date	09/29/10	09/29/10	09/28/10	09/28/10	09/29/10	09/28/10	09/28/10	09/21/10	09/22/10	09/28/10	09/30/10	09/30/10
Chemical Name												
Total Metals (MG/KG)												
Aluminum	9,360	9,270	11,500	14,600	14,600	11,300	13,200	11,400	NA	5,860	10,100	10,700
Antimony	2.1 U	0.39 U	0.79 U	0.43 U	0.52 R	0.48 U	0.89 U	0.43 U	NA	0.34 U	0.39 U	0.33 U
Arsenic	14	9.2	1 B	5.6	1.8	0.28 B	1.2	5.8	NA	0.88 B	0.52 B	5
Barium	34.9	36.1	82.4	40	130	87.6	101	104	NA	40.5	35.2	98.3
Beryllium	1.2	0.66	0.79	0.41 J	1.1	0.58	0.88	1	NA	0.5	0.41	0.66
Cadmium	1.2 U	0.23 U	0.47 U	0.26 U	0.31 U	0.06 B	0.54 U	0.05 B	NA	0.2 U	0.23 U	0.23 J
Calcium	36.6	39.8	467	168	438	320	633	684	NA	310	118	2,210
Chromium	56 J	21.6 J	17.8	19.6	21.3	16.7	21.5	20.2	NA	8.5	14	13.6
Cobalt	4.2	4.8	12.4	4	8.5	9.3	7.1	16.4	NA	7.3	5.1	8.7
Copper	25.8	11.6	9.6	7.7	12.8	10.8	12	15.1	NA	4.4	5.8	22.4
Cyanide	0.48 U	0.44 U	0.48 U	0.44 U	0.44 UL	0.44 U	0.44 U	0.44 U	NA	0.4 U	0.52 U	0.52 U
Iron	73,400 J	19,200 J	20,100	20,500	23,800	10,500	22,600	15,300	NA	16,700	14,000	11,000
Lead	18.8 J	10 J	7.8	7.8	11	5.3	9.2	5.7	NA	4.3	5.6	38.2
Magnesium	867	971	1,940	1,020	1,510 J	1,560	2,050	1,860	NA	946	1,200	766
Manganese	41.4	64.3	131	70.7	43.7	43.7	65.9	37.1	NA	224	28.6	171
Mercury	0.018 U	0.017 U	0.02 J	0.009 J	0.019 U	0.008 J	0.07	0.01 J	NA	0.01 J	0.023 U	0.04 J
Nickel	6 J	7.2	18.8	9.1	17	17.1	21.1	31.6	NA	10.4	10.6	12.3
Potassium	764	827	928	1,060	934 J	1,080	1,190	575	NA	706	895	657
Selenium	1.3	0.54	0.24 J	0.35 J	0.5 J	0.18 J	0.33 J	0.47	NA	0.12 J	0.27 J	0.58
Silver	0.02 J	0.02 J	0.03 J	0.01 J	0.03 J	0.02 J	0.03 J	0.03 J	NA	0.02 J	0.02 J	0.09
Sodium	55.2 J	45.8 J	76 B	97.3 B	114	136	158	112	NA	39.7 B	133	50 J
Thallium	0.12 J	0.1 J	0.13 J	0.15 J	0.19 J	0.14 J	0.14 J	0.13 J	NA	0.06 J	0.12 J	0.23
Vanadium	46.9	37	22	24.4	29	15.7	26.9	18.9	NA	10.6	19.8	30.3
Zinc	31.3	23.8	42.9	23	51.3	50	46.3	73.3	NA	27.6	24.9	78.6
Wet Chemistry												
pH (ph)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

K - Analyte present, value may be biased high, actual value may be lower

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

PH - pH units

UG/KG - Micrograms per kilogram

Table F-3
Groundwater Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
Volatile Organic Compounds (UG/L)																	
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
1,2-Dibromoethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
Acetone	8 B	10 U	10 U	11 B	4 B	10 U	10 U	10 U	10 U	10 U	9 B	2.5 U	2.5 UJ	2.5 U	2.5 U	6.7 B	4.6 B
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1.1 B	1 U	1 U	2.6 B
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Cyclohexane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Dichlorodifluoromethane (Freon-12)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Isopropylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Methyl acetate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.75 U	0.75 UJ	0.75 U	0.75 U	0.75 U	0.75 U
Methylcyclohexane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	2.5 U	2.5 UJ	2.5 U	2.5 U	2.5 U	2.5 U
Methyl-tert-butyl ether (MTBE)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	1 B	1 B	2 B	1 B	1 B	2 B	2 B	2 B	9 B	2 B	1 B	0.5 U	0.5 UJ	5.1	5.5	0.5 U	0.5 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.5 U	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	0.42 J	0.5 UJ	0.5 U	0.5 U	0.5 U	0.5 U
Trichlorofluoromethane (Freon-11)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Xylene, total	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	1.5 U	1.5 UJ	1.5 U	1.5 U	1.5 U	1.5 U
Semivolatile Organic Compounds (UG/L)																	
1,1-Biphenyl	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
2,2'-Oxybis(1-chloropropane)	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.16 U	0.16 U	0.16 U	0.15 U	0.15 U	0.16 U
2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	20 U	20 U	20 U	19 U	18 U	20 R
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.52 U	0.53 U	0.53 U	0.51 U	0.49 U	0.53 R
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
2,4-Dinitrophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.52 UJ	0.53 UJ	0.53 UJ	0.51 UJ	0.49 UJ	0.53 UJ
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
2-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.16 U	0.16 U	0.16 UJ	0.15 UJ	0.15 UJ	0.16 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
3- and 4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 UJ	0.1 UJ	0.1 U	0.1 UJ	0.098 UJ	0.1 R
3-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	20 U	20 U	20 U	19 U	18 U	20 U
4,6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.78 U	0.79 U	0.79 U	0.76 U	0.74 U	0.79 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R

Table F-3
Groundwater Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	NA	NA	NA	NA	NA	NA
4-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.1 UJ	0.1 UJ	0.1 UJ	0.1 UJ	0.098 UJ	0.1 UJ
4-Nitrophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.52 U	0.53 U	0.53 U	0.51 U	0.49 U	0.53 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	11 U	3 J	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Acetophenone	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Anthracene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Atrazine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
Benzaldehyde	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 UJ	7.9 UJ	7.9 UJ	7.6 UJ	7.4 UJ	7.9 UJ
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 UL	0.1 UL	0.1 U	0.1 U	0.098 U	0.1 UL
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 UL	0.1 UL	0.1 U	0.1 U	0.098 U	0.1 UL
bis(2-Ethylhexyl)phthalate	10 U	10 U	10 U	10 U	10 U	11 U	4 B	10 U	10 U	10 U	NA	1.1 B	1.2 B	1.2 B	0.75 B	1.1 B	1.1 B
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Caprolactam	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Carbazole	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Chrysene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 UL	0.1 UL	0.28	0.24	0.098 U	0.1 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Di-n-butylphthalate	2 J	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Di-n-octylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 UJ	7.6 UJ	7.4 UJ	7.9 UJ
Fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Fluorene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 UL
Isophorone	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	1.7	0.98	0.098 U	0.1 U
n-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.098 U	0.1 U
n-Nitrosodiphenylamine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Nitrobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Pentachlorophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA	0.52 U	0.53 U	0.53 U	0.51 U	0.49 U	0.53 U
Phenanthrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Phenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 R
Pyrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA	7.8 U	7.9 U	7.9 U	7.6 U	7.4 U	7.9 U
Pesticide/Polychlorinated Biphenyls (UG/L)																	
4,4'-DDD	0.1 U	0.026 B	0.1 U	0.1 U	9.5	0.056 B	0.022 B	0.11 U	0.1 U	0.049 B	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.027 J	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.047 J	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Aldrin	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
alpha-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
Aroclor-1016	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1221	2 U	2 U	2 U	2 U	2.1 U	2.2 U	2.1 U	2.1 U	2 U	2.2 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1232	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1242	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1248	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1254	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Aroclor-1260	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1 U	1.1 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
beta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
delta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.03 J	0.026 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Endosulfan I	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
Endosulfan II	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Endrin	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Endrin aldehyde	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.11 U	0.1 U	0.11 U	0.1 U	0.11 U	NA	0.052 U	0.051 U	0.053 U	0.052 U	0.054 U	0.053 U
gamma-BHC (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.053 U	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.021 J	0.026 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.036 J	0.054 U	0.051 U	0.053 U	0.05 U	0.054 U	NA	0.026 U	0.026 U	0.026 U	0.026 U	0.027 U	0.026 U

Table F-3
Groundwater Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
Methoxychlor	0.5 U	0.5 U	0.5 U	0.5 U	0.53 U	0.54 U	0.51 U	0.53 U	0.5 U	0.54 U	NA	0.26 U	0.26 U	0.26 U	0.26 U	0.27 U	0.26 U
Toxaphene	5 U	5 U	5 U	5 U	5.3 U	5.4 U	5.1 U	5.3 U	5 U	5.4 U	NA	0.52 U	0.51 U	0.53 U	0.52 U	0.54 U	0.53 U
Dioxin/Furans (NG/L)																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.55E-04 X	0.00105 X	0.00228 B	0.00184 B	0.00132 B	0.0255 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,4,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,7,8,9-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
2,3,4,6,7,8-Hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
2,3,4,7,8-Pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
2,3,7,8-TCDD (dioxin)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0106 U	0.0109 U	0.0106 U	0.0102 U	0.0106 U	0.0102 U
2,3,7,8-Tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0106 U	0.0109 U	0.0106 U	0.0102 U	0.0106 U	0.0102 U
Octachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0532 U	0.0543 U	0.0532 U	0.051 U	0.0532 U	0.051 U
Octachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0044 B	0.0084 B	0.142	0.142	0.0198 B	0.00383 B
Total heptachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
Total heptachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.00614 J	0.0255 U	0.00437 J	0.0255 U
Total hexachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
Total hexachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
Total pentachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
Total pentachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0266 U	0.0272 U	0.0266 U	0.0255 U	0.0266 U	0.0255 U
Total tetrachlorodibenzofuran	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0106 U	0.0109 U	0.0106 U	0.0102 U	0.0106 U	0.0102 U
Total tetrachlorodibenzo-p-dioxin	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0106 U	0.0109 U	0.0106 U	0.0102 U	0.0106 U	0.0102 U
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.87E-06	1.30E-05	6.54E-05	6.10E-05	1.91E-05	1.15E-06
Explosives (UG/L)																	
1,3,5-Trinitrobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
1,3-Dinitrobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
2,4,6-Trinitrotoluene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
2-Amino-4,6-dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
2-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
3-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
4-Amino-2,6-dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
4-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
HMX	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	3.6	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Nitroglycerin	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	NA	2 U	2 U	2 U	2 U	2 U	2 U
Nitroguanidine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	6 U	6 U	6 U	6 U	6 U	6 U
Perchlorate	NA	0.13 J	0.17 J	0.58	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.08 J	NA	3,600	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
RDX	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Tetryl	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
Total Metals (UG/L)																	
Aluminum	15,300	304	320	1,460	34,300	12,800	2,860	11,500 J	252	493	31,800	54.9 J	99.8 B	1,010	691	277 J	76.1 J
Antimony	6 B	3.2 B	3.4 B	9.9 B	2.1 U	5.1 B	6 B	2.2 B	2.1 U	2.1 U	3.2 B	0.5 U	0.11 J	0.2 J	0.18 J	0.11 J	0.5 U
Arsenic	16.6	6.6 J	6.6 J	19	100	41.8	4.9 J	2.8 U	2.8 U	15.3	22.2	1.5 B	1.7 J	12.8	11.7 B	3.1 B	1.4 B
Barium	1,910	77.5 J	79.2 J	128 J	848	238	171 J	124 J	347	137 J	290	72.2	60.3	164	160	144	102
Beryllium	5.8	0.2 U	0.2 U	0.3 B	5	3 J	0.36 B	0.94 B	0.2 U	0.2 U	2.9 B	0.45 B	0.07 B	0.16 J	0.11 J	0.18 J	0.09 J
Cadmium	0.4 U	0.4 U	0.4 U	0.4 U	0.46 B	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.09 B	0.05 B	0.24 J	0.03 J	0.26 J	0.13 J
Calcium	13,600	33,100	33,200	51,700	87,500	5,360	48,400	1,100 J	7,290	70,100	3,870 J	1,120	2,520	42,100	40,000	13,200	12,300
Chromium	29.2	0.85 B	0.78 B	2.2 B	52.5	20.5	4.5 B	17.1 J	1 B	1.3 B	67.7	3.3 B	3.7 B	3.8 B	2 B	4.2 B	4 B
Cobalt	69.2	0.9 U	0.9 U	4.1 J	30.6 J	53.7	0.9 U	53.4	35.8 J	4.2 J	36.2 J	14.9	0.33 J	1.4	1.2	46.1	25.8
Copper	55.8	4 B	4.5 B	8.4 J	34.1	31.7	5.1 B	20.4 J	1.1 B	2.2 B	54.2	0.94 B	10 U	3.1 B	2.2 B	2.9 B	1.1 B
Cyanide	NA	1.2 U	2.3 J	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	NA	5.7 J	6 J	8 U	7.4 B	8 U	8 U
Iron	64,800	11,100	11,200	2,270	242,000	22,200	26,200	25,100 J	28,600	42,100	66,900	472	14,400	21,200	20,100	1,820	2,920
Lead	61.7	6 B	6.4 B	49	106	59.9	6.8 B	13.7 J	1.3 B	6.5 B	46.6	4 U	4 U	4.2 B	3.7 B	4.8 B	2.9 B
Magnesium	20,100	3,380 J	3,410 J	5,450	18,100	6,190	12,300	5,410	4,390 J	10,900	5,230	2,000	1,360	9,850	9,530	12,800	8,920
Manganese	1,540	678	686	137	2,020	778	1,850	1,580	5,630	2,490	741	118	289	732	711	784	876
Mercury	0.1 U	0.1 U	0.1 U	0.19 J	0.13 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.13 J	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	83.1	1.3 B	2.2 B	10.5 J	31.6 J	41.4	3.7 B	25.9 J	13.8 J	2.5 B	44.5	11.1 J	4 U	1.8 J	0.78 B	50.7	21 J
Potassium	2,290 J	1,330 J	1,380 J	6,360	11,100	2,710 J	5,830	1,560 J	630 J	2,310 J	2,740 J	1,040	544 J	6,490	6,240	1,250	875 J
Selenium	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	7 U	7 U	7 U	7 U	7 U	7 U
Silver	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	4 U	4 U	4 U	4 U	4 U	4 U
Sodium	38,400	10,500	10,600	4,750 J	22,500	43,800	47,700	26,700	20,800	28,000	6,940	21,100	11,700	125,000	123,000	71,400	35,400
Thallium	2.9 U	2.9 U	2.9 U	2.9 U	12.4 B	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vanadium	79.2	1.5 B	1.6 B	34 J	199	159	9.1 J	24.9 J	0.61 B	1.9 B	98.8	2.3 J	2.3 J	9.9	7.1	3.3 B	2.4 B
Zinc	235	12.1 B	12.5 B	188	960	77.9	21.7 B	63.2 J	13.2 B	22.7	153	23.4 J	1.1 B	4.1 B	5.1 B	45.8	21 J

Table F-3
Groundwater Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66MW01	IS66MW02	IS66MW03		IS66MW04	IS66MW05
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407	IS66GW010910	IS66GW020910	IS66GW030910	IS66GW03P0910	IS66GW040910	IS66GW050910
Sample Date	04/16/07	04/16/07	04/16/07	04/16/07	04/16/07	04/13/07	04/13/07	04/13/07	04/17/07	04/13/07	04/17/07	09/29/10	09/29/10	09/28/10	09/28/10	09/28/10	09/27/10
Chemical Name																	
Dissolved Metals (UG/L)																	
Aluminum, Dissolved	11.7 U	11.7 U	11.7 U	11.7 U	11.7 U	11.7 U	18.4 B	11.7 U	11.7 U	11.7 U	NA	41.8 J	100 U	92.7 J	115 J	93.5 J	21.5 J
Antimony, Dissolved	1.5 U	1.5 U	1.5 U	7.4 B	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	NA	0.5 U	0.5 U	0.19 J	0.16 J	0.11 J	0.12 J
Arsenic, Dissolved	2.7 U	9.4 J	7.4 J	16	97.8	2.7 U	2.7 U	2.7 U	2.7 U	14.9	NA	2.8 B	1.8 B	11.3 B	11.2 B	3.4 B	3.2 B
Barium, Dissolved	148 J	90.6 J	83.5 J	110 J	280	63.3 J	145 J	23 J	346	130 J	NA	72.4	59.1	152	155	137	101
Beryllium, Dissolved	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.44 B	0.2 U	0.2 U	0.2 U	0.23 J	0.1 J
Cadmium, Dissolved	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	NA	0.08 B	0.2 U	0.2 U	0.04 J	0.24 J	0.19 J
Calcium, Dissolved	5,090	31,500	33,000	52,400	80,100	3,750 J	48,600	1,130 J	7,580	71,200	NA	1,350	2,490	39,700	40,500	19,800	12,200
Chromium, Dissolved	0.4 U	0.4 U	0.4 U	0.4 U	0.73 B	0.4 U	0.84 B	0.4 U	0.65 B	0.47 B	NA	3.4 B	2.8 B	1.2 B	1 B	3.9 B	4.1 B
Cobalt, Dissolved	28.5 J	0.58 B	0.66 B	3.5 B	3.7 B	26.8 J	0.76 B	31.9 J	37.8 J	5.8 J	NA	15	0.21 J	0.94 J	0.94 J	40	25.1
Copper, Dissolved	1.4 B	1.7 B	1.9 B	4.5 B	1.7 B	0.85 B	1.2 B	1.1 B	1.4 B	1.4 B	NA	1.8 B	10 U	1.8 B	1.9 B	4.9 B	1.6 B
Iron, Dissolved	8,770	20,300 J	15,200 J	870	108,000	3,340	24,200	8,300	26,400	43,000	NA	382	14,400	19,300	19,900	2,260	2,640
Lead, Dissolved	1.3 U	1.3 U	1.3 U	2.4 B	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	NA	1.3 J	1.2 J	1.9 B	2.6 B	1.8 B	2.7 B
Magnesium, Dissolved	8,590	3,550 J	3,590 J	5,630	16,600	5,110	12,600	3,250 J	4,520 J	11,300	NA	2,030	1,370	9,440	9,670	12,800	8,870
Manganese, Dissolved	759	921	809	131	937	652	1,820	1,090	6,050	2,490	NA	119	287	702	725	826	856
Mercury, Dissolved	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	NA	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel, Dissolved	28.2 J	0.82 B	0.94 B	7.5 J	0.75 B	7 J	0.74 B	8.8 J	13.7 J	2.7 B	NA	11.2 J	4 U	0.52 B	4 U	44.6	20.2 J
Potassium, Dissolved	492 J	1,390 J	1,370 J	6,350	8,730	1,550 J	5,540	517 J	585 J	2,220 J	NA	1,070	513 J	6,150	6,280	1,610	838 B
Selenium, Dissolved	2.9 U	2.9 U	3.8 B	3.6 B	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	NA	7 U	7 U	7 U	7 U	7 U	7 U
Silver, Dissolved	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.84 J	0.5 U	NA	4 U	4 U	4 U	4 U	4 U	4 U
Sodium, Dissolved	36,200	10,900	10,900	4,780 J	23,800	43,900	47,400	25,400	20,800	27,900	NA	21,300	11,700	122,000	121,000	75,900	35,200
Thallium, Dissolved	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	NA	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Vanadium, Dissolved	0.3 U	0.55 B	0.48 B	18.1 J	3.8 B	0.73 B	2.3 B	0.3 U	0.3 U	1.2 B	NA	1.4 J	1.6 J	3.4 B	2.4 B	2.8 B	2.4 B
Zinc, Dissolved	43.6 B	6 B	9.1 B	74.3 B	2.1 B	5.6 B	2.5 B	10.9 B	4.9 B	15.8 B	NA	24.8 J	2.1 B	1.4 B	1.5 B	40.3	22.9 J
Wet Chemistry																	
Hardness (mg/l)	NA	123	99.6	145	341	31.9	170	19.6	47.6	240	NA	8.1 J	12	140	140	91	67

Notes:

B - Analyte not detected above the level reported in blanks

J - Analyte present, value may or may not be accurate or precise

NA - Not analyzed

R - Unreliable Result

U - The material was analyzed for, but not detected

UJ - Analyte not detected, quantitation limit may be inaccurate

UL - Analyte not detected, quantitation limit is probably higher

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/L - Milligrams per liter

NG/L - Nanograms per liter

UG/L - Micrograms per liter

Table F-4
Sediment Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Volatile Organic Compounds (UG/KG)																	
1,1,1-Trichloroethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2,2-Tetrachloroethane	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2-Trichloroethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,1-Dichloroethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,1-Dichloroethene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2,4-Trichlorobenzene	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dibromo-3-chloropropane	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dibromoethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichlorobenzene	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichloroethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichloropropane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,3-Dichlorobenzene	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
1,4-Dichlorobenzene	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
2-Butanone	15 UJ	18 UJ	25 J	24 U	15 U	20 U	21 J	18 U	20 J	49 UJ	21 UJ	13 U	24 J	55 U	21 U	12 U	13 U
2-Hexanone	15 U	18 U	20 U	24 U	15 U	20 U	19 U	18 U	21 U	49 UJ	21 UJ	13 U	42 U	55 U	21 U	12 U	13 U
4-Methyl-2-pentanone	15 U	18 U	20 U	24 U	15 U	20 U	19 U	18 U	21 U	49 UJ	21 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Acetone	30 B	34 B	110 J	24 UJ	15 UJ	35 B	100 J	30 B	64 J	49 UJ	21 UJ	13 U	79 B	59 B	23 B	9 B	11 B
Benzene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Bromodichloromethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Bromoform	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Bromomethane	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Carbon disulfide	2.4 B	2.9 B	3.1 B	2.8 B	1.6 B	2.4 B	2 B	1.8 B	2.5 B	3.6 B	1.6 B	13 U	42 U	55 U	21 U	12 U	13 U
Carbon tetrachloride	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Chlorobenzene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Chloroethane	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Chloroform	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Chloromethane	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
cis-1,2-Dichloroethene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
cis-1,3-Dichloropropene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Cyclohexane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Dibromochloromethane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Dichlorodifluoromethane (Freon-12)	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Ethylbenzene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Isopropylbenzene	3 U	3.5 U	4 UJ	4.8 U	3 U	4 UJ	3.8 UJ	3.5 U	4.2 UJ	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Methyl acetate	3.6 U	4.2 U	4.8 UJ	5.7 U	3.6 U	4.8 U	4.5 U	4.2 U	5.1 U	12 UJ	5.1 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Methylcyclohexane	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Methylene chloride	15 U	18 U	20 U	24 U	15 U	20 U	19 U	18 U	21 U	49 UJ	21 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Methyl-tert-butyl ether (MTBE)	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Styrene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Tetrachloroethene	3.3 J	4 J	6 J	10 J	5.8 J	9.2 J	11 J	8.2 J	14 J	17 J	11 J	13 U	42 U	55 U	21 U	12 U	13 U
Toluene	3 U	3.5 U	4 U	4.8 U	3 U	24	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
trans-1,2-Dichloroethene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
trans-1,3-Dichloropropene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Trichloroethene	3 U	3.5 U	4 U	4.8 U	3 U	4 U	3.8 U	3.5 U	4.2 U	9.8 UJ	4.2 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Trichlorofluoromethane (Freon-11)	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Vinyl chloride	6 U	7 U	8 U	9.5 U	6 U	8 U	7.5 U	7 U	8.5 U	20 UJ	8.5 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Xylene, total	9 U	10 U	12 U	14 U	9 U	12 U	11 U	10 U	13 U	29 UJ	13 UJ	13 U	42 U	55 U	21 U	12 U	13 U
Semivolatile Organic Compounds (UG/KG)																	
1,1-Biphenyl	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,2'-Oxybis(1-chloropropane)	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4,5-Trichlorophenol	72 U	66 U	67 U	110 U	7.4 J	87 U	5.8 J	69 U	99 U	140 U	88 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2,4,6-Trichlorophenol	72 U	66 U	67 U	24 J	23 J	87 U	22 J	16 J	27 J	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dichlorophenol	14 U	13 U	13 U	23 J	18 J	17 U	18 J	15 J	22 J	28 UJ	18 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dimethylphenol	14 R	13 R	13 R	22 R	12 R	17 R	13 R	14 R	20 R	28 UL	18 UL	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dinitrophenol	890 U	810 U	820 U	1,300 U	770 U	1,100 U	800 U	850 U	1,200 U	1,700 U	1,100 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2,4-Dinitrotoluene	14 U	13 U	13 U	22 U	12 U	17 U	13 U	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,6-Dinitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Chloronaphthalene	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 UL	430 UL	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Chlorophenol	72 U	66 U	67 U	110 U	63 U	87 U	65 U	69 U	99 U	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Methylnaphthalene	14 UL	13 UL	13 UL	6.2 L	8.1 L	17 UL	5.8 L	9.9 L	6.6 L	28 UL	18 UL	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Methylphenol	72 U	66 U	67 U	110 U	63 U	87 U	65 U	69 U	99 U	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Nitroaniline	890 U	810 U	820 U	1,300 U	770 U	1,100 U	800 U	850 U	1,200 U	1,700 U	1,100 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2-Nitrophenol	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
3- and 4-Methylphenol	20 J	66 U	18 J	110 U	63 U	87 U	65 U	69 U	99 U	140 J	51 J	NA	NA	NA	NA	NA	NA
3,3'-Dichlorobenzidine	14 R	13 R	13 R	22 R	12 R	17 R	13 R	14 R	20 R	28 UJ	18 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
3-Nitroaniline	890 U	810 U	820 U	1,300 U	770 U	1,100 U	800 U	850 U	1,200 U	1,700 U	1,100 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4,6-Dinitro-2-methylphenol	220 U	200 U	200 U	320 U	190 U	260 U	200 U	210 U	300 U	430 U	260 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4-Bromophenyl-phenylether	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Chloro-3-methylphenol	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U

Table F-4
Sediment Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
4-Chloroaniline	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Chlorophenyl-phenylether	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Methylphenol	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Nitroaniline	890 U	810 U	820 U	1,300 U	770 U	1,100 U	800 U	850 U	1,200 U	1,700 U	1,100 U	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4-Nitrophenol	72 UJ	66 U	67 UJ	110 UJ	63 UJ	87 UJ	65 UJ	69 UJ	99 UJ	140 UJ	88 UJ	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
Acenaphthene	14 U	13 U	13 U	14 J	47	31 J	24 J	100	23 J	5.5 J	20 J	430 U	1,200 U	1,200 U	830 U	510 U	100 J
Acenaphthylene	14 U	13 U	2.4 J	9 J	9 J	10 J	21 J	13 J	13 J	23 J	11 J	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Acetophenone	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 UL	430 UL	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Anthracene	14 U	13 U	3.7 J	23 J	120	93	49	170	50	30 J	39	430 U	1,200 U	1,200 U	830 U	120 J	260 J
Atrazine	14 U	13 U	13 U	4.3 J	4.2 J	17 U	3.8 J	4.4 J	7.3 J	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Benzaldehyde	360 R	320 R	330 R	540 R	310 R	430 R	320 R	340 R	490 R	700 UJ	430 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Benzo(a)anthracene	8.6 B	16 B	25 B	130 B	530 B	580 B	530 B	780	350 B	420	240	430 U	1,200 U	1,200 U	240 J	410 J	710
Benzo(a)pyrene	4.9 J	13 J	24 J	160	420	470	500	770	330	370	190	430 U	1,200 U	1,200 U	210 J	390 J	490 J
Benzo(b)fluoranthene	6.5 J	15 J	33	280	710	820	810	1,300	440	700	340	430 U	1,200 U	1,200 U	330 J	450 J	590
Benzo(g,h,i)perylene	14 U	5.6 J	18 J	130	240	350	260	430	230	230	130	430 U	1,200 U	1,200 U	830 U	230 J	310 J
Benzo(k)fluoranthene	14 U	4.9 J	11 J	88	210	240	210	340	150	180	74	430 U	1,200 U	1,200 U	240 J	360 J	640
bis(2-Chloroethoxy)methane	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 UJ	430 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
bis(2-Chloroethyl)ether	14 U	13 U	13 U	22 U	2.2 J	17 U	13 U	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
bis(2-Ethylhexyl)phthalate	360 B	87 B	45 B	97 B	60 B	190 B	62 B	110 B	120 B	220 B	230 B	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Butylbenzylphthalate	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Caprolactam	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Carbazole	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	170 J
Chrysene	5.1 J	8.2 J	22 J	150	470	490	460	680	250	330	170	430 U	1,200 U	1,200 U	300 J	440 J	730
Dibenz(a,h)anthracene	14 U	13 U	4.7 J	50	86	110	140	210	75	88	34 J	430 U	1,200 U	1,200 U	830 U	510 U	120 J
Dibenzofuran	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Diethylphthalate	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Dimethyl phthalate	2.2 B	13 U	2.3 B	4.6 B	6.1 B	17 U	6.3 B	14 U	8.6 B	5.5 J	2.5 J	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Di-n-butylphthalate	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Di-n-octylphthalate	72 U	66 U	67 U	110 U	63 U	87 U	65 U	69 U	99 U	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Fluoranthene	7.5 J	20 J	36	240	1,000	1,100	730	1,400	590	560	450	430 U	260 J	1,200 U	360 J	770	1,500
Fluorene	14 U	13 U	13 U	20 J	98	41	24 J	77	20 J	28 U	22 J	430 U	1,200 U	1,200 U	830 U	510 U	110 J
Hexachlorobenzene	14 U	13 U	13 U	22 U	2.4 J	17 U	2.6 J	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachlorobutadiene	14 U	13 U	13 U	22 U	12 U	17 U	13 U	14 U	20 U	28 UJ	18 UJ	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachlorocyclopentadiene	14 U	13 U	13 UL	22 U	6.6 J	17 U	6.6 J	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachloroethane	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Indeno(1,2,3-cd)pyrene	14 U	5.4 J	16 J	140	250	300	250	420	220	210	110	430 U	1,200 U	1,200 U	830 U	280 J	390 J
Isophorone	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Naphthalene	14 UL	13 UL	13 UL	22 UL	20 B	5.9 B	7.6 B	63 L	20 UL	28 U	5.1 B	430 U	1,200 U	1,200 U	830 U	510 U	500 U
n-Nitroso-di-n-propylamine	14 U	13 U	13 U	22 U	12 U	17 U	13 U	14 U	20 U	28 U	18 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
n-Nitrosodiphenylamine	360 U	320 U	330 U	540 U	310 U	430 U	320 U	340 U	490 U	700 U	430 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Nitrobenzene	14 U	13 U	13 U	22 U	12 U	17 U	13 U	14 U	20 U	28 U	18 U	430 U	620 U	620 U	620 U	510 U	500 U
Pentachlorophenol	72 UL	66 UL	67 UL	110 UL	63 UL	87 UL	65 UL	69 UL	99 UL	140 UL	88 UL	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
Phenanthrene	2.9 J	7.4 J	18 J	140	680	390	200	780	210	110	260	430 U	1,200 U	1,200 U	830 U	360 J	940
Phenol	72 U	66 U	67 U	110 U	8.8 J	87 U	65 U	69 U	99 U	140 U	88 U	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Pyrene	7.7 J	14 J	38	270	780	890	660	1,100	500	600	470	430 U	1,200 U	1,200 U	330 J	630	1,100
Pesticide/Polychlorinated Biphenyls (UG/KG)																	
4,4'-DDD	1.9 J	2.2 U	6.7 J	57 J	2.4 J	29 J	44 J	52	42 J	23 J	6.4 J	66	38 J	47	4.4 J	13	40
4,4'-DDE	1.4 J	2.2 U	2.8 J	29 J	1.5 J	9.3 J	4.7 J	7.5	13 J	22 J	12 J	8.1	22	21	8.4	4 J	4.2 J
4,4'-DDT	2.4 U	2.2 U	2.3 J	9.2 J	2.1 UJ	6.1 J	2.7 J	3.2 J	4 J	39 J	5.4 J	3.1 B	12 U	12 B	12 J	3.1 B	2.7 B
Aldrin	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
alpha-BHC	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
alpha-Chlordane	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	1.2 J	5.3 J	4 J	1.8 J	0.82 J	1.6 J
Aroclor-1016	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1221	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	88 U	240 U	250 U	170 U	100 U	100 U
Aroclor-1232	15 U	13 U	13 UJ	20 U	13 UL	19 U	14 U	14 U	19 U	31 U	17 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1242	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1248	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1254	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	830	14 UJ	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1260	12 U	11 U	11 UJ	17 U	11 UL	16 U	12 U	12 U	16 U	26 U	14 UJ	43 U	120 U	120 U	160	51 U	50 U
beta-BHC	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	1.2 J
delta-BHC	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Dieldrin	2.4 U	2.2 U	1.6 J	8.3 J	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endosulfan I	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	3.2 J	2.6 UJ	2.3 J	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Endosulfan II	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endosulfan sulfate	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endrin	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	12 U	8.3 U	2.1 J	5 U
Endrin aldehyde	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	3.4 J	8.3 U	2.5 J	5 U
Endrin ketone	2.4 U	2.2 U	2.1 UJ	3.2 UJ	2.1 UJ	3.1 UJ	2.4 UJ	2.3 U	3.2 UJ	5.2 UJ	2.8 UJ	4.3 U	12 U	2.6 J	8.3 U	4.1 J	1.2 J
gamma-BHC (Lindane)	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
gamma-Chlordane	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	0.67 J	2.3 J	1.6 J	1.6 J	5	0.65 J
Heptachlor	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Heptachlor epoxide	1.2 U	1.1 U	1.1 UJ	1.7 UJ	1.1 UJ	1.6 UJ	1.2 UJ	1.2 U	1.6 UJ	2.6 UJ	1.4 UJ	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U

Table F-4
Sediment Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Methoxychlor	12 U	11 U	11 UJ	17 UJ	11 UJ	16 UJ	12 UJ	12 U	16 UJ	12 J	14 UJ	22 U	61 U	35 J	43 U	17 J	26 U
Toxaphene	24 U	21 U	20 UJ	31 UJ	21 UJ	30 UJ	23 UJ	22 U	31 UJ	50 UJ	27 UJ	220 U	610 U	630 U	430 U	260 U	260 U
Dioxin/Furans (PG/G)																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.963 J	0.896 J	0.753 J	3.35 J	0.883 X	3.14 J	1.72 J	4.92	2.98 J	3.9 J	24.1	NA	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	11.3	9.79	6.99	38.9	12.6	22.7	18.4	69.6	40.4	16.6	75.1	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-Heptachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	0.309 X	0.169 X	0.394 X	4.98 U	4.15 U	1.19 X	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-Hexachlorodibenzofuran	0.151 J	3.02 U	3.22 U	0.493 X	0.073 X	4.38 U	0.182 J	0.113 X	4.98 U	0.289 J	5.74 J	NA	NA	NA	NA	NA	NA
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	3.25 U	3.02 U	3.22 U	0.461 J	3.34 U	4.38 U	3.67 U	3.47 U	0.213 X	0.175 J	1.02 X	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzofuran	3.25 U	3.02 U	3.22 U	0.649 J	0.068 X	4.38 U	0.342 J	3.47 U	4.98 U	4.15 U	2.27 J	NA	NA	NA	NA	NA	NA
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.32 J	0.263 J	3.22 U	1.05 J	0.299 J	0.495 X	0.685 J	1.3 J	0.944 J	0.356 X	3.1 J	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-Hexachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	3.67 U	3.47 U	4.98 U	4.15 U	8.32 U	NA	NA	NA	NA	NA	NA
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.353 J	0.303 X	3.22 U	0.919 J	0.261 J	0.308 J	0.517 J	0.248 X	0.599 X	0.343 J	3.88 J	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	3.67 U	3.47 U	4.98 U	4.15 U	1.93 X	NA	NA	NA	NA	NA	NA
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	0.165 J	3.47 U	0.0986 X	4.15 U	1.07 J	NA	NA	NA	NA	NA	NA
2,3,4,6,7,8-Hexachlorodibenzofuran	3.25 U	3.02 U	3.22 U	0.304 X	3.34 U	4.38 U	0.346 X	3.47 U	4.98 U	4.15 U	2.2 J	NA	NA	NA	NA	NA	NA
2,3,4,7,8-Pentachlorodibenzofuran	3.25 U	3.02 U	3.22 U	5.81 U	3.34 U	4.38 U	0.222 X	3.47 U	4.98 U	4.15 U	1.96 X	NA	NA	NA	NA	NA	NA
2,3,7,8-TCDD (dioxin)	1.3 U	1.21 U	1.29 U	2.32 U	1.34 U	1.75 U	0.0644 X	1.39 U	1.99 U	1.66 U	0.492 X	NA	NA	NA	NA	NA	NA
2,3,7,8-Tetrachlorodibenzofuran	1.3 U	1.21 U	1.29 U	2.32 U	0.313 J	0.584 J	0.402 J	1.39 U	1.99 U	0.497 J	3.46	NA	NA	NA	NA	NA	NA
Octachlorodibenzofuran	3.68 J	3.31 J	2.67 J	14.3	5.21 J	14.2	5.64 J	33	9.44 J	4.87 J	31.1	NA	NA	NA	NA	NA	NA
Octachlorodibenzo-p-dioxin	560	576	334 J	1,790	454	835	495	1,050	1,490	1,000	1,650	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzofuran	2.87 J	2.55 J	2.17 J	12.9	2.75 J	12.2	5.87	29.2	9.9	9.14	50.2	NA	NA	NA	NA	NA	NA
Total heptachlorodibenzo-p-dioxin	30.1	28.7	18.3	105	33.8	53.3	43.2	253	119	42.6	160	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzofuran	0.817 J	1.1 J	0.433 J	5.35 J	0.32 J	3.54 J	9.59	3.97	2.93 J	1.97 J	26.5	NA	NA	NA	NA	NA	NA
Total hexachlorodibenzo-p-dioxin	7.14	5.05	2.7 J	15.1	6.7	6.47	7.3	12.8	8.67	5.67	30.4	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzofuran	0.617 J	0.372 J	0.324 J	3.83 J	3.34 U	0.536 J	16.8	0.435 J	0.799 J	1 J	18.7	NA	NA	NA	NA	NA	NA
Total pentachlorodibenzo-p-dioxin	1.03 J	0.57 J	3.22 U	1.07 J	0.85 J	1.16 J	1.23 J	0.591 J	0.333 J	4.15 U	4.84 J	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzofuran	1.3 U	1.21 U	1.29 U	2.32 U	0.56 J	0.428 J	1.64	0.363 J	0.397 J	0.718 J	33.9	NA	NA	NA	NA	NA	NA
Total tetrachlorodibenzo-p-dioxin	1.3 U	0.572 J	1.29 U	2.32 U	0.549 J	0.437 J	0.39 J	1.39 U	0.424 J	1.66 U	3.32 J	NA	NA	NA	NA	NA	NA
Toxic Equivalents (Total TEQ)	0.374	0.337	0.178	1.35	0.374	0.655	0.897	1.24	1.16	0.672	5.88	NA	NA	NA	NA	NA	NA
Explosives (UG/KG)																	
1,3,5-Trinitrobenzene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	620 U	620 U	620 U	620 U	620 U	620 U
1,3-Dinitrobenzene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	620 U	620 U	620 U	620 U	620 U	620 U
2,4,6-Trinitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	620 U	620 U	620 U	620 U	620 U	620 U
2-Amino-4,6-dinitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
2-Nitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
3-Nitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
4-Amino-2,6-dinitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
4-Nitrotoluene	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
HMX	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	620 U	620 U	620 U	620 U	620 U	620 U
Nitroglycerin	530 U	1,400	540 UL	790 U	520 U	710 U	520 U	510 U	670 U	1,000 U	560 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U
Nitroguanidine	39 U	39 U	40 U	40 U	39 U	40 U	39 U	40 U	40 U	40 U	40 UL	130 U	320 U	280 U	230 U	120 U	140 U
Perchlorate	0.53 U	0.51 U	0.53 U	0.72 U	0.53 U	0.57 U	0.54 U	0.54 U	0.65 U	0.62 U	1.3 U	2.9 J	5.9 R	6.3 R	7.7 J	3 R	3.1 R
RDX	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	620 U	620 U	620 U	620 U	620 U	620 U
Tetryl	66 U	65 U	68 UL	98 U	65 U	89 U	65 U	64 U	84 U	120 U	70 U	1,200 R	1,200 R	1,200 R	1,200 R	1,200 R	1,200 R
Total Metals (MG/KG)																	
Aluminum	4,590 J	2,840 J	3,160	9,690	1,450	9,240	3,400	2,790	10,600	12,000	10,100	928	14,300	16,500	9,170	2,190	3,030
Antimony	0.6 U	0.48 U	0.43 UL	0.71 U	0.4 U	0.19 J	0.15 J	0.18 J	0.35 J	1.8	4.7	0.66 B	2.2 B	3.3 B	3 B	1.2 B	0.86 B
Arsenic	1.1 B	1.1 B	3.5	5.2	0.54 B	8.8	2.9	3.3	5.6	8.4	6.4	1.2 J	6.2 J	8.2	8.9	13.8	3.5
Barium	30.7	23.6	34	92.2	10	83.7	28.3	41.4	89.4	138	103	16.2 J	154	170	93.6 J	34.2 J	36.6 J
Beryllium	0.28 J	0.23 J	0.3 J	0.81	0.14 B	0.81	0.32 J	0.3 J	0.84	0.63 J	0.68	0.18 B	1.5 B	1.5 B	0.71 B	0.38 B	0.36 B
Cadmium	0.82 J	0.64 J	0.2 J	0.96 J	0.12 B	0.8 J	0.24 J	0.29 J	0.81 J	4.7	0.32 J	0.097 U	1.1 B	1.1 B	0.45 B	0.11 U	0.12 U
Calcium	454	458	239 K	730	159 B	1,260	435	856	1,320	4,530	1,470	285 J	3,690	3,580 J	2,980	1,180 J	577 J
Chromium	7.4	5.3	5.9	15.4	4	14.6	8.6	6.7	16.2	26.7	16.8	2.6	26.8	30.2	13.2	8.2	7.9
Cobalt	6.7	6.7	9.3	24.5	2.7	21	5.8	6.4	12.5	10.4	9.2	3.1 J	40.9	28.9 J	19 J	15.3	5.5 J
Copper	10.7	9	7.8	33.1	5.6	25.8	12.3	8.4	26.2	134	28.2	3.5 J	67.8	73	30.2 J	13.2	12.9
Cyanide	0.56 U	0.52 U	0.56 U	0.88 U	0.51 J	0.72 U	0.35 J	0.56 U	0.76 U	1.2 U	0.72 U	0.08 U	0.21 U	0.22 U	0.15 U	0.092 U	0.093 U
Iron	4,730	4,100	8,680	14,900	3,220	23,100	15,600	10,800	19,900	21,100	15,200	3,460	21,300	25,400	11,300	13,700	13,700
Lead	13.6	10.4	10.5	29.9	7	36	21.8	17.4	63.2	262	57.2	3.6	67.5	78.9	39.8	70.9	21.6
Magnesium	440	302	256 K	852	155	763	300	323	1,060	1,690	1,090	180 J	1,310 J	1,470 J	1,090 J	868 J	372 J
Manganese	80	77.9	118	244	27.2	461	71.2	379	110	593	233	119	247	292	229	122	126
Mercury	0.02 J	0.04	0.02 J	0.06 J	0.01 J	0.08	0.04 J	0.03 J	0.15	0.35	1.8	0.057 U	0.18 B	0.16 B	1.3	0.072 B	0.076 U
Nickel	5.3	4.4	4.7	15.5	2.2 J	16.6	9.4	6.8	17.6	26.3	12	2 J	31.6	30	20.6	14.2	7.7 J
Potassium	508 J	264 J	275 K	803	180	840	360	279	777	839	780	66.1 J	878 J	977 J	679 J	164 J	219 J
Selenium	0.16 J	0.08 J	0.1 J	0.36 J	0.04 J	0.51 J	0.24 J	0.19 J	0.62	0.77 J	0.56	0.66 UJ	1.8 UJ	2 UJ	1.3 UJ	0.77 UJ	0.81 UJ
Silver	0.03 J	0.02 J	0.03 J	0.11 J	0.03 J	0.15	0.05 J	0.05 J	0.3	17	0.33	0.29 U	0.81 U	0.87 U	0.68 B	0.34 U	0.36 U
Sodium	115 B	85.8 B	101 B	230 B	50.7 B	320 B	94.1 B	53.7 B	305 B	789	331	105 B	408 B	526 B	294 B	166 B	174 B
Thallium	0.06 J	0.03 J	0.04 J	0.14 J	0.02 J	0.22	0.12 J	0.07 J	0.23	0.2 J	0.19	0.71 U	2 U	2.1 U	1.4 U	0.83 U	0.87 U
Vanadium	11.2	7.8	12.6	39.3	5.8	37.8	18.4	16.2	39.4	34.6	28.8	9.6 J	61.5	68	25.7	26.2	20.6
Zinc	53.7	47.4	30.3	89.3	13.7	88.3	35.4	39.8	127	414	131	10.4	216	228	186	55.1	47.9

Table F-4
Sediment Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SD06		IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD06	IS66SD06P	IS66SD07	IS66SD08	IS66SD09	IS66SD10	IS66SD11	IS66SD12	IS66SD13	IS66SD14	IS66SD15	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	10/01/10	09/30/10	09/30/10	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name																	
Wet Chemistry																	
pH (ph)	7.9	7.6	6.7	6.6	7.3	7	7	8.1	6.6	6.6	6.8	7.01	6.39	6.6	6.53	6.96	6.61
Total organic carbon (TOC) (mg/kg)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	11,800 J	98,600 J	94,100 J	146,000 J	145,000 J	26,500 J
Total organic carbon (TOC) (ug/g)	16,000	3,300	16,000	51,000	2,400	34,000	18,000	18,000	63,000	130,000	56,000	NA	NA	NA	NA	NA	NA
Grain Size (PCT)																	
Coarse Sand (%)	0.2	0.4	0.6	2.2	0.4	0.9	1.2	0.1	0.1	0.9	3	NA	NA	NA	NA	NA	NA
Fine Sand (%)	78.4	72.2	75.7	52.2	88	58.2	66.8	81.5	36.6	35.5	20.5	NA	NA	NA	NA	NA	NA
Fines (%)	13.9	23.4	8.6	38.4	9.2	38.8	21	15.9	62.2	56.6	68.3	NA	NA	NA	NA	NA	NA
Gravel (%)	0	0	0.3	0.8	0	0	1.3	0	0	0.9	1.4	NA	NA	NA	NA	NA	NA
Medium Sand (%)	7.5	4	14.8	6.4	2.4	2.1	9.7	2.5	1.1	6.1	6.8	NA	NA	NA	NA	NA	NA
Sand (%)	86.1	76.6	91.1	60.8	90.8	61.2	77.7	84.1	37.8	42.5	30.3	NA	NA	NA	NA	NA	NA
GRAINSIZE (PCT/P)																	
GS03 Sieve 3" (75 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS05 Sieve 2" (50 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS06 Sieve 1.5" (37.5 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS07 Sieve 1" (25.0 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS08 Sieve 0.75" (19.0 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
GS10 Sieve 0.375" (9.5 mm)	100	100	100	100	100	100	100	100	100	100	100	NA	NA	NA	NA	NA	NA
Sieve No. 004 (4.75 mm)	100	100	99.7	99.2	100	100	98.7	100	100	99.1	98.6	NA	NA	NA	NA	NA	NA
Sieve No. 010 (2.00 mm)	99.8	99.6	99.1	97	99.6	99.1	97.5	99.9	99.9	98.2	95.6	NA	NA	NA	NA	NA	NA
Sieve No. 020 (850 um)	99	98.5	96.1	96.5	99.3	98.7	95.4	99.5	99.6	96.7	94	NA	NA	NA	NA	NA	NA
Sieve No. 040 (425 um)	92.3	95.6	84.3	90.6	97.2	97	87.8	97.4	98.8	92.1	88.8	NA	NA	NA	NA	NA	NA
Sieve No. 060 (250 um)	66.4	81.3	58.8	78	84.7	93.3	77.4	86.7	97.3	86.2	83.1	NA	NA	NA	NA	NA	NA
Sieve No. 080 (180 um)	42.7	65.2	32.2	60.7	46.7	73.2	59.1	58.6	89.9	82	79.7	NA	NA	NA	NA	NA	NA
Sieve No. 100 (150 um)	34.5	54.7	23.4	55.2	33.7	64.8	51.1	47.5	86.4	77.9	77.4	NA	NA	NA	NA	NA	NA
Sieve No. 200 (75 um)	13.9	23.4	8.6	38.4	9.2	38.8	21	15.9	62.2	56.6	68.3	NA	NA	NA	NA	NA	NA

Notes:

B - Analyte not detected above the level reported in blanks
J - Analyte present, value may or may not be accurate or precise
K - Analyte present, value may be biased high, actual value may be lower
L - Analyte present, value may be biased low, actual value may be higher
NA - Not analyzed
R - Unreliable Result
U - The material was analyzed for, but not detected
UJ - Analyte not detected, quantitation limit may be inaccurate
UL - Analyte not detected, quantitation limit is probably higher
X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)
MG/KG - Milligrams per kilogram
PCT - Percent
PG/G - Picograms per gram
PH - pH units
UG/G - Micrograms per gram
UG/KG - Micrograms per kilogram

Table F-5
Ash Raw Analytical Results
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Station ID	IS66ASH01	IS66ASH02		IS66ASH03	IS66ASH04		IS66ASH05	IS66ASH06	IS66ASH07	IS66ASH08	IS66ASH09
Sample ID	IS66AH01	IS66AH02	IS66AH02P	IS66AH03	IS66AH04	IS66AH04P	IS66AH05	IS66AH06	IS66AH07	IS66AH08	IS66AH09
Sample Date	04/10/07	04/10/07	04/10/07	04/10/07	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10	09/21/10
Chemical Name											
Dioxin/Furans (PG/G)											
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.841 J	6.36	3.11
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	4.16	73.3	17.2
1,2,3,4,7,8,9-Heptachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	3.18 U	5.04 U	2.94 U
1,2,3,4,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.429 X	0.816 J	3.04
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	3.18 U	5.04 U	0.287 X
1,2,3,6,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.178 X	5.04 U	1.15 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.184 X	2.01 J	0.564 X
1,2,3,7,8,9-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.0398 X	5.04 U	0.193 J
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.164 X	0.621 X	0.624 X
1,2,3,7,8-Pentachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.911 J	1.61 J	9.41
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.0639 X	5.04 U	0.319 J
2,3,4,6,7,8-Hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.128 J	5.04 U	0.463 X
2,3,4,7,8-Pentachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.476 J	0.625 X	3.78
2,3,7,8-TCDD (dioxin)	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	1.27 U	2.01 U	0.196 X
2,3,7,8-Tetrachlorodibenzofuran	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	2.18	2.45	16.8
Octachlorodibenzofuran	15,585 U	18,849 U	16,473 U	20,081 U	NA	NA	NA	NA	1.82 X	8.62 J	8.14
Octachlorodibenzo-p-dioxin	175 J	113 J	167 J	84.1 J	NA	NA	NA	NA	89.2	654	265 J
Total heptachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.9 J	16.8	7.44
Total heptachlorodibenzo-p-dioxin	13	16	17	12	NA	NA	NA	NA	9.81	129	55.7
Total hexachlorodibenzofuran	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.13 J	4.65 J	10.7
Total hexachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	1.11 J	10.5	6.7
Total pentachlorodibenzofuran	20	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	6.12	9.64	71.9
Total pentachlorodibenzo-p-dioxin	7,792 U	9,424 U	8,236 U	10,040 U	NA	NA	NA	NA	0.436 J	5.04 U	2.06 J
Total tetrachlorodibenzofuran	29	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	18.2	18.3	155
Total tetrachlorodibenzo-p-dioxin	3,117 U	3,769 U	3,294 U	4,016 U	NA	NA	NA	NA	0.841 J	1.74 J	5.26
Toxic Equivalents (Total TEQ)	NA	NA	NA	NA	NA	NA	NA	NA	0.642	1.82	4.52
Total Metals (MG/KG)											
Aluminum	NA	NA	NA	NA	6,240	5,970	8,420	6,890	10,000	11,100	5,960
Antimony	NA	NA	NA	NA	1.1 U	1.2 U	1.2 U	0.65 U	0.34 L	0.9 U	0.37 J
Arsenic	NA	NA	NA	NA	96.5	86.9	24.9	49	123	49.4	37.7
Barium	NA	NA	NA	NA	68.7	69.6	120	108	86.3	201	108
Beryllium	NA	NA	NA	NA	1.9	1.8	1.4	1.4	3	2.4	1.7
Cadmium	NA	NA	NA	NA	0.45 J	0.38 J	0.49 J	0.21 J	0.29 J	0.42 J	0.22 J
Calcium	NA	NA	NA	NA	3,300	3,770	4,540	1,190	1,740	5,310	1,970
Chromium	NA	NA	NA	NA	19.9	20.3	19.8	14.8	28.8	20.6	16.1
Cobalt	NA	NA	NA	NA	17	17.2	9.4	10.4	17.2	11	7.4
Copper	NA	NA	NA	NA	36	34.8	38.8	43.6	42.3	40.2	38.6
Cyanide	NA	NA	NA	NA	0.48 U	0.48 U	0.52 U	0.56 U	0.52 U	0.76 U	0.56 U
Iron	NA	NA	NA	NA	42,900	45,000	35,100	23,000	51,300	42,500	28,600
Lead	NA	NA	NA	NA	17.4	17.1	49	26	25.2 J	39.3	36.9
Magnesium	NA	NA	NA	NA	366	389	960	356	279	922	418
Manganese	NA	NA	NA	NA	130	139	378	232	98.3 L	150	455
Mercury	NA	NA	NA	NA	0.32	0.29	0.23	0.66	0.67 L	0.24	0.28
Nickel	NA	NA	NA	NA	35.9	35.8	36.6	23.7	37.2	38.4	36.1
Potassium	NA	NA	NA	NA	391	417	615	626	396	1,090	539
Selenium	NA	NA	NA	NA	1.8	1.6	3	3.1	6.1	2.3	8.1
Silver	NA	NA	NA	NA	0.08 J	0.08 J	0.14	0.08 J	0.11 J	0.1 J	0.09 J
Sodium	NA	NA	NA	NA	57.2 J	66.4 J	120 J	112 J	58.3 J	384	399
Thallium	NA	NA	NA	NA	1.5	1.2	0.99	0.7	1.9	1.4	0.76
Vanadium	NA	NA	NA	NA	86.6	80.8	76.4	50.5	86.9	80.3	150
Zinc	NA	NA	NA	NA	53.8	55.1	59	26.5	40.6 J	53.8	30

Notes:

J - Analyte present, value may or may not be accurate or precise

L - Analyte present, value may be biased low, actual value may be higher

NA - Not analyzed

U - The material was analyzed for, but not detected

X - Dioxins only: Estimated Maximum Possible Concentration (EMPC)

MG/KG - Milligrams per kilogram

PG/G - Picograms per gram

Appendix G
Human Health Risk Assessment Tables

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/Future	Surface Soil	Surface Soil	Surface Soil	Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Trespassers/visitors may access site and contact site surface soil.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access site and contact site surface soil.
					Adolescent	Ingestion	On-site	Quant	Trespassers/visitors may access site and contact site surface soil.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access site and contact site surface soil.
		Air	Emissions from Surface Soil	Trespasser/Visitor	Adult	Inhalation	On-site	Quant	Trespassers/visitors could inhale vapors and dust from site surface soil disturbed during activities at the site.
					Adolescent	Inhalation	On-site	Quant	Trespassers/visitors could inhale vapors and dust from site surface soil disturbed during activities at the site.
	Ash	Ash	Ash	Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Trespassers/visitors may access site and contact ash piles.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access site and contact ash piles.
					Adolescent	Ingestion	On-site	Quant	Trespassers/visitors may access site and contact ash piles.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access site and contact ash piles.
		Air	Emissions from Ash	Trespasser/Visitor	Adult	Inhalation	On-site	Quant	Trespassers/visitors could inhale dust from ash piles disturbed during activities at the site.
					Adolescent	Inhalation	On-site	Quant	Trespassers/visitors could inhale dust from ash piles disturbed during activities at the site.
	Sediment	Sediment	Sediment	Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Trespassers/visitors may access the site and contact sediment.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access the site and contact sediment.
					Adolescent	Ingestion	On-site	Quant	Trespassers/visitors may access the site and contact sediment.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may access the site and contact sediment.
Future	Soil*	Soil*	Soil*	Resident	Adult	Ingestion	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
					Child	Ingestion	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
					Child/Adult	Ingestion	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
						Dermal Absorption	On-site	Quant	Although unlikely, if the site is used for future residential development, residents could contact site soil.
				Industrial Worker	Adult	Ingestion	On-site	Quant	Industrial workers could contact site soil.
						Dermal Absorption	On-site	Quant	Industrial workers could contact site soil.
				Construction Worker	Adult	Ingestion	On-site	Quant	Construction workers could contact site soil while performing activities at the site.
						Dermal Absorption	On-site	Quant	Construction workers could contact site soil while performing activities at the site.
				Trespasser/Visitor	Adult	Ingestion	On-site	Quant	Trespassers/visitors may contact site soil while on the site.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may contact site soil while on the site.
					Adolescent	Ingestion	On-site	Quant	Trespassers/visitors may contact site soil while on the site.
						Dermal Absorption	On-site	Quant	Trespassers/visitors may contact site soil while on the site.

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
		Air	Emissions from Soil*	Resident	Adult	Inhalation	On-site	Quant	If the site is used for future residential development, residents could inhale vapors and dust from site soil.
					Child	Inhalation	On-site	Quant	If the site is used for future residential development, residents could inhale vapors and dust from site soil.
					Child/Adult	Inhalation	On-site	Quant	If the site is used for future residential development, residents could inhale vapors and dust from site soil.
				Industrial Worker	Adult	Inhalation	On-site	Quant	Future Industrial Worker may inhale vapors and dust from areas of site soil disturbed during activities at the site.
				Construction Worker	Adult	Inhalation	On-site	Quant	Construction workers could inhale vapors and dust from site soil while working at the site.
				Trespasser/Visitor	Adult	Inhalation	On-site	Quant	Trespasser/visitors may inhale dust emanating from site soil .
					Adolescent	Inhalation	On-site	Quant	Trespasser/visitors may inhale dust emanating from site soil.
	Ash	Ash	Ash	Resident	Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
					Child	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
					Child/Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact site ash piles.
				Industrial Worker	Adult	Ingestion	On-site	Quant	Industrial workers could contact site ash piles while working at the site.
						Dermal Absorption	On-site	Quant	Industrial workers could contact site ash piles while working at the site.
				Construction Worker	Adult	Ingestion	On-site	Quant	Construction workers could contact site ash piles while performing activities at the site.
						Dermal Absorption	On-site	Quant	Construction workers could contact site ash piles while performing activities at the site.
	Ash	Air	Emissions from Ash	Resident	Adult	Inhalation	On-site	Quant	Although unlikely, if site used for future residential development, residents could inhale dust from ash piles at the site..
					Child	Inhalation	On-site	Quant	Although unlikely, if site used for future residential development, residents could inhale dust from ash piles at the site..
					Child/Adult	Inhalation	On-site	Quant	Although unlikely, if site used for future residential development, residents could inhale dust from ash piles at the site..
				Industrial Worker	Adult	Inhalation	On-site	Quant	Industrial workers could inhale dust from ash piles while working at the site.
				Construction Worker	Adult	Inhalation	On-site	Quant	Construction workers could inhale dust from ash piles while performing activities at the site.
	Sediment	Sediment	Sediment	Resident	Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
					Child	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
					Child/Adult	Ingestion	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
						Dermal Absorption	On-site	Quant	Although unlikely, if site used for future residential development, residents could contact sediment.
				Construction Worker	Adult	Ingestion	On-site	Quant	Construction workers could contact sediment while performing activities at the site.
						Dermal Absorption	On-site	Quant	Construction workers could contact sediment while performing activities at the site.
				Industrial Worker	Adult	Ingestion	On-site	Quant	Industrial workers could contact sediment while working at the site.
						Dermal Absorption	On-site	Quant	Industrial workers could contact sediment while working at the site.

TABLE 1

SELECTION OF EXPOSURE PATHWAYS

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	On-Site/ Off-Site	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
	Groundwater	Groundwater	Shallow Groundwater - Tap Water	Resident	Adult	Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
						Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
					Child	Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
						Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply.
					Child/Adult	Dermal Absorption	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply. Child/Adult evaluated for cancer risk only.
						Ingestion	On-site	Quant	Although unlikely, groundwater will be evaluated for use as a future potable water supply. Child/Adult evaluated for cancer risk only.
			Shallow Groundwater - Water in Excavation Pit	Construction Worker	Adult	Dermal Absorption	On-site	Quant	Construction worker may contact groundwater in an excavation during excavation and construction activities.
						Ingestion	On-site	None	Incidental ingestion of groundwater from an excavation during excavation and construction activities expected to be insignificant compared to dermal
Future (continued)	Groundwater	Air	Shallow Groundwater - Water Vapors at Showerhead	Resident	Adult	Inhalation	On-site	Quant	Although unlikely, groundwater will be evaluated for use as future potable water supply.
					Child	Inhalation	On-site	Quant	Although unlikely, groundwater will be evaluated for use as future potable water supply.
				Industrial Worker	Adult	Inhalation	On-site	None	Industrial workers not expected to take a significant number of showers/baths at workplace.
			Shallow Groundwater - Volatilization from Water in Excavation Pit	Construction Worker	Adult	Inhalation	On-site	Quant	Construction worker may inhale volatiles from groundwater in an excavation during excavation and construction activities.
		Air	Shallow Groundwater - Vapor Intrusion to Indoor Air	Resident	Adult	Inhalation	On-site	Qual	Future resident could inhale vapors migrating from groundwater in indoor air if future resident constructed on site.
					Child	Inhalation	On-site	Qual	Future resident could inhale vapors migrating from groundwater into indoor air if future resident constructed on site.
					Child/Adult	Inhalation	Onsite	Quant	Although unlikely, groundwater will be evaluated for use as future potable water supply.
				Industrial Worker	Adult	Inhalation	On-site	Qual	Future industrial workers could inhale vapors migrating from groundwater into indoor air if future industrial building constructed on site.

Quant: will be quantitatively evaluated.

Qual: will be qualitatively evaluated.

None: Not considered to be a complete pathway, therefore, not evaluated.

Soil* - combined surface and subsurface soil

Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Surface Soil	78-93-3	2-Butanone	2.9E-02 J	2.9E-02 J	MG/KG	IS66SS310001	1/37	0.01 - 0.035	2.9E-02	ND	2.8E+03 N	1.5E+00	SSL	NO	BSL
	67-64-1	Acetone	1.0E-02 L	2.1E-01 J	MG/KG	IS66SS310001	10/37	0.01 - 0.035	2.1E-01	1.3E+01	6.1E+03 N	4.5E+00	SSL	NO	BSL
	75-15-0	Carbon disulfide	9.0E-04 J	9.0E-04 J	MG/KG	IS66SS370001	1/38	0.005 - 0.032	9.0E-04	ND	8.2E+01 NS	3.1E-01	SSL	NO	BSL
	67-66-3	Chloroform	4.6E-03 J	4.6E-03 J	MG/KG	IS66SS22P0001	1/38	0.005 - 0.032	4.6E-03	ND	2.9E-01 C	5.3E-05	SSL	NO	BSL
	79-20-9	Methyl acetate	3.7E-03 J	3.7E-03 J	MG/KG	IS66SS230001	1/38	0.005 - 0.032	3.7E-03	2.3E-03	7.8E+03 NS	7.5E+00	SSL	NO	BSL
	100-42-5	Styrene	1.2E-03 J	1.6E-02	MG/KG	IS66SS070001	3/38	0.005 - 0.032	1.6E-02	1.3E-03	6.3E+02 NS	1.8E+00	SSL	NO	BSL
	127-18-4	Tetrachloroethene	3.2E-03 J	1.4E-02 J	MG/KG	IS66SS310001	20/38	0.005 - 0.032	1.4E-02	ND	5.5E-01 C	4.9E-05	SSL	NO	BSL
	108-88-3	Toluene	7.1E-03 J	7.1E-03 J	MG/KG	IS66SS230001	1/38	0.005 - 0.032	7.1E-03	1.4E-01	5.0E+02 NS	1.6E+00	SSL	NO	BSL
	95-95-4	2,4,5-Trichlorophenol	2.7E-03 J	4.5E-03 J	MG/KG	IS66SS280001	3/38	0.099 - 45	4.5E-03	ND	6.1E+02 N	1.4E+01	SSL	NO	BSL
	88-06-2	2,4,6-Trichlorophenol	5.5E-03 J	1.5E-02 J	MG/KG	IS66SS250001	8/38	0.099 - 18	1.5E-02	ND	6.1E+00 C**	2.3E-02	SSL	NO	BSL
	120-83-2	2,4-Dichlorophenol	5.6E-03 J	1.4E-02 J	MG/KG	IS66SS250001	3/38	0.02 - 18	1.4E-02	ND	1.8E+01 N	1.3E-01	SSL	NO	BSL
	91-57-6	2-Methylnaphthalene	3.9E-03 L	7.1E-01 J	MG/KG	IS66SS150001	5/38	0.02 - 18	7.1E-01	7.3E-02	3.1E+01 N	7.5E-01	SSL	NO	BSL
	83-32-9	Acenaphthene	2.8E-03 J	2.6E+01 J	MG/KG	IS66SS15P0001	12/38	0.02 - 18	2.6E+01	1.4E-01	3.4E+02 N	2.2E+01	SSL	NO	BSL
	208-96-8	Acenaphthylene	1.6E-03 L	3.4E-01 J	MG/KG	IS66SS210001	6/38	0.02 - 18	3.4E-01	ND	3.4E+02 N	2.2E+01	SSL	NO	BSL
	120-12-7	Anthracene	1.3E-03 J	5.6E+01 J	MG/KG	IS66SS15P0001	22/38	0.02 - 18	5.6E+01	2.6E-01	1.7E+03 N	3.6E+02	SSL	NO	BSL
	1912-24-9	Atrazine	1.6E-03 J	2.5E-03 J	MG/KG	IS66SS280001	3/38	0.02 - 18	2.5E-03	ND	2.1E+00 C	1.9E-04	SSL	NO	BSL
	56-55-3	**Benzo(a)anthracene**	**4.8E-03 J**	**1.7E+02 J**	**MG/KG**	**IS66SS15P0001**	**29/38**	**0.02 - 110**	**1.7E+02**	**4.8E-01**	**1.5E-01 C**	**1.0E-02**	**SSL**	**YES**	**ASL**
	50-32-8	**Benzo(a)pyrene**	**6.2E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**25/38**	**0.02 - 110**	**1.8E+02**	**3.9E-01**	**1.5E-02 C**	**3.5E-03**	**SSL**	**YES**	**ASL**
	205-99-2	**Benzo(b)fluoranthene**	**6.3E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**29/38**	**0.02 - 110**	**1.8E+02**	**4.2E-01**	**1.5E-01 C**	**3.5E-02**	**SSL**	**YES**	**ASL**
	191-24-2	Benzo(g,h,i)perylene	2.2E-03 J	9.2E+01 J	MG/KG	IS66SS15P0001	24/38	0.02 - 18	9.2E+01	1.3E-01	1.7E+02 N			NO	BSL
	207-08-9	**Benzo(k)fluoranthene**	**5.8E-03 J**	**1.5E+02 J**	**MG/KG**	**IS66SS15P0001**	**24/38**	**0.02 - 110**	**1.5E+02**	**3.6E-01**	**1.5E+00 C**	**3.5E-01**	**SSL**	**YES**	**ASL**
	117-81-7	bis(2-Ethylhexyl)phthalate	5.8E-02 K	2.7E+01	MG/KG	IS66SS080001	3/38	0.099 - 18	2.7E+01	7.5E+00	3.5E+01 C*	1.1E+00	SSL	NO	BSL
	86-74-8	Carbazole	1.4E-01 J	4.5E+01 J	MG/KG	IS66SS15P0001	5/38	0.33 - 18	4.5E+01	1.3E-01	N/A			NO	NTX
	218-01-9	**Chrysene**	**2.0E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**28/38**	**0.02 - 110**	**1.8E+02**	**4.4E-01**	**1.5E+01 C**	**1.1E+00**	**SSL**	**YES**	**ASL**
	53-70-3	**Dibenz(a,h)anthracene**	**2.4E-03 J**	**4.4E+01 J**	**MG/KG**	**IS66SS15P0001**	**19/38**	**0.02 - 18**	**4.4E+01**	**ND**	**1.5E-02 C**	**1.1E-02**	**SSL**	**YES**	**ASL**
	132-64-9	**Dibenzofuran**	**4.2E-01 J**	**9.2E+00 J**	**MG/KG**	**IS66SS15P0001**	**2/38**	**0.33 - 18**	**9.2E+00**	**6.5E-02**	**7.8E+00 N**	**6.8E-01**		**YES**	**ASL**
	131-11-3	Dimethyl phthalate	2.0E-03 J	3.1E-03 J	MG/KG	IS66SS410001	6/38	0.02 - 18	3.1E-03	ND	N/A			NO	NTX
	84-74-2	Di-n-butylphthalate	5.4E-01 J	5.4E-01 J	MG/KG	IS66SS150001	1/38	0.33 - 18	5.4E-01	ND	6.1E+02 N	9.2E+00	SSL	NO	BSL
	206-44-0	**Fluoranthene**	**2.2E-03 J**	**3.5E+02 J**	**MG/KG**	**IS66SS15P0001**	**29/38**	**0.02 - 110**	**3.5E+02**	**1.1E+00**	**2.3E+02 N**	**1.6E+02**	**SSL**	**YES**	**ASL**
	86-73-7	Fluorene	5.8E-03 L	1.4E+01 J	MG/KG	IS66SS15P0001	8/38	0.02 - 18	1.4E+01	1.5E-01	2.3E+02 N	2.7E+01	SSL	NO	BSL
	77-47-4	Hexachlorocyclopentadiene	3.9E-03 L	4.4E-03 L	MG/KG	IS66SS280001	2/38	0.02 - 18	4.4E-03	ND	3.7E+01 N	6.8E-01	SSL	NO	BSL
	193-39-5	**Indeno(1,2,3-cd)pyrene**	**2.0E-03 J**	**1.2E+02 J**	**MG/KG**	**IS66SS15P0001**	**26/38**	**0.02 - 18**	**1.2E+02**	**1.0E-01**	**1.5E-01 C**	**1.2E-01**	**SSL**	**YES**	**ASL**
	91-20-3	**Naphthalene**	**4.5E-02 L**	**6.1E+00 J**	**MG/KG**	**IS66SS15P0001**	**3/38**	**0.02 - 18**	**6.1E+00**	**1.1E-01**	**3.6E+00 C***	**4.7E-04**	**SSL**	**YES**	**ASL**
	85-01-8	Phenanthrene	2.0E-03 J	2.1E+02 J	MG/KG	IS66SS15P0001	27/38	0.02 - 110	2.1E+02	1.1E+00	1.7E+03 N			NO	BSL
	129-00-0	**Pyrene**	**2.7E-03 J**	**2.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**28/38**	**0.02 - 110**	**2.8E+02**	**8.8E-01**	**1.7E+02 N**	**1.2E+02**	**SSL**	**YES**	**ASL**
	72-54-8	4,4'-DDD	1.1E-03 J	6.4E-01	MG/KG	IS66SS410001	7/38	0.0031 - 0.056	6.4E-01	ND	2.0E+00 C	6.6E-02	SSL	NO	BSL

Table 2.1
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	72-55-9	4,4'-DDE	2.2E-04 J	2.5E-01 J	MG/KG	IS66SS150001	27/38	0.0031 - 0.056	2.5E-01	1.0E-02	1.4E+00 C	4.7E-02	SSL	NO	BSL
	50-29-3	4,4'-DDT	6.0E-04 J	4.6E-01	MG/KG	IS66SS410001	25/38	0.0031 - 0.056	4.6E-01	9.4E-03	1.7E+00 C*	6.7E-02	SSL	NO	BSL
	309-00-2	Aldrin	1.2E-02 J	1.2E-02 J	MG/KG	IS66SS15P0001	1/38	0.0016 - 0.0041	1.2E-02	ND	2.9E-02 C*	6.5E-04	SSL	NO	BSL
	319-84-6	alpha-BHC	7.7E-04 J	3.2E-03	MG/KG	IS66SS120001	2/38	0.0016 - 0.0041	3.2E-03	ND	7.7E-02 C	6.2E-05	SSL	NO	BSL
	5103-71-9	alpha-Chlordane	6.3E-04 J	2.3E-02 J	MG/KG	IS66SS050001	9/38	0.0016 - 0.0041	2.3E-02	ND	1.6E+00 C*			NO	BSL
	319-85-7	beta-BHC	2.6E-04 J	9.6E-03 J	MG/KG	IS66SS150001	14/38	0.0016 - 0.0041	9.6E-03	ND	2.7E-01 C	2.2E-04	SSL	NO	BSL
	319-86-8	delta-BHC	5.3E-04 J	5.3E-04 J	MG/KG	IS66SS050001	1/38	0.0016 - 0.0041	5.3E-04	ND	2.7E-01 C			NO	BSL
	60-57-1	**Dieldrin**	**7.3E-04 J**	**7.1E-02 J**	**MG/KG**	**IS66SS410001**	**15/38**	**0.0031 - 0.008**	**7.1E-02**	**ND**	**3.0E-02 C**	**1.7E-04**	**SSL**	**YES**	**ASL**
	959-98-8	Endosulfan I	4.2E-04 J	1.5E-02 J	MG/KG	IS66SS15P0001	7/38	0.0016 - 0.0041	1.5E-02	ND	3.7E+01 N			NO	BSL
	33213-65-9	Endosulfan II	1.3E-03 J	2.3E-02 J	MG/KG	IS66SS150001	6/38	0.0031 - 0.008	2.3E-02	ND	3.7E+01 N			NO	BSL
	1031-07-8	Endosulfan sulfate	2.2E-03 J	3.8E-02 J	MG/KG	IS66SS150001	5/38	0.0031 - 0.029	3.8E-02	ND	3.7E+01 N			NO	BSL
	72-20-8	Endrin	8.0E-04 J	1.2E-03 J	MG/KG	IS66SS120001	2/38	0.0031 - 0.008	1.2E-03	ND	1.8E+00 N	4.4E-01	SSL	NO	BSL
	7421-93-4	Endrin aldehyde	1.1E-03 J	6.2E-02 J	MG/KG	IS66SS15P0001	9/38	0.0031 - 0.008	6.2E-02	ND	1.8E+00 N			NO	BSL
	53494-70-5	Endrin ketone	1.1E-03 J	9.6E-02 J	MG/KG	IS66SS15P0001	11/38	0.0031 - 0.029	9.6E-02	ND	1.8E+00 N			NO	BSL
	58-89-9	gamma-BHC (Lindane)	3.5E-04 J	3.5E-04 J	MG/KG	IS66SS42P0001	1/38	0.0016 - 0.0041	3.5E-04	ND	5.2E-01 C*	3.6E-04	SSL	NO	BSL
	5103-74-2	gamma-Chlordane	2.8E-04 J	1.2E-02 J	MG/KG	IS66SS150001	11/38	0.0016 - 0.0041	1.2E-02	ND	1.6E+00 C*			NO	BSL
	76-44-8	Heptachlor	8.4E-04 J	9.5E-04 J	MG/KG	IS66SS020001	2/38	0.0016 - 0.0041	9.5E-04	ND	1.1E-01 C	1.2E-03	SSL	NO	BSL
	1024-57-3	Heptachlor epoxide	6.2E-04 J	5.3E-03 J	MG/KG	IS66SS15P0001	2/38	0.0016 - 0.0041	5.3E-03	ND	5.3E-02 C*	1.5E-04	SSL	NO	BSL
	72-43-5	Methoxychlor	8.1E-03 J	2.3E-01 J	MG/KG	IS66SS150001	8/38	0.016 - 0.041	2.3E-01	ND	3.1E+01 N	9.9E+00	SSL	NO	BSL
	TOTALTEQ	**2,3,7,8-TCDD TEQ**	**3.3E-07**	**6.1E-06**	**MG/KG**	**IS66SS390001**	**20/20**	**See Table 2.1.A**	**6.1E-06**	**ND**	**4.5E-06 C***			**YES**	**ASL**
	55-63-0	**Nitroglycerin**	**1.9E+00**	**1.9E+00**	**MG/KG**	**IS66SS310001**	**1/38**	**0.66 - 4**	**1.9E+00**	**ND**	**6.1E-01 N**	**1.6E-03**	**SSL**	**YES**	**ASL**
	14797-73-0	Perchlorate	4.6E-04 J	1.8E-02 J	MG/KG	IS66SS070001	31/38	0.0023 - 0.007	1.8E-02	ND	5.5E+00 N			NO	BSL
	7429-90-5	**Aluminum**	**2.7E+03**	**1.8E+04**	**MG/KG**	**IS66SS410001**	**38/38**	**17 - 97.1**	**1.8E+04**	**2.0E+04**	**7.7E+03 N**	**5.5E+04**	**SSL**	**YES**	**ASL**
	7440-36-0	Antimony	9.0E-02 J	1.1E-01 J	MG/KG	IS66SS310001	2/37	0.46 - 29.1	1.1E-01	ND	3.1E+00 N	6.6E-01	SSL	NO	BSL
	7440-38-2	**Arsenic**	**1.2E+00**	**1.1E+02**	**MG/KG**	**IS66SS140001**	**36/38**	**0.29 - 4.9**	**1.1E+02**	**1.5E+01**	**3.9E-01 C***	**1.3E-03**	**SSL**	**YES**	**ASL**
	7440-39-3	Barium	1.2E+01	2.1E+02	MG/KG	IS66SS15P0001	38/38	0.29 - 97.1	2.1E+02	8.0E+01	1.5E+03 N	3.0E+02	SSL	NO	BSL
	7440-41-7	Beryllium	2.6E-01 J	2.9E+00	MG/KG	IS66SS110001	24/38	0.29 - 2.4	2.9E+00	1.1E+00	1.6E+01 N	5.8E+01	SSL	NO	BSL
	7440-43-9	Cadmium	2.3E-01 J	1.1E+00	MG/KG	IS66SS340001	2/38	0.58 - 2.4	1.1E+00	2.5E+00	7.0E+00 N			NO	BSL
	7440-70-2	Calcium	5.0E+01	1.6E+04	MG/KG	IS66SS080001	38/38	5.8 - 2430	1.6E+04	2.1E+03	N/A			NO	NUT
	7440-47-3	**Chromium**	**4.4E+00**	**2.8E+01**	**MG/KG**	**IS66SS340001**	**38/38**	**0.29 - 4.9**	**2.8E+01**	**3.3E+01**	**2.9E-01 C**	**8.3E-04**	**SSL**	**YES**	**ASL**
	7440-48-4	**Cobalt**	**9.4E-01**	**1.8E+01 J**	**MG/KG**	**IS66SS110001**	**38/38**	**0.058 - 24.3**	**1.8E+01**	**2.2E+01**	**2.3E+00 N**	**4.9E-01**	**SSL**	**YES**	**ASL**
	7440-50-8	Copper	5.1E+00	6.0E+01	MG/KG	IS66SS15P0001	38/38	1.4 - 12.1	6.0E+01	2.0E+01	3.1E+02 N	5.1E+01	SSL	NO	BSL
	57-12-5	Cyanide	8.3E-02 J	5.7E-01 J	MG/KG	IS66SS210001	10/38	0.5 - 1.2	5.7E-01	7.3E-01	1.6E+02 N	7.4E+00	SSL	NO	BSL
	7439-89-6	**Iron**	**2.5E+03**	**3.6E+04**	**MG/KG**	**IS66SS040001**	**38/38**	**5.8 - 48.5**	**3.6E+04**	**3.9E+04**	**5.5E+03 N**	**6.4E+02**	**SSL**	**YES**	**ASL**
	7439-92-1	Lead	7.9E+00	3.1E+02	MG/KG	IS66SS150001	38/38	0.29 - 1.5	3.1E+02	6.3E+01	4.0E+02 N			NO	BSL
	7439-95-4	Magnesium	1.8E+02	2.3E+03	MG/KG	IS66SS080001	37/38	5.8 - 2430	2.3E+03	1.6E+03	N/A			NO	NUT
	7439-96-5	**Manganese**	**1.1E+01**	**5.2E+02**	**MG/KG**	**IS66SS150001**	**38/38**	**0.29 - 7.3**	**5.2E+02**	**1.4E+03**	**1.8E+02 N**			**YES**	**ASL**

Table 2.1

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Site 66 Remedial Investigation

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7439-97-6	**Mercury**	**2.0E-02 J**	**2.2E+01 J**	**MG/KG**	**IS66SS200001**	**27/38**	**0.026 - 0.48**	**2.2E+01**	**1.6E-01**	**2.3E+00 N**	**3.0E-02**	**SSL**	**YES**	**ASL**
	7440-02-0	Nickel	2.5E+00 J	9.0E+01	MG/KG	IS66SS020001	38/38	2.3 - 19.4	9.0E+01	1.5E+01	1.5E+02 N	4.8E+01	SSL	NO	BSL
	7440-09-7	Potassium	2.9E+02 J	1.2E+03	MG/KG	IS66SS390001	38/38	58 - 2430	1.2E+03	1.5E+03	N/A			NO	NUT
	7782-49-2	Selenium	1.7E-01 J	3.4E+00	MG/KG	IS66SS150001	22/38	0.29 - 2.4	3.4E+00	1.2E+00	3.9E+01 N	9.5E-01	SSL	NO	BSL
	7440-22-4	Silver	1.0E-02 J	5.5E-01 J	MG/KG	IS66SS200001	25/38	0.058 - 4.9	5.5E-01	8.4E-01	3.9E+01 N	1.6E+00	SSL	NO	BSL
	7440-23-5	Sodium	2.9E+01 J	2.0E+02	MG/KG	IS66SS340001	13/38	58 - 2430	2.0E+02	1.2E+02	N/A			NO	NUT
	7440-28-0	Thallium	6.0E-02 J	3.2E-01	MG/KG	IS66SS340001	20/38	0.12 - 4.9	3.2E-01	2.3E+00	N/A			NO	NTX
	7440-62-2	**Vanadium**	**1.6E+01**	**1.2E+02**	**MG/KG**	**IS66SS140001**	**38/38**	**0.29 - 24.3**	**1.2E+02**	**5.3E+01**	**3.9E+01 N**	**2.6E+00**	**SSL**	**YES**	**ASL**
	7440-66-6	Zinc	6.0E+00	3.7E+02	MG/KG	IS66SS160001 : IS66SS170001	38/38	1.4 - 9.7	3.7E+02	3.8E+01	2.3E+03 N	6.8E+02	SSL	NO	BSL

[1] Minimum/Maximum detected concentrations.

[2] Maximum concentration is used for screening.

[3] Values are 95% UTL from Background Soil Investigation Report (Tetra Tech, 2002), Table 4-2.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Soil.
[Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for pyrene used as surrogate for benzo(g,h,i)perylene.
RSL value for anthracene used as surrogate for phenanthrene.
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.
RSL value for endosulfan used as surrogate for endosulfan I, endosulfan II, and endosulfan sulfate.

[5] RSL value for endrin used as surrogate for endrin aldehyde and endrin ketone.
Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
C* = where: N RSL < 100X C RSL
N/A = Not applicable
ND = Not detected
SSL = Soil Screening Level for Protection of Groundwater, from RSL Table
S = Concentration exceeds Csat, used Csat as screening value
MG/KG = milligrams per kilogram
C** = where: N RSL < 10X C RSL

Table 2.1.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SS220001			IS66SS22P0001			IS66SS230001			IS66SS250001			IS66SS270001			IS66SS280001			IS66SS310001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other parameters																							
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	1.4E-06	J	1.4E-08	5.8E-07	J	5.8E-09	2.8E-06		2.8E-08	1.7E-06	J	1.7E-08	4.1E-06		4.1E-08	1.9E-06	J	1.9E-08	2.2E-06	J	2.2E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	1.3E-05		1.3E-07	8.6E-06		8.6E-08	2.1E-05		2.1E-07	1.3E-05		1.3E-07	3.6E-05		3.6E-07	3.8E-05	K	3.8E-07	2.2E-05		2.2E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.7E-06	U		3.2E-06	U		2.7E-07	J	2.7E-09	3.7E-06	U		3.8E-07	J	3.8E-09	2.1E-07	J	2.1E-09	1.5E-07	X	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	6.6E-07	J	6.6E-08	2.4E-07	J	2.4E-08	1.0E-06	J	1.0E-07	5.9E-07	J	5.9E-08	1.7E-06	J	1.7E-07	4.3E-07	J	4.3E-08	1.0E-06	J	1.0E-07
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.2E-07	J	2.2E-08	3.2E-06	U		2.5E-07	J	2.5E-08	3.0E-07	J	3.0E-08	7.7E-07	J	7.7E-08	4.3E-07	X		3.7E-07	J	3.7E-08
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.1E-07	X		3.2E-06	U		4.0E-07	J	4.0E-08	2.6E-07	X		7.0E-07	J	7.0E-08	1.6E-07	X		3.9E-07	J	3.9E-08
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	5.2E-07	J	5.2E-08	3.2E-06	U		7.0E-07	J	7.0E-08	5.3E-07	J	5.3E-08	1.5E-06	J	1.5E-07	7.0E-07	J	7.0E-08	6.4E-07	J	6.4E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		3.2E-06	U		2.7E-06	U		3.7E-06	U		2.3E-06	U		2.7E-06	U		2.7E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.9E-07	X		3.2E-06	U		5.4E-07	X		5.8E-07	X		1.5E-06	J	1.5E-07	7.9E-07	J	7.9E-08	9.9E-07	J	9.9E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.7E-06	U		3.2E-06	U		3.8E-07	J	1.1E-08	3.7E-06	U		6.6E-07	X		2.7E-06	U		4.2E-07	J	1.3E-08
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.7E-06	U		3.2E-06	U		2.7E-06	U		3.7E-06	U		4.5E-07	X		1.2E-07	X		2.2E-07	X	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-07	X		3.2E-06	U		5.9E-07	J	5.9E-08	3.9E-07	X		7.6E-07	J	7.6E-08	1.3E-07	X		3.9E-07	X	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.7E-06	U		3.2E-06	U		6.1E-07	J	1.8E-07	3.7E-06	U		9.2E-07	J	2.8E-07	2.7E-06	U		4.6E-07	J	1.4E-07
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U		1.3E-06	U		1.1E-06	U		1.5E-06	U		9.3E-07	U		1.1E-06	U		1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	7.0E-07	X		1.3E-06	U		7.8E-07	J	7.8E-08	1.5E-06	U		9.5E-07		9.5E-08	1.1E-06	U		8.3E-07	J	8.3E-08
Octachlorodibenzofuran	0.0003	MG/KG	2.4E-06	J	7.3E-10	1.3E-06	J	3.9E-10	6.7E-06		2.0E-09	4.6E-06	J	1.4E-09	9.5E-06		2.9E-09	4.6E-06	J	1.4E-09	4.0E-06	B	
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	8.0E-04		2.4E-07	7.0E-04		2.1E-07	2.0E-03	J	5.9E-07	4.9E-04		1.5E-07	1.8E-03	J	5.5E-07	3.5E-09	K	1.1E-12	1.2E-03	K	3.5E-07
Total 2,3,7,8-TCDD equivalents					5.2E-07			3.3E-07			1.4E-06			4.3E-07			2.0E-06			5.9E-07		1.2E-06

Minimum equivalent concentration = 3.3E-07
Maximum equivalent concentration = 6.1E-06

Table 2.1.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SS320001			IS66SS32P0001			IS66SS330001			IS66SS340001			IS66SS350001			IS66SS360001			IS66SS370001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other parameters																							
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	9.4E-08	B		3.0E-07	B		1.2E-06	J	1.2E-08	1.1E-05		1.1E-07	1.6E-06	J	1.6E-08	4.6E-06		4.6E-08	1.4E-07	J	1.4E-09
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	6.5E-05	J	6.5E-07	2.2E-05	J	2.2E-07	2.5E-05		2.5E-07	5.6E-05		5.6E-07	2.3E-05		2.3E-07	6.7E-05		6.7E-07	3.6E-05		3.6E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.7E-06	U		2.5E-06	U		2.2E-06	U		7.6E-07	J	7.6E-09	2.8E-06	U		3.3E-07	J	3.3E-09	2.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		1.3E-07	J	1.3E-08	4.4E-07	J	4.4E-08	1.0E-06	J	1.0E-07	6.5E-07	J	6.5E-08	1.2E-06	J	1.2E-07	2.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.3E-07	J	2.3E-08	2.5E-06	U		2.7E-07	X		8.1E-07	J	8.1E-08	3.1E-07	J	3.1E-08	8.3E-07	J	8.3E-08	2.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		2.2E-07	J	2.2E-08	7.5E-07	J	7.5E-08	2.6E-07	X		5.0E-07	J	5.0E-08	2.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	6.9E-07	J	6.9E-08	3.1E-07	J	3.1E-08	4.9E-07	J	4.9E-08	1.8E-06	J	1.8E-07	4.6E-07	X		1.6E-06	J	1.6E-07	1.8E-07	X	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		2.2E-06	U		2.6E-06	U		2.8E-06	U		2.7E-06	U		2.4E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	8.9E-07	J	8.9E-08	3.8E-07	J	3.8E-08	6.3E-07	J	6.3E-08	1.8E-06	J	1.8E-07	7.0E-07	J	7.0E-08	1.6E-06	J	1.6E-07	2.4E-06	U	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.7E-06	U		2.5E-06	U		1.5E-07	X		2.9E-07	J	8.6E-09	2.8E-06	U		4.0E-07	J	1.2E-08	2.4E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.7E-06	U		2.5E-06	U		1.7E-07	J	1.7E-07	4.6E-07	J	4.6E-07	2.3E-07	J	2.3E-07	3.9E-07	J	3.9E-07	2.4E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		1.9E-07	X		9.2E-07	J	9.2E-08	3.4E-07	J	3.4E-08	4.6E-07	J	4.6E-08	2.4E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.7E-06	U		2.5E-06	U		2.7E-07	J	8.0E-08	3.9E-07	X		3.4E-07	J	1.0E-07	4.4E-07	J	1.3E-07	2.4E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U		1.0E-06	U		8.6E-07	U		1.1E-06	U		1.1E-06	U		1.1E-06	U		9.6E-07	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		1.0E-06	U		5.2E-07	J	5.2E-08	1.1E-06	U		5.8E-07	J	5.8E-08	6.6E-07	X		9.6E-07	UJ	
Octachlorodibenzofuran	0.0003	MG/KG	6.4E-07	J	1.9E-10	7.0E-07	J	2.1E-10	2.1E-06	J	6.2E-10	4.1E-05		1.2E-08	3.1E-06	J	9.2E-10	1.0E-05		3.1E-09	4.8E-06	U	
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	1.3E-02	J	3.8E-06	4.3E-03	J	1.3E-06	4.3E-03	K	1.3E-06	2.4E-03	K	7.1E-07	2.4E-03	J	7.1E-07	4.4E-03	K	1.3E-06	1.2E-02	K	3.7E-06
Total 2,3,7,8-TCDD equivalents					4.6E-06			1.6E-06			2.0E-06			2.6E-06			1.5E-06			3.2E-06			4.1E-06

Minimum equivalent concentration = 3.3E-07
Maximum equivalent concentration = 6.1E-06

Table 2.1.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SS380001			IS66SS390001			IS66SS400001			IS66SS410001			IS66SS420001			IS66SS42P0001			IS66SS430001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other parameters									0														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	9.6E-06	J	9.6E-08	1.6E-07	X		5.9E-18		5.9E-20	1.1E-06	X		2.2E-06	J	2.2E-08	2.5E-06	J	2.5E-08	1.6E-06	J	1.6E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	1.2E-04	J	1.2E-06	7.7E-05		7.7E-07	5.7E-05		5.7E-07	5.5E-05		5.5E-07	3.3E-05		3.3E-07	3.8E-05		3.8E-07	3.7E-05		3.7E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	7.0E-07	J	7.0E-09	2.7E-06	U		3.0E-07	X		2.6E-06	U		2.4E-06	U		2.8E-06	U		2.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	1.4E-06	J	1.4E-07	2.7E-06	U		8.0E-07	X		1.8E-07	X		7.7E-07	J	7.7E-08	1.0E-06	J	1.0E-07	6.5E-07	J	6.5E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	1.6E-06	J	1.6E-07	4.1E-07	J	4.1E-08	5.7E-07	X		2.2E-07	X		4.0E-07	J	4.0E-08	5.1E-07	X		3.2E-07	X	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	6.5E-07	J	6.5E-08	2.7E-06	U		3.0E-07	X		2.6E-06	U		2.6E-07	X		3.5E-07	J	3.5E-08	2.3E-07	X	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.9E-06	J	2.9E-07	6.9E-07	J	6.9E-08	1.5E-06	J	1.5E-07	8.6E-07	X		6.9E-07	J	6.9E-08	9.9E-07	J	9.9E-08	6.2E-07	J	6.2E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.5E-06	UJ		2.7E-06	U		3.2E-06	U		2.6E-06	U		2.4E-06	U		9.8E-08	X		2.4E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.9E-06	J	3.9E-07	1.4E-06	J	1.4E-07	1.4E-06	J	1.4E-07	5.3E-07	X		8.0E-07	X		1.2E-06	X		8.0E-07	X	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.8E-07	J	1.1E-08	2.7E-06	U		3.2E-06	U		2.6E-06	U		2.6E-07	X		4.1E-07	J	1.2E-08	2.8E-07	J	8.3E-09
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	8.8E-07	J	8.8E-07	2.7E-06	U		3.4E-07	X		1.5E-07	X		2.0E-07	J	2.0E-07	2.8E-07	J	2.8E-07	1.6E-07	X	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	6.2E-07	J	6.2E-08	2.7E-06	U		4.5E-07	J	4.5E-08	2.6E-06	U		3.8E-07	J	3.8E-08	6.1E-07	J	6.1E-08	1.1E-07	J	1.1E-08
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.5E-07	X		2.7E-06	U		2.4E-07	X		2.6E-06	U		4.0E-07	X		4.4E-07	X		2.7E-07	X	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.4E-07	X		1.1E-06	U		1.3E-06	U		1.0E-06	U		9.6E-07	U		1.1E-06	U		9.7E-07	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	4.4E-07	J	4.4E-08	1.1E-06	U		5.6E-07	J	5.6E-08	1.0E-06	U		3.6E-07	X		4.5E-07	J	4.5E-08	9.7E-07	U	
Octachlorodibenzofuran	0.0003	MG/KG	2.1E-05		6.2E-09	5.3E-07	B		1.7E-05		5.1E-09	4.1E-06	J	1.2E-09	3.7E-06	J	1.1E-09	4.2E-06	J	1.3E-09	3.0E-06	J	8.9E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	3.4E-03	J	1.0E-06	1.7E-02	K	5.1E-06	3.6E-03	J	1.1E-06	2.7E-03	J	8.1E-07	3.9E-03	J	1.2E-06	3.4E-03	J	1.0E-06	4.9E-03	J	1.5E-06
Total 2,3,7,8-TCDD equivalents					4.4E-06			6.1E-06			2.0E-06			1.4E-06			1.9E-06			2.1E-06			2.0E-06

Minimum equivalent concentration = 3.3E-07
Maximum equivalent concentration = 6.1E-06

Table 2.1.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Surface Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SS440001			IS66SS450001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other parameters								
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	1.9E-06	J	1.9E-08	2.1E-06	J	2.1E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	4.4E-05		4.4E-07	9.1E-05		9.1E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.5E-06	U		1.4E-07	X	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	6.1E-07	J	6.1E-08	9.6E-07	J	9.6E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.5E-07	X		6.3E-07	X	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.0E-07	J	2.0E-08	3.1E-07	X	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	7.1E-07	J	7.1E-08	1.2E-06	J	1.2E-07
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	6.7E-08	J	6.7E-09	1.1E-07	X	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	5.5E-07	X		1.5E-06	J	1.5E-07
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.5E-06	U		3.0E-07	X	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	1.5E-07	X		3.6E-07	J	3.6E-07
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.1E-07	J	3.1E-08	2.2E-07	X	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.2E-07	J	9.5E-08	3.9E-07	X	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.0E-06	U		1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.0E-06	U		1.1E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	3.6E-06	J	1.1E-09	3.1E-06	J	9.2E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	4.6E-03	J	1.4E-06	9.4E-03	J	2.8E-06
Total 2,3,7,8-TCDD equivalents					2.1E-06			4.5E-06

Minimum equivalent concentration = 3.3E-07
Maximum equivalent concentration = 6.1E-06

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Emissions from Surface Soil	78-93-3	2-Butanone	1.0E-03 J	1.0E-03 J	µg/m^3	IS66SS310001	1/37	0.01 - 0.035	1.0E-03	N/A	5.2E+02 N	N/A	N/A	NO	BSL
	67-64-1	Acetone	8.7E-05 L	1.8E-03 J	µg/m^3	IS66SS310001	10/37	0.01 - 0.035	1.8E-03	N/A	3.2E+03 N	N/A	N/A	NO	BSL
	75-15-0	Carbon disulfide	1.2E-03 J	1.2E-03 J	µg/m^3	IS66SS370001	1/38	0.005 - 0.032	1.2E-03	N/A	7.3E+01 N	N/A	N/A	NO	BSL
	67-66-3	Chloroform	1.8E-03 J	1.8E-03 J	µg/m^3	IS66SS22P0001	1/38	0.005 - 0.032	1.8E-03	N/A	1.1E-01 C	N/A	N/A	NO	BSL
	79-20-9	Methyl acetate	1.3E-04 J	1.3E-04 J	µg/m^3	IS66SS230001	1/38	0.005 - 0.032	1.3E-04	N/A	N/A	N/A	N/A	NO	NTX
	100-42-5	Styrene	1.4E-03 J	1.8E-02	µg/m^3	IS66SS070001	3/38	0.005 - 0.032	1.8E-02	N/A	1.0E+02 N	N/A	N/A	NO	BSL
	127-18-4	Tetrachloroethene	1.9E-02 J	8.4E-02 J	µg/m^3	IS66SS310001	20/38	0.005 - 0.032	8.4E-02	N/A	4.1E-01 C	N/A	N/A	NO	BSL
	108-88-3	Toluene	8.7E-03 J	8.7E-03 J	µg/m^3	IS66SS230001	1/38	0.005 - 0.032	8.7E-03	N/A	5.2E+02 N	N/A	N/A	NO	BSL
	95-95-4	2,4,5-Trichlorophenol	2.0E-09 J	3.3E-09 J	µg/m^3	IS66SS280001	3/38	0.099 - 45	3.3E-09	N/A	N/A	N/A	N/A	NO	NTX
	88-06-2	2,4,6-Trichlorophenol	4.0E-09 J	1.1E-08 J	µg/m^3	IS66SS250001	8/38	0.099 - 18	1.1E-08	N/A	7.8E-01 C	N/A	N/A	NO	BSL
	120-83-2	2,4-Dichlorophenol	4.1E-09 J	1.0E-08 J	µg/m^3	IS66SS250001	3/38	0.02 - 18	1.0E-08	N/A	N/A	N/A	N/A	NO	NTX
	91-57-6	2-Methylnaphthalene	1.1E-02 L	1.9E+00 J	µg/m^3	IS66SS150001	5/38	0.02 - 18	1.9E+00	N/A	N/A	N/A	N/A	NO	NTX
	83-32-9	Acenaphthene	0.023723 J	2.2E+02 J	µg/m^3	IS66SS15P0001	12/38	0.02 - 18	2.2E+02	N/A	N/A	N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	1.4E-02 L	2.9E+00 J	µg/m^3	IS66SS210001	6/38	0.02 - 18	2.9E+00	N/A	N/A	N/A	N/A	NO	NTX
	120-12-7	Anthracene	3.0E-01 J	1.3E+04 J	µg/m^3	IS66SS15P0001	22/38	0.02 - 18	1.3E+04	N/A	N/A	N/A	N/A	NO	NTX
	1912-24-9	Atrazine	1.2E-09 J	1.8E-09 J	µg/m^3	IS66SS280001	3/38	0.02 - 18	1.8E-09	N/A	N/A	N/A	N/A	NO	NTX
	56-55-3	Benzo(a)anthracene	3.5E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	29/38	0.02 - 110	1.3E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	50-32-8	Benzo(a)pyrene	4.6E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	25/38	0.02 - 110	1.3E-04	N/A	8.7E-04 C	N/A	N/A	NO	BSL
	205-99-2	Benzo(b)fluoranthene	4.6E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	29/38	0.02 - 110	1.3E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	1.6E-09 J	6.8E-05 J	µg/m^3	IS66SS15P0001	24/38	0.02 - 18	6.8E-05	N/A	N/A	N/A	N/A	NO	NTX
	207-08-9	Benzo(k)fluoranthene	4.3E-09 J	1.1E-04 J	µg/m^3	IS66SS15P0001	24/38	0.02 - 110	1.1E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	117-81-7	bis(2-Ethylhexyl)phthalate	4.3E-08 K	2.0E-05	µg/m^3	IS66SS080001	3/38	0.099 - 18	2.0E-05	N/A	1.0E+00 C	N/A	N/A	NO	BSL
	86-74-8	Carbazole	1.0E-07 J	3.3E-05 J	µg/m^3	IS66SS15P0001	5/38	0.33 - 18	3.3E-05	N/A	N/A	N/A	N/A	NO	NTX
	218-01-9	Chrysene	1.5E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	28/38	0.02 - 110	1.3E-04	N/A	8.7E-02 C	N/A	N/A	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	1.8E-09 J	3.2E-05 J	µg/m^3	IS66SS15P0001	19/38	0.02 - 18	3.2E-05	N/A	8.0E-04 C	N/A	N/A	NO	BSL
	132-64-9	Dibenzofuran	2.5E+00 J	5.4E+01 J	µg/m^3	IS66SS15P0001	2/38	0.33 - 18	5.4E+01	N/A	N/A	N/A	N/A	NO	NTX
	131-11-3	Dimethyl phthalate	1.5E-09 J	2.3E-09 J	µg/m^3	IS66SS410001	6/38	0.02 - 18	2.3E-09	N/A	N/A	N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	4.0E-07 J	4.0E-07 J	µg/m^3	IS66SS150001	1/38	0.33 - 18	4.0E-07	N/A	N/A	N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	1.6E-09 J	2.6E-04 J	µg/m^3	IS66SS15P0001	29/38	0.02 - 110	2.6E-04	N/A	N/A	N/A	N/A	NO	NTX
	86-73-7	Fluorene	6.2E-02 L	1.5E+02 J	µg/m^3	IS66SS15P0001	8/38	0.02 - 18	1.5E+02	N/A	N/A	N/A	N/A	NO	NTX
	77-47-4	Hexachlorocyclopentadiene	2.9E-09 L	3.2E-09 L	µg/m^3	IS66SS280001	2/38	0.02 - 18	3.2E-09	N/A	2.1E-02 N	N/A	N/A	NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	1.5E-09 J	8.8E-05 J	µg/m^3	IS66SS15P0001	26/38	0.02 - 18	8.8E-05	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	91-20-3	**Naphthalene**	**1.5E-01 L**	**2.1E+01 J**	**µg/m^3**	**IS66SS15P0001**	**3/38**	**0.02 - 18**	**2.1E+01**	**N/A**	**7.2E-02 C***	**N/A**	**N/A**	**YES**	**ASL**
	85-01-8	Phenanthrene	1.5E-09 J	1.5E-04 J	µg/m^3	IS66SS15P0001	27/38	0.02 - 110	1.5E-04	N/A	N/A	N/A	N/A	NO	NTX
	129-00-0	Pyrene	6.1E-02 J	6.4E+03 J	µg/m^3	IS66SS15P0001	28/38	0.02 - 110	6.4E+03	N/A	N/A	N/A	N/A	NO	NTX
	72-54-8	4,4'-DDD	8.1E-10 J	4.7E-07	µg/m^3	IS66SS410001	7/38	0.0031 - 0.056	4.7E-07	N/A	3.5E-02 C	N/A	N/A	NO	BSL

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	72-55-9	4,4'-DDE	1.6E-10 J	1.8E-07 J	µg/m^3	IS66SS150001	27/38	0.0031 - 0.056	1.8E-07	N/A	2.5E-02 C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	4.4E-10 J	3.4E-07	µg/m^3	IS66SS410001	25/38	0.0031 - 0.056	3.4E-07	N/A	2.5E-02 C	N/A	N/A	NO	BSL
	309-00-2	Aldrin	8.8E-09 J	8.8E-09 J	µg/m^3	IS66SS15P0001	1/38	0.0016 - 0.0041	8.8E-09	N/A	5.0E-04 C	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	5.7E-10 J	2.4E-09	µg/m^3	IS66SS120001	2/38	0.0016 - 0.0041	2.4E-09	N/A	1.4E-03 C	N/A	N/A	NO	BSL
	5103-71-9	alpha-Chlordane	4.6E-10 J	1.7E-08 J	µg/m^3	IS66SS050001	9/38	0.0016 - 0.0041	1.7E-08	N/A	2.4E-02 C*	N/A	N/A	NO	BSL
	319-85-7	beta-BHC	1.9E-10 J	7.1E-09 J	µg/m^3	IS66SS150001	14/38	0.0016 - 0.0041	7.1E-09	N/A	4.6E-03 C	N/A	N/A	NO	BSL
	319-86-8	delta-BHC	3.9E-10 J	3.9E-10 J	µg/m^3	IS66SS050001	1/38	0.0016 - 0.0041	3.9E-10	N/A	4.8E-03 C	N/A	N/A	NO	BSL
	60-57-1	Dieldrin	5.4E-10 J	5.2E-08 J	µg/m^3	IS66SS410001	15/38	0.0031 - 0.008	5.2E-08	N/A	5.3E-04 C	N/A	N/A	NO	BSL
	959-98-8	Endosulfan I	3.1E-10 J	1.1E-08 J	µg/m^3	IS66SS15P0001	7/38	0.0016 - 0.0041	1.1E-08	N/A	N/A	N/A	N/A	NO	NTX
	33213-65-9	Endosulfan II	9.6E-10 J	1.7E-08 J	µg/m^3	IS66SS150001	6/38	0.0031 - 0.008	1.7E-08	N/A	N/A	N/A	N/A	NO	NTX
	1031-07-8	Endosulfan sulfate	1.6E-09 J	2.8E-08 J	µg/m^3	IS66SS150001	5/38	0.0031 - 0.029	2.8E-08	N/A	N/A	N/A	N/A	NO	NTX
	72-20-8	Endrin	5.9E-10 J	8.8E-10 J	µg/m^3	IS66SS120001	2/38	0.0031 - 0.008	8.8E-10	N/A	N/A	N/A	N/A	NO	NTX
	7421-93-4	Endrin aldehyde	8.1E-10 J	4.6E-08 J	µg/m^3	IS66SS15P0001	9/38	0.0031 - 0.008	4.6E-08	N/A	N/A	N/A	N/A	NO	NTX
	53494-70-5	Endrin ketone	8.1E-10 J	7.1E-08 J	µg/m^3	IS66SS15P0001	11/38	0.0031 - 0.029	7.1E-08	N/A	N/A	N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	2.6E-10 J	2.6E-10 J	µg/m^3	IS66SS42P0001	1/38	0.0016 - 0.0041	2.6E-10	N/A	7.8E-03 C	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	2.1E-10 J	8.8E-09 J	µg/m^3	IS66SS150001	11/38	0.0016 - 0.0041	8.8E-09	N/A	2.4E-02 C*	N/A	N/A	NO	BSL
	76-44-8	Heptachlor	6.2E-10 J	7.0E-10 J	µg/m^3	IS66SS020001	2/38	0.0016 - 0.0041	7.0E-10	N/A	1.9E-03 C	N/A	N/A	NO	BSL
	1024-57-3	Heptachlor epoxide	4.6E-10 J	3.9E-09 J	µg/m^3	IS66SS15P0001	2/38	0.0016 - 0.0041	3.9E-09	N/A	9.4E-04 C	N/A	N/A	NO	BSL
	72-43-5	Methoxychlor	6.0E-09 J	1.7E-07 J	µg/m^3	IS66SS150001	8/38	0.016 - 0.041	1.7E-07	N/A	N/A	N/A	N/A	NO	NTX
	TOTALTEQ	2,3,7,8-TCDD TEQ	2.4E-13	4.5E-12	µg/m^3	IS66SS280001	20/20	See Table 2.2.A	4.5E-12	N/A	6.4E-08 C	N/A	N/A	NO	BSL
	55-63-0	Nitroglycerin	1.4E-06	1.4E-06	µg/m^3	IS66SS310001	1/38	0.66 - 4	1.4E-06	N/A	N/A	N/A	N/A	NO	NTX
	14797-73-0	Perchlorate	3.4E-10 J	1.3E-08 J	µg/m^3	IS66SS070001	31/38	0.0023 - 0.007	1.3E-08	N/A	N/A	N/A	N/A	NO	NTX
	7429-90-5	Aluminum	2.0E-03	1.3E-02	µg/m^3	IS66SS410001	38/38	17 - 97.1	1.3E-02	N/A	5.2E-01 N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	6.6E-08 J	8.1E-08 J	µg/m^3	IS66SS310001	2/37	0.46 - 29.1	8.1E-08	N/A	N/A	N/A	N/A	NO	NTX
	7440-38-2	Arsenic	8.8E-07	7.9E-05	µg/m^3	IS66SS140001	36/38	0.29 - 4.9	7.9E-05	N/A	5.7E-04 C*	N/A	N/A	NO	BSL
	7440-39-3	Barium	8.5E-06	1.5E-04	µg/m^3	IS66SS15P0001	38/38	0.29 - 97.1	1.5E-04	N/A	5.2E-02 N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	1.9E-07 J	2.1E-06	µg/m^3	IS66SS110001	24/38	0.29 - 2.4	2.1E-06	N/A	1.0E-03 C*	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	1.7E-07 J	8.1E-07	µg/m^3	IS66SS340001	2/38	0.58 - 2.4	8.1E-07	N/A	1.0E-03 C**	N/A	N/A	NO	BSL
	7440-70-2	Calcium	3.7E-05	1.2E-02	µg/m^3	IS66SS080001	38/38	5.8 - 2430	1.2E-02	N/A	N/A	N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**3.2E-06**	**2.1E-05**	**µg/m^3**	**IS66SS340001**	**38/38**	**0.29 - 4.9**	**2.1E-05**	**N/A**	**1.1E-05 C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	Cobalt	6.9E-07	1.3E-05 J	µg/m^3	IS66SS110001	38/38	0.058 - 24.3	1.3E-05	N/A	2.7E-04 C*	N/A	N/A	NO	BSL
	7440-50-8	Copper	3.8E-06	4.4E-05	µg/m^3	IS66SS15P0001	38/38	1.4 - 12.1	4.4E-05	N/A	N/A	N/A	N/A	NO	NTX
	57-12-5	Cyanide	6.1E-08 J	4.2E-07 J	µg/m^3	IS66SS210001	10/38	0.5 - 1.2	4.2E-07	N/A	N/A	N/A	N/A	NO	NTX
	7439-89-6	Iron	1.9E-03	2.6E-02	µg/m^3	IS66SS040001	38/38	5.8 - 48.5	2.6E-02	N/A	N/A	N/A	N/A	NO	NTX
	7439-92-1	Lead	5.8E-06	2.2E-04	µg/m^3	IS66SS150001	38/38	0.29 - 1.5	2.2E-04	N/A	N/A	N/A	N/A	NO	NTX
	7439-95-4	Magnesium	1.3E-04	1.7E-03	µg/m^3	IS66SS080001	37/38	5.8 - 2430	1.7E-03	N/A	N/A	N/A	N/A	NO	NUT
	7439-96-5	Manganese	8.3E-06	3.8E-04	µg/m^3	IS66SS150001	38/38	0.29 - 7.3	3.8E-04	N/A	5.2E-03 N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.5E-08 J	1.6E-05 J	µg/m^3	IS66SS200001	27/38	0.026 - 0.48	1.6E-05	N/A	3.1E-03 N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	1.8E-06 J	6.6E-05	µg/m^3	IS66SS020001	38/38	2.3 - 19.4	6.6E-05	N/A	9.4E-03 C*	N/A	N/A	NO	BSL
	7440-09-7	Potassium	2.1E-04 J	8.8E-04	µg/m^3	IS66SS390001	38/38	58 - 2430	8.8E-04	N/A	N/A	N/A	N/A	NO	NUT
	7782-49-2	Selenium	1.3E-07 J	2.5E-06	µg/m^3	IS66SS150001	22/38	0.29 - 2.4	2.5E-06	N/A	2.1E+00 N	N/A	N/A	NO	BSL
	7440-22-4	Silver	7.4E-09 J	4.0E-07 J	µg/m^3	IS66SS200001	25/38	0.058 - 4.9	4.0E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-23-5	Sodium	2.2E-05 J	1.5E-04	µg/m^3	IS66SS340001	13/38	58 - 2430	1.5E-04	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	4.4E-08 J	2.4E-07	µg/m^3	IS66SS340001	20/38	0.12 - 4.9	2.4E-07	N/A	N/A	N/A	N/A	NO	NTX

Table 2.2
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7440-62-2	Vanadium	1.2E-05	8.5E-05	µg/m^3	IS66SS140001	38/38	0.29 - 24.3	8.5E-05	N/A	1.0E-02 N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	4.4E-06	2.7E-04	µg/m^3	IS66SS160001 : IS66SS170001	38/38	1.4 - 9.7	2.7E-04	N/A	N/A	N/A	N/A	NO	NTX

[1] Minimum/Maximum calculated air concentrations from soil concentrations. Air concentrations calculated as Cair = Csoil*1000*(1/PEF+1/VF)
VF calculated for volatile and semi-volatile analytes identified as volatile in the Regional Screening Levels for Chemical Contaminants at Superfund Sites (Oak Ridge National Laboratory, Nov. 2010). VF calculated on Table 2 Supplement. PEF = 1.36 x 10^9 m^3/kg.

[2] Maximum concentration is used for screening.

[3] Background values not available.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Air. [Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.

[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
µg/m^3 = micrograms per cubic meter
C* = where: N RSL < 100X C RSL
N/A = Not applicable
SSL = Soil Screening Level for Protection of Groundwater, from RSL Table
S = Concentration exceeds Csat, used Csat as screening value
MG/KG = milligrams per kilogram
C** = where: N RSL < 10X C RSL

Table 2.2 Supplement A
Calculation of Volatilization Factors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Diffusivity in Air (D_i) (cm^2/s)	Henry's Law Constant (H') (unitless)	Diffusivity in Water (D_w) (cm^2/s)	Soil Organic Carbon Partition Coeff. (K_{oc}) (cm^3/g)	Soil Water Partition Coeff. ($K_d = K_{oc} \times F_{oc}$) ($g/cm^3$)	Solubility in Water (S) (mg/L)	Apparent Diffusivity (D_A) (cm^2/s)	Volatilization Factor (VF) (m^3/kg)	Soil Saturation Concentration (C_{sat}) (mg/kg)
Volatile Organics									
2-Butanone	9.1E-02	2.3E-03	1.0E-05	4.5E+00	2.7E-02	2.2E+05	8.9E-05	1.7E+04	2.8E+04
Acetone	1.1E-01	1.4E-03	1.2E-05	2.4E+00	1.4E-02	1.0E+06	7.1E-05	1.9E+04	1.1E+05
Carbon disulfide	1.1E-01	5.9E-01	1.3E-05	2.2E+01	1.3E-01	2.2E+03	9.8E-03	1.6E+03	7.4E+02
Chloroform	7.70E-02	1.50E-01	1.10E-05	3.18E+01	1.9E-01	7.9E+03	1.9E-03	3.6E+03	2.5E+03
Methyl Acetate	9.6E-02	4.7E-03	1.1E-05	3.1E+00	1.8E-02	2.4E+05	2.0E-04	1.1E+04	2.9E+04
Styrene	7.1E-02	1.1E-01	8.8E-06	4.5E+02	2.7E+00	3.1E+02	1.5E-04	1.3E+04	8.7E+02
Tetrachloroethene	5.0E-02	7.2E-01	9.5E-06	9.5E+01	5.7E-01	2.1E+02	2.4E-03	3.2E+03	1.7E+02
Toluene	7.8E-02	2.7E-01	9.2E-06	2.3E+02	1.4E+00	5.3E+02	7.2E-04	5.9E+03	8.2E+02
2-Methylnaphthalene	5.24E-02	2.12E-02	7.78E-06	2.5E+03	1.5E+01	2.5E+01	4.0E-06	8.0E+04	3.7E+02
Semivolatile Organics									
Acenapthene	5.10E-02	7.50E-03	8.30E-06	5.03E+03	3.0E+01	3.9E+00	6.8E-07	1.9E+05	1.2E+02
Anthracene	3.9E-02	2.3E-03	7.9E-06	1.6E+04	9.8E+01	4.3E-02	4.9E-08	7.2E+05	4.3E+00
Dibenzofuran	4.1E-02	8.7E-03	7.4E-06	9.2E+03	5.5E+01	3.1E+00	3.5E-07	2.7E+05	1.7E+02
Fluorene	4.40E-02	3.90E-03	7.90E-06	9.16E+03	5.5E+01	1.7E+00	1.7E-07	3.9E+05	9.3E+01
Naphthalene	6.0E-02	1.8E-02	8.4E-06	1.5E+03	9.3E+00	3.1E+01	6.2E-06	6.4E+04	2.9E+02
Pyrene	2.8E-02	4.9E-04	7.2E-06	5.4E+04	3.3E+02	1.4E-01	2.3E-09	3.3E+06	4.4E+01

Volatilization factor (VF) = $\dfrac{Q/C * (3.14 * D_A * T)^{1/2} * 10^{-4}\ m^2/cm^2}{2 * \rho_b * D_A}$ **(m^3/kg)**

Apparent Diffusivity (D_A) = $\dfrac{[(\Theta_a^{10/3} * D_i * H' + \Theta_w^{10/3} * D_w)/n^2]}{(\rho_b * K_d + \Theta_w + \Theta_a * H')}$ **(cm^2/s)**

Soil Saturation Concentration (C_{sat}) = $S/\rho_b * (K_d * \rho_b + \Theta_w + H' * \Theta_a)$

Parameters	Values
Q/C - Inverse of the mean concentration at the center of a 0.5-acre-square source (g/m^2-s per kg/m^3)	87.37
T - Exposure interval(s)	9.5E+08
r_b - Soil bulk density (g/cm^3)	1.5
Q_a - Air-filled soil porosity (L_{air}/L_{water}) = n - Q_w	0.28
n - Total soil porosity (Lpore/Lsoil) = 1 - (r_b/r_s)	0.43
Q_w - Water-filled soil porosity (Lwater/Lsoil)	0.15
r_s - Soil particle density (g/cm^3)	2.65
f_{oc} - fraction organic carbon in soil (g/g)	0.006

Equations and chemical properties from USEPA, 1996. *Soil Screening Guidance: User's Guide.* EPA/540/R-96/018.
Physical/chemical properties from USEPA Regional Screening Table, November 2010.

$Q/C_{vol} = A \times \exp[(\ln A_{site} - B)^2/C]$

Variable	Value	Units	Description
A_{site} =	0.5	acres	Source area
A =	14.0111		constant (Zone 8 - Philadelphia, PA)
B =	19.6154		constant (Zone 8 - Philadelphia, PA)
C =	225.3317		constant (Zone 8 - Philadelphia, PA)
Q/C_{vol} =	87.37	(g/m^2-s per kg/m^3)	

Table 2.3
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Ash

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Ash	TOTALTEQ	2,3,7,8-TCDD TEQ	2.5E-08	4.1E-06	MG/KG	IS66AH09	6/6	See Table 2.3.A	4.1E-06	N/A	4.5E-06 C*	N/A	N/A	NO	BSL
	7429-90-5	**Aluminum**	**6.0E+03**	**1.1E+04**	**MG/KG**	**IS66AH08**	**6/6**	**32 - 54**	**1.1E+04**	**N/A**	**7.7E+03 N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-36-0	Antimony	3.4E-01 L	3.7E-01 J	MG/KG	IS66AH09	2/6	1 - 2	3.7E-01	N/A	3.1E+00 N	N/A	N/A	NO	BSL
	7440-38-2	**Arsenic**	**2.5E+01**	**1.2E+02**	**MG/KG**	**IS66AH07**	**6/6**	**0.54 - 0.9**	**1.2E+02**	**N/A**	**3.9E-01 C***	**N/A**	**N/A**	**YES**	**ASL**
	7440-39-3	Barium	7.0E+01	2.0E+02	MG/KG	IS66AH08	6/6	0.54 - 1.2	2.0E+02	N/A	1.5E+03 N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	1.4E+00	3.0E+00	MG/KG	IS66AH07	6/6	0.54 - 0.9	3.0E+00	N/A	1.6E+01 N	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	2.1E-01 J	4.9E-01 J	MG/KG	IS66AH05	6/6	1.3 - 2.5	4.9E-01	N/A	7.0E+00 N	N/A	N/A	NO	BSL
	7440-70-2	Calcium	1.2E+03	5.3E+03	MG/KG	IS66AH08	6/6	11 - 18	5.3E+03	N/A	N/A	N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**1.5E+01**	**2.9E+01**	**MG/KG**	**IS66AH07**	**6/6**	**0.54 - 0.9**	**2.9E+01**	**N/A**	**2.9E-01 C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	**Cobalt**	**7.4E+00**	**1.7E+01**	**MG/KG**	**IS66AH04P : IS66AH07**	**6/6**	**0.11 - 0.18**	**1.7E+01**	**N/A**	**2.3E+00 N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-50-8	Copper	3.6E+01	4.4E+01	MG/KG	IS66AH06	6/6	3.2 - 6.2	4.4E+01	N/A	3.1E+02 N	N/A	N/A	NO	BSL
	7439-89-6	**Iron**	**2.3E+04**	**5.1E+04**	**MG/KG**	**IS66AH07**	**6/6**	**12 - 25**	**5.1E+04**	**N/A**	**5.5E+03 N**	**N/A**	**N/A**	**YES**	**ASL**
	7439-92-1	Lead	1.7E+01	4.9E+01	MG/KG	IS66AH05	6/6	0.65 - 1.2	4.9E+01	N/A	4.0E+02 N	N/A	N/A	NO	BSL
	7439-95-4	Magnesium	2.8E+02	9.6E+02	MG/KG	IS66AH05	6/6	13 - 25	9.6E+02	N/A	N/A	N/A	N/A	NO	NUT
	7439-96-5	**Manganese**	**9.8E+01 L**	**4.6E+02**	**MG/KG**	**IS66AH09**	**6/6**	**0.65 - 1.2**	**4.6E+02**	**N/A**	**1.8E+02 N**	**N/A**	**N/A**	**YES**	**ASL**
	7439-97-6	Mercury	2.3E-01	6.7E-01 L	MG/KG	IS66AH07	6/6	0.036 - 0.065	6.7E-01	N/A	2.3E+00 N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	2.4E+01	3.8E+01	MG/KG	IS66AH08	6/6	5.2 - 9.9	3.8E+01	N/A	1.5E+02 N	N/A	N/A	NO	BSL
	7440-09-7	Potassium	4.0E+02	1.1E+03	MG/KG	IS66AH08	6/6	110 - 180	1.1E+03	N/A	N/A	N/A	N/A	NO	NUT
	7782-49-2	Selenium	1.8E+00	8.1E+00	MG/KG	IS66AH09	6/6	0.54 - 0.9	8.1E+00	N/A	3.9E+01 N	N/A	N/A	NO	BSL
	7440-22-4	Silver	8.0E-02 J	1.4E-01	MG/KG	IS66AH05	6/6	0.11 - 0.18	1.4E-01	N/A	3.9E+01 N	N/A	N/A	NO	BSL
	7440-23-5	Sodium	5.8E+01 J	4.0E+02	MG/KG	IS66AH09	6/6	110 - 180	4.0E+02	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	7.0E-01	1.9E+00	MG/KG	IS66AH07	6/6	0.21 - 0.36	1.9E+00	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	**Vanadium**	**5.1E+01**	**1.5E+02**	**MG/KG**	**IS66AH09**	**6/6**	**0.54 - 0.9**	**1.5E+02**	**N/A**	**3.9E+01 N**	**N/A**	**N/A**	**YES**	**ASL**
	7440-66-6	Zinc	2.7E+01	5.9E+01	MG/KG	IS66AH05	6/6	2.7 - 4.5	5.9E+01	N/A	2.3E+03 N	N/A	N/A	NO	BSL

[1] Minimum/Maximum detected concentrations.

[2] Maximum concentration is used for screening.

[3] Background values not available.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Soil. [Online]. Available: Sites.http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
RSL value for Manganese (water) used as surrogate for manganese.

[5] RSL value for Mercury (inorganic salts) used as surrogate for mercury.
Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
C* = where: N RSL < 100X C RSL
N/A = Not applicable

Table 2.3.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Ash
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66AH01			IS66AH02			IS66AH02P			IS66AH03			IS66AH07			IS66AH08			IS66AH09		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters																							
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		8.4E-07	J	8.4E-09	6.4E-06		6.4E-08	3.1E-06		3.1E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		4.2E-06		4.2E-08	7.3E-05		7.3E-07	1.7E-05		1.7E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		3.2E-06	U		5.0E-06	U		2.9E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		4.3E-07	X		8.2E-07	J	8.2E-08	3.0E-06		3.0E-07
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		3.2E-06	U		5.0E-06	U		2.9E-07	X	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		1.8E-07	X		5.0E-06	U		1.2E-06	J	1.2E-07
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		1.8E-07	X		2.0E-06	J	2.0E-07	5.6E-07	X	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		4.0E-08	X		5.0E-06	U		1.9E-07	J	1.9E-08
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		1.6E-07	X		6.2E-07	X		6.2E-07	X	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		9.1E-07	J	2.7E-08	1.6E-06	J	4.8E-08	9.4E-06		2.8E-07
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		6.4E-08	X		5.0E-06	U		3.2E-07	J	3.2E-07
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		1.3E-07	J	1.3E-08	5.0E-06	U		4.6E-07	X	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	7.8E-03	U		9.4E-03	U		8.2E-03	U		1.0E-02	U		4.8E-07	J	1.4E-07	6.3E-07	X		3.8E-06		1.1E-06
2,3,7,8-TCDD (dioxin)	1	MG/KG	3.1E-03	U		3.8E-03	U		3.3E-03	U		4.0E-03	U		1.3E-06	U		2.0E-06	U		2.0E-07	X	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	3.1E-03	U		3.8E-03	U		3.3E-03	U		4.0E-03	U		2.2E-06		2.2E-07	2.5E-06		2.5E-07	1.7E-05		1.7E-06
Octachlorodibenzofuran	0.0003	MG/KG	1.6E-02	U		1.9E-02	U		1.6E-02	U		2.0E-02	U		1.8E-06	X		8.6E-06	J	2.6E-09	8.1E-06		2.4E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	1.7E-04	J	5.2E-08	1.1E-04	J	3.4E-08	1.7E-04	J	5.0E-08	8.4E-05	J	2.5E-08	8.9E-05		2.7E-08	6.5E-04		2.0E-07	2.7E-04	J	8.0E-08
Total 2,3,7,8-TCDD equivalents					5.2E-08			3.4E-08			5.0E-08			2.5E-08			4.8E-07			1.6E-06			4.1E-06

Minimum equivalent concentration = 2.5E-08
Maximum equivalent concentration = 4.1E-06

Table 2.4
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Emissions From Ash	TOTALTEQ	2,3,7,8-TCDD TEQ	1.9E-14	3.0E-12	µg/m^3	IS66AH09	3/3	See Table 2.2.A	3.0E-12	N/A	6.4E-08 C	N/A	N/A	NO	BSL
	7429-90-5	Aluminum	4.4E-03	8.2E-03	µg/m^3	IS66AH08	6/6	32 - 54	8.2E-03	N/A	5.2E-01 N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	2.5E-07 L	2.7E-07 J	µg/m^3	IS66AH09	2/6	1 - 2	2.7E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-38-2	Arsenic	1.8E-05	9.0E-05	µg/m^3	IS66AH07	6/6	0.54 - 0.9	9.0E-05	N/A	5.7E-04 C*	N/A	N/A	NO	BSL
	7440-39-3	Barium	5.1E-05	1.5E-04	µg/m^3	IS66AH08	6/6	0.54 - 1.2	1.5E-04	N/A	5.2E-02 N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	1.0E-06	2.2E-06	µg/m^3	IS66AH07	6/6	0.54 - 0.9	2.2E-06	N/A	1.0E-03 C*	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	1.5E-07 J	3.6E-07 J	µg/m^3	IS66AH05	6/6	1.3 - 2.5	3.6E-07	N/A	1.0E-03 C**	N/A	N/A	NO	BSL
	7440-70-2	Calcium	8.8E-04	3.9E-03	µg/m^3	IS66AH08	6/6	11 - 18	3.9E-03	N/A	N/A	N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**1.1E-05**	**2.1E-05**	µg/m^3	**IS66AH07**	**6/6**	**0.54 - 0.9**	**2.1E-05**	**N/A**	**1.1E-05 C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	Cobalt	5.4E-06	1.3E-05	µg/m^3	IS66AH04P : IS66AH07	6/6	0.11 - 0.18	1.3E-05	N/A	2.7E-04 C*	N/A	N/A	NO	BSL
	7440-50-8	Copper	2.6E-05	3.2E-05	µg/m^3	IS66AH06	6/6	3.2 - 6.2	3.2E-05	N/A	N/A	N/A	N/A	NO	NTX
	7439-89-6	Iron	1.7E-02	3.8E-02	µg/m^3	IS66AH07	6/6	12 - 25	3.8E-02	N/A	N/A	N/A	N/A	NO	NTX
	7439-92-1	Lead	1.3E-05	3.6E-05	µg/m^3	IS66AH05	6/6	0.65 - 1.2	3.6E-05	N/A	N/A	N/A	N/A	NO	NTX
	7439-95-4	Magnesium	2.1E-04	7.1E-04	µg/m^3	IS66AH05	6/6	13 - 25	7.1E-04	N/A	N/A	N/A	N/A	NO	NUT
	7439-96-5	Manganese	7.2E-05 L	3.3E-04	µg/m^3	IS66AH09	6/6	0.65 - 1.2	3.3E-04	N/A	5.2E-03 N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.7E-07	4.9E-07 L	µg/m^3	IS66AH07	6/6	0.036 - 0.065	4.9E-07	N/A	3.1E-03 N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	1.7E-05	2.8E-05	µg/m^3	IS66AH08	6/6	5.2 - 9.9	2.8E-05	N/A	9.4E-03 C*	N/A	N/A	NO	BSL
	7440-09-7	Potassium	2.9E-04	8.0E-04	µg/m^3	IS66AH08	6/6	110 - 180	8.0E-04	N/A	N/A	N/A	N/A	NO	NUT
	7782-49-2	Selenium	1.3E-06	6.0E-06	µg/m^3	IS66AH09	6/6	0.54 - 0.9	6.0E-06	N/A	2.1E+00 N	N/A	N/A	NO	BSL
	7440-22-4	Silver	5.9E-08 J	1.0E-07	µg/m^3	IS66AH05	6/6	0.11 - 0.18	1.0E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-23-5	Sodium	4.3E-05 J	2.9E-04	µg/m^3	IS66AH09	6/6	110 - 180	2.9E-04	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	5.1E-07	1.4E-06	µg/m^3	IS66AH07	6/6	0.21 - 0.36	1.4E-06	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	Vanadium	3.7E-05	1.1E-04	µg/m^3	IS66AH09	6/6	0.54 - 0.9	1.1E-04	N/A	1.0E-02 N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	1.9E-05	4.3E-05	µg/m^3	IS66AH05	6/6	2.7 - 4.5	4.3E-05	N/A	N/A	N/A	N/A	NO	NTX

[1] Minimum/Maximum calculated air concentrations from soil concentrations. Air concentrations calculated as Cair = Csoil*1000*(1/PEF+1/VF)
VF calculated for volatile and semi-volatile analytes identified as volatile in the Regional Screening Levels for Chemical Contaminants at Superfund Sites (Oak Ridge National Laboratory, Nov. 2010). VF calculated on Table 2 Supplement. PEF = 1.36 x 10^9 m^3/kg.

[2] Maximum concentration is used for screening.

[3] Background values not available.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Air. [Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.

[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
µg/m^3 = micrograms per cubic meter
C* = where: N RSL < 100X C RSL
N/A = Not applicable
SSL = Soil Screening Level for Protection of Groundwater, from RSL Table
S = Concentration exceeds Csat, used Csat as screening value
MG/KG = milligrams per kilogram
C** = where: N RSL < 10X C RSL

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Sediment	78-93-3	2-Butanone	2.0E-02 J	2.5E-02 J	MG/KG	IS66SD07	4/14	0.012 - 0.098	2.5E-02	N/A	2.8E+04 N	N/A	N/A	NO	BSL
	67-64-1	Acetone	6.4E-02 J	1.1E-01 J	MG/KG	IS66SD07	3/14	0.012 - 0.098	1.1E-01	N/A	6.1E+04 N	N/A	N/A	NO	BSL
	127-18-4	Tetrachloroethene	4.0E-03 J	1.7E-02 J	MG/KG	IS66SD14	10/14	0.006 - 0.055	1.7E-02	N/A	5.5E+00 C	N/A	N/A	NO	BSL
	108-88-3	Toluene	2.4E-02	2.4E-02	MG/KG	IS66SD10	1/14	0.006 - 0.055	2.4E-02	N/A	8.2E+02 NS	N/A	N/A	NO	BSL
	95-95-4	2,4,5-Trichlorophenol	5.8E-03 J	7.4E-03 J	MG/KG	IS66SD09	2/14	0.12 - 3.1	7.4E-03	N/A	6.1E+03 N	N/A	N/A	NO	BSL
	88-06-2	2,4,6-Trichlorophenol	1.6E-02 J	2.7E-02 J	MG/KG	IS66SD13	5/14	0.12 - 1.2	2.7E-02	N/A	6.1E+01 C**	N/A	N/A	NO	BSL
	120-83-2	2,4-Dichlorophenol	1.5E-02 J	2.3E-02 J	MG/KG	IS66SD08	5/14	0.025 - 1.2	2.3E-02	N/A	1.8E+02 N	N/A	N/A	NO	BSL
	91-57-6	2-Methylnaphthalene	5.8E-03 L	9.9E-03 L	MG/KG	IS66SD12	5/14	0.025 - 1.2	9.9E-03	N/A	3.1E+02 N	N/A	N/A	NO	BSL
	m&pCRESOL	3- and 4-Methylphenol	1.8E-02 J	1.4E-01 J	MG/KG	IS66SD14	4/10	0.12 - 0.28	1.4E-01	N/A	3.1E+02 N	N/A	N/A	NO	BSL
	83-32-9	Acenaphthene	5.5E-03 J	1.0E-01 J	MG/KG	IS66SD05 : IS66SD12	9/14	0.025 - 1.2	1.0E-01	N/A	3.4E+03 N	N/A	N/A	NO	BSL
	208-96-8	Acenaphthylene	2.4E-03 J	2.3E-02 J	MG/KG	IS66SD14	9/14	0.025 - 1.2	2.3E-02	N/A	3.4E+03 N	N/A	N/A	NO	BSL
	120-12-7	Anthracene	3.7E-03 J	2.6E-01 J	MG/KG	IS66SD05	11/14	0.025 - 1.2	2.6E-01	N/A	1.7E+04 N	N/A	N/A	NO	BSL
	1912-24-9	Atrazine	3.8E-03 J	7.3E-03 J	MG/KG	IS66SD13	5/14	0.025 - 1.2	7.3E-03	N/A	2.1E+01 C	N/A	N/A	NO	BSL
	56-55-3	Benzo(a)anthracene	2.4E-01	7.8E-01	MG/KG	IS66SD12	6/14	0.026 - 1.2	7.8E-01	N/A	1.5E+00 C	N/A	N/A	NO	BSL
	50-32-8	**Benzo(a)pyrene**	**1.3E-02 J**	**7.7E-01**	**MG/KG**	**IS66SD12**	**13/14**	**0.026 - 1.2**	**7.7E-01**	**N/A**	1.5E-01 C	N/A	N/A	**YES**	**ASL**
	205-99-2	Benzo(b)fluoranthene	1.5E-02 J	1.3E+00	MG/KG	IS66SD12	13/14	0.026 - 1.2	1.3E+00	N/A	1.5E+00 C	N/A	N/A	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	5.6E-03 J	4.3E-01	MG/KG	IS66SD12	12/14	0.025 - 1.2	4.3E-01	N/A	1.7E+03 N	N/A	N/A	NO	BSL
	207-08-9	Benzo(k)fluoranthene	4.9E-03 J	6.4E-01	MG/KG	IS66SD05	13/14	0.025 - 1.2	6.4E-01	N/A	1.5E+01 C	N/A	N/A	NO	BSL
	111-44-4	bis(2-Chloroethyl)ether	2.2E-03 J	2.2E-03 J	MG/KG	IS66SD09	1/14	0.025 - 1.2	2.2E-03	N/A	2.1E+00 C	N/A	N/A	NO	BSL
	86-74-8	Carbazole	1.7E-01 J	1.7E-01 J	MG/KG	IS66SD05	1/14	0.42 - 1.2	1.7E-01	N/A	N/A	N/A	N/A	NO	NTX
	218-01-9	Chrysene	8.2E-03 J	7.3E-01	MG/KG	IS66SD05	13/14	0.026 - 1.2	7.3E-01	N/A	1.5E+02 C	N/A	N/A	NO	BSL
	53-70-3	**Dibenz(a,h)anthracene**	**4.7E-03 J**	**2.1E-01**	**MG/KG**	**IS66SD12**	**10/14**	**0.025 - 1.2**	**2.1E-01**	**N/A**	1.5E-01 C	N/A	N/A	**YES**	**ASL**
	131-11-3	Dimethyl phthalate	2.5E-03 J	5.5E-03 J	MG/KG	IS66SD14	2/14	0.025 - 1.2	5.5E-03	N/A	N/A	N/A	N/A	NO	NTX
	206-44-0	Fluoranthene	2.0E-02 J	1.5E+00	MG/KG	IS66SD05	14/14	0.026 - 1.2	1.5E+00	N/A	2.3E+03 N	N/A	N/A	NO	BSL
	86-73-7	Fluorene	2.0E-02 J	1.1E-01 J	MG/KG	IS66SD05	8/14	0.025 - 1.2	1.1E-01	N/A	2.3E+03 N	N/A	N/A	NO	BSL
	118-74-1	Hexachlorobenzene	2.4E-03 J	2.6E-03 J	MG/KG	IS66SD11	2/14	0.025 - 1.2	2.6E-03	N/A	3.0E+00 C	N/A	N/A	NO	BSL
	77-47-4	Hexachlorocyclopentadiene	6.6E-03 J	6.6E-03 J	MG/KG	IS66SD09 : IS66SD11	2/14	0.025 - 1.2	6.6E-03	N/A	3.7E+02 N	N/A	N/A	NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	5.4E-03 J	4.2E-01	MG/KG	IS66SD12	12/14	0.025 - 1.2	4.2E-01	N/A	1.5E+00 C	N/A	N/A	NO	BSL
	91-20-3	Naphthalene	6.3E-02 L	6.3E-02 L	MG/KG	IS66SD12	1/14	0.025 - 1.2	6.3E-02	N/A	3.6E+01 C*	N/A	N/A	NO	BSL
	85-01-8	Phenanthrene	7.4E-03 J	9.4E-01	MG/KG	IS66SD05	12/14	0.026 - 1.2	9.4E-01	N/A	1.7E+04 N	N/A	N/A	NO	BSL
	108-95-2	Phenol	8.8E-03 J	8.8E-03 J	MG/KG	IS66SD09	1/14	0.12 - 1.2	8.8E-03	N/A	1.8E+04 N	N/A	N/A	NO	BSL
	129-00-0	Pyrene	1.4E-02 J	1.1E+00	MG/KG	IS66SD05 : IS66SD12	13/14	0.026 - 1.2	1.1E+00	N/A	1.7E+03 N	N/A	N/A	NO	BSL
	72-54-8	4,4'-DDD	1.9E-03 J	5.7E-02 J	MG/KG	IS66SD08	14/14	0.0042 - 0.012	5.7E-02	N/A	2.0E+01 C	N/A	N/A	NO	BSL
	72-55-9	4,4'-DDE	1.4E-03 J	2.9E-02 J	MG/KG	IS66SD08	14/14	0.0042 - 0.012	2.9E-02	N/A	1.4E+01 C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	2.3E-03 J	3.9E-02 J	MG/KG	IS66SD14	9/14	0.0042 - 0.012	3.9E-02	N/A	1.7E+01 C*	N/A	N/A	NO	BSL
	5103-71-9	alpha-Chlordane	8.2E-04 J	5.3E-03 J	MG/KG	IS66SD02	4/14	0.0021 - 0.0063	5.3E-03	N/A	1.6E+01 C*	N/A	N/A	NO	BSL

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	11097-69-1	Aroclor-1254	8.3E-01	8.3E-01	MG/KG	IS66SD14	1/14	0.022 - 0.12	8.3E-01	N/A	1.1E+00 C**	N/A	N/A	NO	BSL
	11096-82-5	Aroclor-1260	1.6E-01	1.6E-01	MG/KG	IS66SD03	1/14	0.022 - 0.12	1.6E-01	N/A	2.2E+00 C	N/A	N/A	NO	BSL
	319-85-7	beta-BHC	1.2E-03 J	1.2E-03 J	MG/KG	IS66SD05	1/14	0.0021 - 0.0063	1.2E-03	N/A	2.7E+00 C	N/A	N/A	NO	BSL
	60-57-1	Dieldrin	1.6E-03 J	8.3E-03 J	MG/KG	IS66SD08	2/14	0.0042 - 0.012	8.3E-03	N/A	3.0E-01 C	N/A	N/A	NO	BSL
	959-98-8	Endosulfan I	2.3E-03 J	3.2E-03 J	MG/KG	IS66SD13	2/14	0.0021 - 0.0063	3.2E-03	N/A	3.7E+02 N	N/A	N/A	NO	BSL
	72-20-8	Endrin	2.1E-03 J	2.1E-03 J	MG/KG	IS66SD04	1/14	0.0042 - 0.012	2.1E-03	N/A	1.8E+01 N	N/A	N/A	NO	BSL
	7421-93-4	Endrin aldehyde	2.5E-03 J	3.4E-03 J	MG/KG	IS66SD02P	2/14	0.0042 - 0.012	3.4E-03	N/A	1.8E+01 N	N/A	N/A	NO	BSL
	53494-70-5	Endrin ketone	1.2E-03 J	4.1E-03 J	MG/KG	IS66SD04	3/14	0.0042 - 0.012	4.1E-03	N/A	1.8E+01 N	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	6.5E-04 J	5.0E-03	MG/KG	IS66SD04	4/14	0.0021 - 0.0063	5.0E-03	N/A	1.6E+01 C*	N/A	N/A	NO	BSL
	72-43-5	Methoxychlor	1.2E-02 J	3.5E-02 J	MG/KG	IS66SD02P	3/14	0.021 - 0.063	3.5E-02	N/A	3.1E+02 N	N/A	N/A	NO	BSL
	TOTALTEQ	2,3,7,8-TCDD TEQ	1.8E-07	4.6E-06	MG/KG	IS66SD15	10/10	See Table 2.5.A	4.6E-06	N/A	4.5E-05 C*	N/A	N/A	NO	BSL
	55-63-0	Nitroglycerin	1.4E+00	1.4E+00	MG/KG	IS66SD06P	1/14	1 - 4	1.4E+00	N/A	6.1E+00 N	N/A	N/A	NO	BSL
	14797-73-0	Perchlorate	7.7E-03 J	7.7E-03 J	MG/KG	IS66SD03	1/11	0.0057 - 0.017	7.7E-03	N/A	5.5E+01 N	N/A	N/A	NO	BSL
	7429-90-5	Aluminum	1.5E+03	1.7E+04	MG/KG	IS66SD02P	14/14	24 - 145	1.7E+04	N/A	7.7E+04 N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	1.5E-01 J	4.7E+00	MG/KG	IS66SD15	6/14	0.64 - 43.5	4.7E+00	N/A	3.1E+01 N	N/A	N/A	NO	BSL
	7440-38-2	**Arsenic**	**2.9E+00**	**1.4E+01**	**MG/KG**	**IS66SD04**	**12/14**	**0.4 - 7.3**	**1.4E+01**	**N/A**	3.9E+00 C*	N/A	N/A	**YES**	**ASL**
	7440-39-3	Barium	1.0E+01	1.7E+02	MG/KG	IS66SD02P	14/14	0.4 - 145	1.7E+02	N/A	1.5E+04 N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	2.8E-01 J	8.4E-01	MG/KG	IS66SD13	9/14	0.4 - 3.6	8.4E-01	N/A	1.6E+02 N	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	2.0E-01 J	4.7E+00	MG/KG	IS66SD14	9/14	0.8 - 3.6	4.7E+00	N/A	7.0E+01 N	N/A	N/A	NO	BSL
	7440-70-2	Calcium	2.4E+02 K	4.5E+03	MG/KG	IS66SD14	13/14	8 - 3630	4.5E+03	N/A	N/A	N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**4.0E+00**	**3.0E+01**	**MG/KG**	**IS66SD02P**	**14/14**	**0.4 - 7.3**	**3.0E+01**	**N/A**	2.9E+00 C	N/A	N/A	**YES**	**ASL**
	7440-48-4	**Cobalt**	**2.7E+00**	**4.1E+01**	**MG/KG**	**IS66SD02**	**14/14**	**0.08 - 36.3**	**4.1E+01**	**N/A**	2.3E+01 N	N/A	N/A	**YES**	**ASL**
	7440-50-8	Copper	5.6E+00	1.3E+02	MG/KG	IS66SD14	14/14	2 - 18.1	1.3E+02	N/A	3.1E+03 N	N/A	N/A	NO	BSL
	57-12-5	Cyanide	3.5E-01 J	5.1E-01 J	MG/KG	IS66SD09	2/14	0.65 - 1.8	5.1E-01	N/A	1.6E+03 N	N/A	N/A	NO	BSL
	7439-89-6	Iron	3.2E+03	2.5E+04	MG/KG	IS66SD02P	14/14	8 - 72.5	2.5E+04	N/A	5.5E+04 N	N/A	N/A	NO	BSL
	7439-92-1	Lead	7.0E+00	2.6E+02	MG/KG	IS66SD14	14/14	0.4 - 2.2	2.6E+02	N/A	4.0E+02 N	N/A	N/A	NO	BSL
	7439-95-4	Magnesium	1.6E+02	1.7E+03	MG/KG	IS66SD14	14/14	8 - 3630	1.7E+03	N/A	N/A	N/A	N/A	NO	NUT
	7439-96-5	Manganese	2.7E+01	5.9E+02	MG/KG	IS66SD14	14/14	0.4 - 10.9	5.9E+02	N/A	1.8E+03 N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	1.0E-02 J	1.8E+00	MG/KG	IS66SD15	11/14	0.036 - 0.34	1.8E+00	N/A	2.3E+01 N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	2.2E+00 J	3.2E+01	MG/KG	IS66SD02	14/14	3.2 - 29	3.2E+01	N/A	1.5E+03 N	N/A	N/A	NO	BSL
	7440-09-7	Potassium	1.6E+02 J	9.8E+02 J	MG/KG	IS66SD02P	14/14	80 - 3630	9.8E+02	N/A	N/A	N/A	N/A	NO	NUT
	7782-49-2	Selenium	4.0E-02 J	7.7E-01 J	MG/KG	IS66SD14	10/14	0.4 - 3.6	7.7E-01	N/A	3.9E+02 N	N/A	N/A	NO	BSL
	7440-22-4	Silver	3.0E-02 J	1.7E+01	MG/KG	IS66SD14	10/14	0.08 - 7.3	1.7E+01	N/A	3.9E+02 N	N/A	N/A	NO	BSL
	7440-23-5	Sodium	3.3E+02	7.9E+02	MG/KG	IS66SD14	2/14	80 - 3630	7.9E+02	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	2.0E-02 J	2.3E-01	MG/KG	IS66SD13	10/14	0.16 - 7.3	2.3E-01	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	Vanadium	5.8E+00	6.8E+01	MG/KG	IS66SD02P	14/14	0.4 - 36.3	6.8E+01	N/A	3.9E+02 N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	1.4E+01	4.1E+02	MG/KG	IS66SD14	14/14	2 - 14.5	4.1E+02	N/A	2.3E+04 N	N/A	N/A	NO	BSL

Table 2.5
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Background values not available.
[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Soil x 10. [Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for p-Cresol used as surrogate for 3- and 4-methylphenol.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for pyrene used as surrogate for benzo(g,h,i)perylene.
RSL value for anthracene used as surrogate for phenanthrene.
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.
RSL value for endosulfan used as surrogate for endosulfan I.
RSL value for endrin used as surrogate for endrin aldehyde and endrin ketone.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
C* = where: N RSL < 100X C RSL
N/A = Not applicable
S = Concentration exceeds Csat, used Csat as screening value
MG/KG = milligrams per kilogram
C** = where: N RSL < 10X C RSL

Table 2.5.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SD06			IS66SD06P			IS66SD07			IS66SD08			IS66SD09			IS66SD10		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters																				
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	9.6E-07	J	9.6E-09	9.0E-07	J	9.0E-09	7.5E-07	J	7.5E-09	3.4E-06	J	3.4E-08	8.8E-07	X		3.1E-06	J	3.1E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	1.1E-05		1.1E-07	9.8E-06		9.8E-08	7.0E-06		7.0E-08	3.9E-05		3.9E-07	1.3E-05		1.3E-07	2.3E-05		2.3E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		5.8E-06	U		3.3E-06	U		3.1E-07	X	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	1.5E-07	J	1.5E-08	3.0E-06	U		3.2E-06	U		4.9E-07	X		7.3E-08	X		4.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		4.6E-07	J	4.6E-08	3.3E-06	U		4.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		6.5E-07	J	6.5E-08	6.8E-08	X		4.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.2E-07	J	3.2E-08	2.6E-07	J	2.6E-08	3.2E-06	U		1.1E-06	J	1.1E-07	3.0E-07	J	3.0E-08	5.0E-07	X	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		5.8E-06	U		3.3E-06	U		4.4E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.5E-07	J	3.5E-08	3.0E-07	X		3.2E-06	U		9.2E-07	J	9.2E-08	2.6E-07	J	2.6E-08	3.1E-07	J	3.1E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		5.8E-06	U		3.3E-06	U		4.4E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		5.8E-06	U		3.3E-06	U		4.4E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		3.0E-07	X		3.3E-06	U		4.4E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.3E-06	U		3.0E-06	U		3.2E-06	U		5.8E-06	U		3.3E-06	U		4.4E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.3E-06	U		1.2E-06	U		1.3E-06	U		2.3E-06	U		1.3E-06	U		1.8E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.3E-06	U		1.2E-06	U		1.3E-06	U		2.3E-06	U		3.1E-07	J	3.1E-08	5.8E-07	J	5.8E-08
Octachlorodibenzofuran	0.0003	MG/KG	3.7E-06	J	1.1E-09	3.3E-06	J	9.9E-10	2.7E-06	J	8.0E-10	1.4E-05		4.3E-09	5.2E-06	J	1.6E-09	1.4E-05		4.3E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	5.6E-04		1.7E-07	5.8E-04		1.7E-07	3.3E-04	J	1.0E-07	1.8E-03		5.4E-07	4.5E-04		1.4E-07	8.4E-04		2.5E-07
Total 2,3,7,8-TCDD equivalents					3.7E-07			3.1E-07			1.8E-07			1.3E-06			3.5E-07			6.0E-07

Minimum equivalent concentration = 1.8E-07
Maximum equivalent concentration = 4.6E-06

Table 2.5.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Sediment
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66SD11			IS66SD12			IS66SD13			IS66SD14			IS66SD15		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	1.7E-06	J	1.7E-08	4.9E-06		4.9E-08	3.0E-06	J	3.0E-08	3.9E-06	J	3.9E-08	2.4E-05		2.4E-07
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	1.8E-05		1.8E-07	7.0E-05		7.0E-07	4.0E-05		4.0E-07	1.7E-05		1.7E-07	7.5E-05		7.5E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	1.7E-07	X		3.9E-07	X		5.0E-06	U		4.2E-06	U		1.2E-06	X	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	1.8E-07	J	1.8E-08	1.1E-07	X		5.0E-06	U		2.9E-07	J	2.9E-08	5.7E-06	J	5.7E-07
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.7E-06	U		3.5E-06	U		2.1E-07	X		1.8E-07	J	1.8E-08	1.0E-06	X	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.4E-07	J	3.4E-08	3.5E-06	U		5.0E-06	U		4.2E-06	U		2.3E-06	J	2.3E-07
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	6.9E-07	J	6.9E-08	1.3E-06	J	1.3E-07	9.4E-07	J	9.4E-08	3.6E-07	X		3.1E-06	J	3.1E-07
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.7E-06	U		3.5E-06	U		5.0E-06	U		4.2E-06	U		8.3E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	5.2E-07	J	5.2E-08	2.5E-07	X		6.0E-07	X		3.4E-07	J	3.4E-08	3.9E-06	J	3.9E-07
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.7E-06	U		3.5E-06	U		5.0E-06	U		4.2E-06	U		1.9E-06	X	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	1.7E-07	J	1.7E-07	3.5E-06	U		9.9E-08	X		4.2E-06	U		1.1E-06	J	1.1E-06
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.5E-07	X		3.5E-06	U		5.0E-06	U		4.2E-06	U		2.2E-06	J	2.2E-07
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.2E-07	X		3.5E-06	U		5.0E-06	U		4.2E-06	U		2.0E-06	X	
2,3,7,8-TCDD (dioxin)	1	MG/KG	6.4E-08	X		1.4E-06	U		2.0E-06	U		1.7E-06	U		4.9E-07	X	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	4.0E-07	J	4.0E-08	1.4E-06	U		2.0E-06	U		5.0E-07	J	5.0E-08	3.5E-06		3.5E-07
Octachlorodibenzofuran	0.0003	MG/KG	5.6E-06	J	1.7E-09	3.3E-05		9.9E-09	9.4E-06	J	2.8E-09	4.9E-06	J	1.5E-09	3.1E-05		9.3E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	5.0E-04		1.5E-07	1.1E-03		3.2E-07	1.5E-03		4.5E-07	1.0E-03		3.0E-07	1.7E-03		5.0E-07
Total 2,3,7,8-TCDD equivalents					7.3E-07			1.2E-06			9.8E-07			6.4E-07			4.6E-06

Minimum equivalent concentration = 1.8E-07
Maximum equivalent concentration = 4.6E-06

Table 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Soil*	75-34-3	1,1-Dichloroethane	3.0E-03 L	3.0E-03 L	MG/KG	IS66SB270910	1/62	0.0048 - 0.032	3.0E-03	ND	3.3E+00 C	6.90E-04	SSL	NO	BSL
	75-35-4	1,1-Dichloroethene	1.1E-03 J	2.8E-03 L	MG/KG	IS66SB270910	3/62	0.0048 - 0.032	2.8E-03	ND	2.4E+01 N	1.2E-01	SSL	NO	BSL
	78-93-3	2-Butanone	2.2E-02 J	2.9E-02 J	MG/KG	IS66SS310001	2/61	0.01 - 0.035	2.9E-02	ND	2.8E+03 N	1.5E+00	SSL	NO	BSL
	67-64-1	Acetone	6.5E-03 J	2.1E-01 J	MG/KG	IS66SS310001	12/61	0.01 - 0.035	2.1E-01	1.3E+01	6.1E+03 N	4.5E+00	SSL	NO	BSL
	75-15-0	Carbon disulfide	9.0E-04 J	9.0E-04 J	MG/KG	IS66SS370001	1/62	0.0048 - 0.032	9.0E-04	ND	8.2E+01 NS	3.1E-01	SSL	NO	BSL
	67-66-3	Chloroform	4.6E-03 J	4.6E-03 J	MG/KG	IS66SS22P0001	1/62	0.0048 - 0.032	4.6E-03	ND	2.9E-01 C	5.3E-05	SSL	NO	BSL
	100-41-4	Ethylbenzene	9.3E-03	9.3E-03	MG/KG	IS66SB410607	1/62	0.0048 - 0.032	9.3E-03	2.4E-03	5.4E+00 C	1.70E-03	SSL	NO	BSL
	98-82-8	Isopropylbenzene	2.2E-02	2.2E-02	MG/KG	IS66SB410607	1/62	0.0048 - 0.032	2.2E-02	ND	2.1E+02 NS	1.1E+00	SSL	NO	BSL
	79-20-9	Methyl acetate	3.7E-03 J	3.7E-03 J	MG/KG	IS66SS230001	1/62	0.0048 - 0.032	3.7E-03	2.3E-03	7.8E+03 NS	7.5E+00	SSL	NO	BSL
	100-42-5	Styrene	1.2E-03 J	1.6E-02	MG/KG	IS66SS070001	3/62	0.0048 - 0.032	1.6E-02	1.3E-03	6.3E+02 NS	1.8E+00	SSL	NO	BSL
	127-18-4	Tetrachloroethene	3.2E-03 J	1.4E-02 J	MG/KG	IS66SS310001	36/62	0.0048 - 0.032	1.4E-02	ND	5.5E-01 C	4.9E-05	SSL	NO	BSL
	108-88-3	Toluene	7.1E-03 J	1.3E-02	MG/KG	IS66SB22P1112	2/62	0.0048 - 0.032	1.3E-02	1.4E-01	5.0E+02 NS	1.6E+00	SSL	NO	BSL
	1330-20-7	Xylene, total	5.0E-02	5.0E-02	MG/KG	IS66SB410607	1/62	0.01 - 0.032	5.0E-02	9.9E-03	6.3E+01 NS	2.0E-01	SSL	NO	BSL
	95-95-4	2,4,5-Trichlorophenol	2.7E-03 J	1.3E-02 J	MG/KG	IS66SB400910	4/62	0.099 - 45	1.3E-02	ND	6.1E+02 N	1.4E+01	SSL	NO	BSL
	88-06-2	2,4,6-Trichlorophenol	5.5E-03 J	1.6E-02 J	MG/KG	IS66SB231516	13/62	0.099 - 18	1.6E-02	ND	6.1E+00 C**	2.3E-02	SSL	NO	BSL
	120-83-2	2,4-Dichlorophenol	2.6E-03 J	1.4E-02 J	MG/KG	IS66SB22P1112 : IS66SB231516 : IS66SS250001	8/62	0.02 - 18	1.4E-02	ND	1.8E+01 N	1.3E-01	SSL	NO	BSL
	121-14-2	2,4-Dinitrotoluene	8.2E-03 J	8.2E-03 J	MG/KG	IS66SB340809	1/62	0.02 - 1.2	8.2E-03	ND	1.6E+00 C*	2.90E-04	SSL	NO	BSL
	91-57-6	2-Methylnaphthalene	3.3E-03 L	7.1E-01 J	MG/KG	IS66SS150001	9/62	0.02 - 18	7.1E-01	7.3E-02	3.1E+01 N	7.5E-01	SSL	NO	BSL
	m&pCRESOL	3- and 4-Methylphenol	1.4E-02 J	1.6E-02 J	MG/KG	IS66SB251011	2/36	0.099 - 0.15	1.6E-02	ND	3.1E+01 N	1.50E-01	SSL	NO	BSL
	83-32-9	Acenaphthene	2.8E-03 J	2.6E+01 J	MG/KG	IS66SS15P0001	18/62	0.02 - 18	2.6E+01	1.4E-01	3.4E+02 N	2.2E+01	SSL	NO	BSL
	208-96-8	Acenaphthylene	1.6E-03 L	3.4E-01 J	MG/KG	IS66SS210001	12/62	0.02 - 18	3.4E-01	ND	3.4E+02 N	2.2E+01	SSL	NO	BSL
	98-86-2	Acetophenone	1.1E-01 J	1.1E-01 J	MG/KG	IS66SB070103	1/62	0.33 - 18	1.1E-01	6.4E-02	7.8E+02 NS	1.1E+00	SSL	NO	BSL
	120-12-7	Anthracene	1.3E-03 J	5.6E+01 J	MG/KG	IS66SS15P0001	30/62	0.02 - 18	5.6E+01	2.6E-01	1.7E+03 N	3.6E+02	SSL	NO	BSL
	1912-24-9	Atrazine	1.5E-03 J	4.8E-03 J	MG/KG	IS66SB400910	9/62	0.02 - 18	4.8E-03	ND	2.1E+00 C	1.9E-04	SSL	NO	BSL
	56-55-3	**Benzo(a)anthracene**	**4.7E-03 J**	**1.7E+02 J**	**MG/KG**	**IS66SS15P0001**	**44/62**	**0.02 - 110**	**1.7E+02**	**4.8E-01**	**1.5E-01 C**	**1.0E-02**	**SSL**	**YES**	**ASL**
	50-32-8	**Benzo(a)pyrene**	**4.3E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**36/62**	**0.02 - 110**	**1.8E+02**	**3.9E-01**	**1.5E-02 C**	**3.5E-03**	**SSL**	**YES**	**ASL**
	205-99-2	**Benzo(b)fluoranthene**	**6.0E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**40/62**	**0.02 - 110**	**1.8E+02**	**4.2E-01**	**1.5E-01 C**	**3.5E-02**	**SSL**	**YES**	**ASL**
	191-24-2	Benzo(g,h,i)perylene	2.2E-03 J	9.2E+01 J	MG/KG	IS66SS15P0001	32/62	0.02 - 18	9.2E+01	1.3E-01	1.7E+02 N	1.20E+02	SSL	NO	BSL
	207-08-9	**Benzo(k)fluoranthene**	**4.4E-03 J**	**1.5E+02 J**	**MG/KG**	**IS66SS15P0001**	**32/62**	**0.02 - 110**	**1.5E+02**	**3.6E-01**	**1.5E+00 C**	**3.5E-01**	**SSL**	**YES**	**ASL**
	117-81-7	bis(2-Ethylhexyl)phthalate	5.0E-02 K	2.7E+01	MG/KG	IS66SS080001	7/62	0.099 - 18	2.7E+01	7.5E+00	3.5E+01 C*	1.1E+00	SSL	NO	BSL
	86-74-8	Carbazole	1.4E-01 J	4.5E+01 J	MG/KG	IS66SS15P0001	8/62	0.33 - 18	4.5E+01	1.3E-01	N/A			NO	NTX
	218-01-9	**Chrysene**	**2.0E-03 J**	**1.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**38/62**	**0.02 - 110**	**1.8E+02**	**4.4E-01**	**1.5E+01 C**	**1.1E+00**	**SSL**	**YES**	**ASL**
	53-70-3	**Dibenz(a,h)anthracene**	**2.4E-03 J**	**4.4E+01 J**	**MG/KG**	**IS66SS15P0001**	**26/62**	**0.02 - 18**	**4.4E+01**	**ND**	**1.5E-02 C**	**1.1E-02**	**SSL**	**YES**	**ASL**
	132-64-9	**Dibenzofuran**	**1.7E-01 J**	**9.2E+00 J**	**MG/KG**	**IS66SS15P0001**	**5/62**	**0.33 - 18**	**9.2E+00**	**6.5E-02**	**7.8E+00 N**	**6.80E-01**	**SSL**	**YES**	**ASL**
	131-11-3	Dimethyl phthalate	2.0E-03 J	5.4E-03 J	MG/KG	IS66SB400910	11/62	0.02 - 18	5.4E-03	ND	N/A			NO	NTX
	84-74-2	Di-n-butylphthalate	5.4E-01 J	5.4E-01 J	MG/KG	IS66SS150001	1/62	0.33 - 18	5.4E-01	ND	6.1E+02 N	9.2E+00	SSL	NO	BSL
	117-84-0	Di-n-octylphthalate	9.6E-02 J	9.6E-02 J	MG/KG	IS66SB400910	1/62	0.099 - 18	9.6E-02	ND	3.5E+01 C*			NO	BSL

Table 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	206-44-0	**Fluoranthene**	**2.2E-03 J**	**3.5E+02 J**	**MG/KG**	**IS66SS15P0001**	**41/62**	**0.02 - 110**	**3.5E+02**	**1.1E+00**	**2.3E+02 N**	**1.6E+02**	**SSL**	**YES**	**ASL**
	86-73-7	Fluorene	5.8E-03 L	1.4E+01 J	MG/KG	IS66SS15P0001	12/62	0.02 - 18	1.4E+01	1.5E-01	2.3E+02 N	2.7E+01	SSL	NO	BSL
	118-74-1	Hexachlorobenzene	3.5E-03 J	3.5E-03 J	MG/KG	IS66SB400910	1/62	0.02 - 18	3.5E-03	ND	3.0E-01 C	5.30E-04	SSL	NO	BSL
	77-47-4	Hexachlorocyclopentadiene	3.9E-03 L	5.3E-03 J	MG/KG	IS66SB400910	3/62	0.02 - 18	5.3E-03	ND	3.7E+01 N	6.8E-01	SSL	NO	BSL
	193-39-5	**Indeno(1,2,3-cd)pyrene**	**2.0E-03 J**	**1.2E+02 J**	**MG/KG**	**IS66SS15P0001**	**35/62**	**0.02 - 18**	**1.2E+02**	**1.0E-01**	**1.5E-01 C**	**1.2E-01**	**SSL**	**YES**	**ASL**
	91-20-3	**Naphthalene**	**4.5E-02 L**	**6.1E+00 J**	**MG/KG**	**IS66SS15P0001**	**7/62**	**0.02 - 18**	**6.1E+00**	**1.1E-01**	**3.6E+00 C***	**4.7E-04**	**SSL**	**YES**	**ASL**
	85-01-8	Phenanthrene	2.0E-03 J	2.1E+02 J	MG/KG	IS66SS15P0001	39/62	0.02 - 110	2.1E+02	1.1E+00	1.7E+03 N	3.6E+02	SSL	NO	BSL
	108-95-2	Phenol	8.6E-03 J	8.6E-03 J	MG/KG	IS66SB400910	1/62	0.099 - 18	8.6E-03	ND	1.8E+03 N	6.3E+00	SSL	NO	BSL
	129-00-0	**Pyrene**	**2.7E-03 J**	**2.8E+02 J**	**MG/KG**	**IS66SS15P0001**	**39/62**	**0.02 - 110**	**2.8E+02**	**8.8E-01**	**1.7E+02 N**	**1.2E+02**	**SSL**	**YES**	**ASL**
	72-54-8	**4,4'-DDD**	**6.8E-04 J**	**8.3E+01**	**MG/KG**	**IS66SB040912**	**16/62**	**0.0031 - 6.1**	**8.3E+01**	**ND**	**2.0E+00 C**	**6.6E-02**	**SSL**	**YES**	**ASL**
	72-55-9	4,4'-DDE	2.2E-04 J	2.8E-01 J	MG/KG	IS66SB040912	34/62	0.0031 - 0.31	2.8E-01	1.0E-02	1.4E+00 C	4.7E-02	SSL	NO	BSL
	50-29-3	4,4'-DDT	6.0E-04 J	6.2E-01	MG/KG	IS66SB040912	31/62	0.0031 - 0.31	6.2E-01	9.4E-03	1.7E+00 C*	6.7E-02	SSL	NO	BSL
	309-00-2	Aldrin	1.2E-02 J	1.2E-02 J	MG/KG	IS66SS15P0001	1/62	0.0016 - 0.16	1.2E-02	ND	2.9E-02 C*	6.5E-04	SSL	NO	BSL
	319-84-6	alpha-BHC	7.7E-04 J	4.0E-03 J	MG/KG	IS66SB070103	3/62	0.0016 - 0.16	4.0E-03	ND	7.7E-02 C	6.2E-05	SSL	NO	BSL
	5103-71-9	alpha-Chlordane	6.3E-04 J	2.3E-02 J	MG/KG	IS66SS050001	10/62	0.0016 - 0.16	2.3E-02	ND	1.6E+00 C*	1.30E-02	SSL	NO	BSL
	319-85-7	beta-BHC	2.6E-04 J	9.6E-03 J	MG/KG	IS66SS150001	16/62	0.0016 - 0.16	9.6E-03	ND	2.7E-01 C	2.2E-04	SSL	NO	BSL
	319-86-8	delta-BHC	5.3E-04 J	5.3E-04 J	MG/KG	IS66SS050001	1/62	0.0016 - 0.16	5.3E-04	ND	2.7E-01 C	2.2E-04	SSL	NO	BSL
	60-57-1	**Dieldrin**	**7.3E-04 J**	**7.1E-02 J**	**MG/KG**	**IS66SS410001**	**18/62**	**0.0031 - 0.31**	**7.1E-02**	**ND**	**3.0E-02 C**	**1.7E-04**	**SSL**	**YES**	**ASL**
	959-98-8	Endosulfan I	4.2E-04 J	1.5E-02 J	MG/KG	IS66SS15P0001	9/62	0.0016 - 0.16	1.5E-02	ND	3.7E+01 N	3.0E+00	SSL	NO	BSL
	33213-65-9	Endosulfan II	1.2E-03 J	2.3E-02 J	MG/KG	IS66SS150001	8/62	0.0031 - 0.31	2.3E-02	ND	3.7E+01 N	3.0E+00	SSL	NO	BSL
	1031-07-8	Endosulfan sulfate	2.2E-03 J	3.8E-02 J	MG/KG	IS66SS150001	6/62	0.0031 - 0.31	3.8E-02	ND	3.7E+01 N	3.0E+00	SSL	NO	BSL
	72-20-8	Endrin	8.0E-04 J	1.2E-03 J	MG/KG	IS66SS120001	3/62	0.0031 - 0.31	1.2E-03	ND	1.8E+00 N	4.4E-01	SSL	NO	BSL
	7421-93-4	Endrin aldehyde	1.1E-03 J	6.2E-02 J	MG/KG	IS66SS15P0001	11/62	0.0031 - 0.31	6.2E-02	ND	1.8E+00 N	4.4E-01	SSL	NO	BSL
	53494-70-5	Endrin ketone	1.1E-03 J	9.6E-02 J	MG/KG	IS66SS15P0001	13/62	0.0031 - 0.31	9.6E-02	ND	1.8E+00 N	4.4E-01	SSL	NO	BSL
	58-89-9	gamma-BHC (Lindane)	3.5E-04 J	3.5E-04 J	MG/KG	IS66SS42P0001	1/62	0.0016 - 0.16	3.5E-04	ND	5.2E-01 C*	3.6E-04	SSL	NO	BSL
	5103-74-2	gamma-Chlordane	2.8E-04 J	2.4E-01 J	MG/KG	IS66SB040912	16/62	0.0016 - 0.16	2.4E-01	ND	1.6E+00 C*	1.30E-02	SSL	NO	BSL
	76-44-8	Heptachlor	8.4E-04 J	9.5E-04 J	MG/KG	IS66SS020001	2/62	0.0016 - 0.16	9.5E-04	ND	1.1E-01 C	1.2E-03	SSL	NO	BSL
	1024-57-3	**Heptachlor epoxide**	**6.2E-04 J**	**2.1E-01 J**	**MG/KG**	**IS66SB040912**	**6/62**	**0.0016 - 0.16**	**2.1E-01**	**ND**	**5.3E-02 C***	**1.5E-04**	**SSL**	**YES**	**ASL**
	72-43-5	Methoxychlor	8.1E-03 J	2.3E-01 J	MG/KG	IS66SS150001	10/62	0.016 - 1.6	2.3E-01	ND	3.1E+01 N	9.9E+00	SSL	NO	BSL
	TOTALTEQ	**2,3,7,8-TCDD TEQ**	**9.7E-08**	**6.1E-06**	**MG/KG**	**IS66SS390001**	**36/36**	**See Table 2.6.A**	**6.1E-06**	**ND**	**4.5E-06 C***			**YES**	**ASL**
	55-63-0	**Nitroglycerin**	**1.9E+00**	**1.9E+00**	**MG/KG**	**IS66SS310001**	**1/62**	**0.66 - 4**	**1.9E+00**	**ND**	**6.1E-01 N**	**1.6E-03**	**SSL**	**YES**	**ASL**
	14797-73-0	Perchlorate	2.9E-04 J	1.8E-02 J	MG/KG	IS66SS070001	42/62	0.0023 - 0.007	1.8E-02	ND	5.5E+00 N	1.0E+01	SSL	NO	BSL
	7429-90-5	Aluminum	2.7E+03	1.8E+04	MG/KG	IS66SB221112 : IS66SS410001	62/62	17 - 97.1	1.8E+04	2.0E+04	7.7E+03 N	5.5E+04	SSL	YES	ASL
	7440-36-0	Antimony	9.0E-02 J	2.8E-01 J	MG/KG	IS66SB251011	3/59	0.46 - 29.1	2.8E-01	ND	3.1E+00 N	6.6E-01	SSL	NO	BSL
	7440-38-2	**Arsenic**	**1.2E+00 J**	**1.1E+02**	**MG/KG**	**IS66SS140001**	**55/62**	**0.29 - 4.9**	**1.1E+02**	**1.5E+01**	**3.9E-01 C***	**1.3E-03**	**SSL**	**YES**	**ASL**
	7440-39-3	Barium	1.2E+01	2.1E+02	MG/KG	IS66SS15P0001	62/62	0.29 - 97.1	2.1E+02	8.0E+01	1.5E+03 N	3.0E+02	SSL	NO	BSL
	7440-41-7	Beryllium	2.2E-01 J	2.9E+00	MG/KG	IS66SS110001	43/62	0.29 - 2.4	2.9E+00	1.1E+00	1.6E+01 N	5.8E+01	SSL	NO	BSL
	7440-43-9	Cadmium	2.3E-01 J	1.6E+00 J	MG/KG	IS66SB05P0812	5/62	0.58 - 4.1	1.6E+00	2.5E-03	7.0E+00 N	1.4E+00	SSL	NO	BSL
	7440-70-2	Calcium	4.0E+01	2.3E+04	MG/KG	IS66SB030306	62/62	5.8 - 2430	2.3E+04	2.1E+03	N/A			NO	NUT
	7440-47-3	**Chromium**	**4.4E+00**	**5.6E+01 J**	**MG/KG**	**IS66SB320809**	**62/62**	**0.29 - 4.9**	**5.6E+01**	**3.3E+01**	**2.9E-01 C**	**8.3E-04**	**SSL**	**YES**	**ASL**
	7440-48-4	**Cobalt**	**9.4E-01**	**1.8E+01 J**	**MG/KG**	**IS66SS110001**	**62/62**	**0.058 - 24.3**	**1.8E+01**	**2.2E+01**	**2.3E+00 N**	**4.9E-01**	**SSL**	**YES**	**ASL**
	7440-50-8	Copper	4.4E+00	6.0E+01	MG/KG	IS66SS15P0001	62/62	1.4 - 12.1	6.0E+01	2.0E+01	3.1E+02 N	5.1E+01	SSL	NO	BSL
	57-12-5	Cyanide	8.3E-02 J	5.7E-01 J	MG/KG	IS66SS210001	11/62	0.5 - 1.2	5.7E-01	7.3E-01	1.6E+02 N	7.4E+00	SSL	NO	BSL
	7439-89-6	**Iron**	**2.5E+03**	**7.3E+04 J**	**MG/KG**	**IS66SB320809**	**62/62**	**5.8 - 48.5**	**7.3E+04**	**3.9E+04**	**5.5E+03 N**	**6.4E+02**	**SSL**	**YES**	**ASL**
	7439-92-1	**Lead**	**4.3E+00**	**1.4E+03 J**	**MG/KG**	**IS66SB05P0812**	**62/62**	**0.29 - 2.1**	**1.4E+03**	**6.3E+01**	**4.0E+02 N**			**YES**	**ASL**
	7439-95-4	Magnesium	1.8E+02	2.8E+03	MG/KG	IS66SB311415	61/62	5.8 - 2430	2.8E+03	1.6E+03	N/A			NO	NUT
	7439-96-5	**Manganese**	**1.1E+01**	**5.2E+02**	**MG/KG**	**IS66SS150001**	**62/62**	**0.29 - 7.3**	**5.2E+02**	**1.4E+03**	**1.8E+02 N**	**5.70E+01**	**SSL**	**YES**	**ASL**
	7439-97-6	**Mercury**	**4.0E-03 J**	**2.2E+01 J**	**MG/KG**	**IS66SS200001**	**41/62**	**0.026 - 0.48**	**2.2E+01**	**1.6E-01**	**2.3E+00 N**	**3.0E-02**	**SSL**	**YES**	**ASL**

Table 2.6
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7440-02-0	Nickel	2.5E+00 J	9.0E+01	MG/KG	IS66SS020001	62/62	2.3 - 19.4	9.0E+01	1.5E+01	1.5E+02 N	4.8E+01	SSL	NO	BSL
	7440-09-7	Potassium	2.9E+02 J	1.4E+03	MG/KG	IS66SB251011	62/62	58 - 2430	1.4E+03	1.5E+03	N/A			NO	NUT
	7782-49-2	Selenium	9.0E-02 J	3.4E+00	MG/KG	IS66SS150001	40/62	0.29 - 2.4	3.4E+00	1.2E+00	3.9E+01 N	9.5E-01	SSL	NO	BSL
	7440-22-4	Silver	1.0E-02 J	5.5E-01 J	MG/KG	IS66SS200001	41/62	0.058 - 4.9	5.5E-01	ND	3.9E+01 N	1.6E+00	SSL	NO	BSL
	7440-23-5	Sodium	2.9E+01 J	2.5E+02	MG/KG	IS66SB251011	26/62	58 - 2430	2.5E+02	1.2E-01	N/A			NO	NUT
	7440-28-0	Thallium	6.0E-02 J	3.2E-01	MG/KG	IS66SS340001	36/62	0.12 - 4.9	3.2E-01	2.3E-03	N/A			NO	NTX
	7440-62-2	**Vanadium**	**1.1E+01**	**1.7E+02 J**	**MG/KG**	**IS66SB050812**	**62/62**	**0.29 - 24.3**	**1.7E+02**	**5.3E+01**	**3.9E+01 N**	**2.6E+00**	**SSL**	**YES**	**ASL**
	7440-66-6	Zinc	6.0E+00	4.3E+02 J	MG/KG	IS66SB05P0812	62/62	1.4 - 9.7	4.3E+02	3.8E+01	2.3E+03 N	6.8E+02	SSL	NO	BSL

* Surface soil & subsurface soil combined
[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Values are 95% UTL from Background Soil Investigation Report (Tetra Tech, 2002), Table 4-1.
[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Soil.
[Online]. Available: Sites.http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for p-Cresol used as surrogate for 3- and 4-methylphenol.
RSL value for Acenaphthene used as surrogate for Acenaphthylene.
RSL value for pyrene used as surrogate for benzo(g,h,i)perylene.
RSL value for anthracene used as surrogate for phenanthrene.
RSL value for bis(2-Ethylhexyl)phthalate used as surrogate for Di-n-octylphthalate.
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities, USEPA, July 14, 1994.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.
RSL value for endosulfan used as surrogate for endosulfan I, endosulfan II, and endosulfan sulfate.
RSL value for endrin used as surrogate for endrin aldehyde and endrin ketone.
[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
C* = where: N RSL < 100X C RSL
N/A = Not applicable
ND = Not detected
SSL = Soil Screening Level for Protection of Groundwater, from RSL Table
S = Concentration exceeds Csat, used Csat as screening value
MG/KG = milligrams per kilogram
C** = where: N RSL < 10X C RSL

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SB221112			IS66SB22P1112			IS66SS220001			IS66SS22P0001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	3.3E-06	U		2.9E-06	U		**1.4E-06**	**J**	1.4E-08	**5.8E-07**	**J**	5.8E-09
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**2.7E-05**		2.7E-07	**1.8E-05**		1.8E-07	**1.3E-05**		1.3E-07	**8.6E-06**		8.6E-08
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	3.3E-06	U		2.9E-06	U		2.7E-06	U		3.2E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		2.9E-06	U		**6.6E-07**	**J**	6.6E-08	**2.4E-07**	**J**	2.4E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.3E-06	U		2.9E-06	U		**2.2E-07**	**J**	2.2E-08	3.2E-06	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		2.9E-06	U		**2.1E-07**	**X**		3.2E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.1E-06**	**J**	1.1E-07	**5.4E-07**	**J**	5.4E-08	**5.2E-07**	**J**	5.2E-08	3.2E-06	U	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		2.9E-06	U		2.7E-06	U		3.2E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.2E-06**	**X**		**6.0E-07**	**J**	6.0E-08	**2.9E-07**	**X**		3.2E-06	U	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.3E-06	U		2.9E-06	U		2.7E-06	U		3.2E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	3.3E-06	U		2.9E-06	U		2.7E-06	U		3.2E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.3E-06	U		2.9E-06	U		**2.8E-07**	**X**		3.2E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.3E-06	U		2.9E-06	U		2.7E-06	U		3.2E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.3E-06	U		1.2E-06	U		1.1E-06	U		1.3E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.3E-06	U		1.2E-06	U		**7.0E-07**	**X**		1.3E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	6.5E-06	U		5.8E-06	U		**2.4E-06**	**J**	7.3E-10	**1.3E-06**	**J**	3.9E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**2.5E-04**		7.4E-08	**1.9E-04**		5.7E-08	**8.0E-04**		2.4E-07	**7.0E-04**		2.1E-07
Total 2,3,7,8-TCDD equivalents					4.5E-07			3.5E-07			5.2E-07			3.3E-07

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
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SampleID			IS66SB231516			IS66SS230001			IS66SB251011			IS66SS250001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	2.8E-06	U		**2.8E-06**		2.8E-08	3.1E-06	U		**1.7E-06**	**J**	1.7E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**1.1E-04**		1.1E-06	**2.1E-05**		2.1E-07	**3.0E-05**		3.0E-07	**1.3E-05**		1.3E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.8E-06	U		**2.7E-07**	**J**	2.7E-09	3.1E-06	U		3.7E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**1.0E-06**	**J**	1.0E-07	3.1E-06	U		**5.9E-07**	**J**	5.9E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.8E-06	U		**2.5E-07**	**J**	2.5E-08	3.1E-06	U		**3.0E-07**	**J**	3.0E-08
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**4.0E-07**	**J**	4.0E-08	3.1E-06	U		**2.6E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.5E-06**	**J**	1.5E-07	**7.0E-07**	**J**	7.0E-08	3.1E-06	U		**5.3E-07**	**J**	5.3E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		2.7E-06	U		3.1E-06	U		3.7E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**4.7E-06**		4.7E-07	**5.4E-07**	**X**		**1.3E-06**	**J**	1.3E-07	**5.8E-07**	**X**	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.8E-06	U		**3.8E-07**	**J**	1.1E-08	3.1E-06	U		3.7E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.8E-06	U		2.7E-06	U		3.1E-06	U		3.7E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**5.9E-07**	**J**	5.9E-08	3.1E-06	U		**3.9E-07**	**X**	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.8E-06	U		**6.1E-07**	**J**	1.8E-07	3.1E-06	U		3.7E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	**8.5E-07**	**J**	8.5E-07	1.1E-06	U		1.2E-06	U		1.5E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		**7.8E-07**	**J**	7.8E-08	1.2E-06	U		1.5E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	5.5E-06	U		**6.7E-06**		2.0E-09	6.1E-06	U		**4.6E-06**	**J**	1.4E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**4.0E-03**	**J**	1.2E-06	**2.0E-03**	**J**	5.9E-07	**6.5E-04**		2.0E-07	**4.9E-04**		1.5E-07
Total 2,3,7,8-TCDD equivalents					3.8E-06			1.4E-06			6.3E-07			4.3E-07

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
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NSF-IH, Indian Head, Maryland

SampleID			IS66SB270910			IS66SS270001			IS66SB280607			IS66SS280001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	**1.4E-07**	**J**	1.4E-09	**4.1E-06**		4.1E-08	**2.3E-07**	**J**	2.3E-09	**1.9E-06**	**J**	1.9E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**1.5E-04**		1.5E-06	**3.6E-05**		3.6E-07	**1.8E-05**		1.8E-07	**3.8E-05**	**K**	3.8E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.8E-06	U		**3.8E-07**	**J**	3.8E-09	2.6E-06	U		**2.1E-07**	**J**	2.1E-09
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**1.7E-06**	**J**	1.7E-07	**9.8E-08**	**J**	9.8E-09	**4.3E-07**	**J**	4.3E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**4.9E-07**	**J**	4.9E-08	**7.7E-07**	**J**	7.7E-08	**1.6E-07**	**X**		**4.3E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**7.0E-07**	**J**	7.0E-08	2.6E-06	U		**1.6E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**2.2E-06**	**J**	2.2E-07	**1.5E-06**	**J**	1.5E-07	**2.3E-07**	**X**		**7.0E-07**	**J**	7.0E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		2.3E-06	U		2.6E-06	U		2.7E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**3.5E-06**	**X**		**1.5E-06**	**J**	1.5E-07	**4.1E-07**	**J**	4.1E-08	**7.9E-07**	**J**	7.9E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.8E-06	U		**6.6E-07**	**X**		2.6E-06	U		2.7E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.8E-06	U		**4.5E-07**	**X**		2.6E-06	U		**1.2E-07**	**X**	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**7.6E-07**	**J**	7.6E-08	2.6E-06	U		**1.3E-07**	**X**	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.8E-06	U		**9.2E-07**	**J**	2.8E-07	2.6E-06	U		2.7E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U		9.3E-07	U		1.0E-06	U		1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		**9.5E-07**		9.5E-08	1.0E-06	U		1.1E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	**8.4E-07**	**J**	2.5E-10	**9.5E-06**		2.9E-09	6.1E-07	B		**4.6E-06**	**J**	1.4E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**5.0E-03**	**J**	1.5E-06	**1.8E-03**	**J**	5.5E-07	**2.6E-03**	**K**	7.9E-07	**3.5E-03**	**K**	1.1E-06
Total 2,3,7,8-TCDD equivalents					3.3E-06			2.0E-06			1.0E-06			1.6E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
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SampleID			IS66SB311415			IS66SS310001			IS66SB320809			IS66SB32P0809		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	2.9E-06	U		**2.2E-06**	**J**	2.2E-08	2.7E-06	U		3.1E-06	U	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**1.2E-05**		1.2E-07	**2.2E-05**		2.2E-07	**1.3E-05**	**J**	1.3E-07	**1.9E-05**	**J**	1.9E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.9E-06	U		**1.5E-07**	**X**		2.7E-06	U		3.1E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.9E-06	U		**1.0E-06**	**J**	1.0E-07	2.7E-06	U		3.1E-06	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.9E-06	U		**3.7E-07**	**J**	3.7E-08	2.7E-06	U		3.1E-06	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.9E-06	U		**3.9E-07**	**J**	3.9E-08	2.7E-06	U		3.1E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	2.9E-06	U		**6.4E-07**	**J**	6.4E-08	**2.2E-07**	**J**	2.2E-08	**3.2E-07**	**J**	3.2E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.9E-06	U		2.7E-06	U		2.7E-06	U		3.1E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**2.0E-06**	**J**	2.0E-07	**9.9E-07**	**J**	9.9E-08	**5.7E-07**	**J**	5.7E-08	**6.2E-07**	**J**	6.2E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.9E-06	U		**4.2E-07**	**J**	1.3E-08	2.7E-06	U		3.1E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.9E-06	U		**2.2E-07**	**X**		2.7E-06	U		3.1E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.9E-06	U		**3.9E-07**	**X**		2.7E-06	U		3.1E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.9E-06	U		**4.6E-07**	**J**	1.4E-07	2.7E-06	U		3.1E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U		1.1E-06	U		1.1E-06	U		1.2E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		**8.3E-07**	**J**	8.3E-08	1.1E-06	U		1.2E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	5.7E-06	U		4.0E-06	B		5.5E-06	U		6.1E-06	U	
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**6.2E-04**	**K**	1.8E-07	**1.2E-03**	**K**	3.5E-07	**6.3E-04**	**J**	1.9E-07	**1.2E-03**	**J**	3.6E-07
Total 2,3,7,8-TCDD equivalents					5.0E-07			1.2E-06			4.0E-07			6.4E-07

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SS320001			IS66SS32P0001			IS66SB331415			IS66SS330001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	9.4E-08	B		3.0E-07	B	3.0E-09	3.2E-06	U		**1.2E-06**	**J**	1.2E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**6.5E-05**	**J**	6.5E-07	**2.2E-05**	**J**	2.2E-07	**7.4E-06**		7.4E-08	**2.5E-05**		2.5E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		2.2E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		**1.3E-07**	**J**	1.3E-08	3.2E-06	U		**4.4E-07**	**J**	4.4E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**2.3E-07**	**J**	2.3E-08	2.5E-06	U		3.2E-06	U		**2.7E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		**2.2E-07**	**J**	2.2E-08
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**6.9E-07**	**J**	6.9E-08	**3.1E-07**	**J**	3.1E-08	3.2E-06	U		**4.9E-07**	**J**	4.9E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		2.2E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**8.9E-07**	**J**	8.9E-08	**3.8E-07**	**J**	3.8E-08	3.2E-06	U		**6.3E-07**	**J**	6.3E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		**1.5E-07**	**X**	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		**1.7E-07**	**J**	1.7E-07
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		**1.9E-07**	**X**	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.7E-06	U		2.5E-06	U		3.2E-06	U		**2.7E-07**	**J**	8.0E-08
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U		1.0E-06	U		1.3E-06	U		8.6E-07	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		1.0E-06	U		1.3E-06	U		**5.2E-07**	**J**	5.2E-08
Octachlorodibenzofuran	0.0003	MG/KG	**6.4E-07**	**J**	1.9E-10	**7.0E-07**	**J**	2.1E-10	6.4E-06	U		**2.1E-06**	**J**	6.2E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**1.3E-02**	**J**	3.8E-06	**4.3E-03**	**J**	1.3E-06	**5.4E-04**	**K**	1.6E-07	**4.3E-03**	**K**	1.3E-06
Total 2,3,7,8-TCDD equivalents					4.6E-06			1.6E-06			2.4E-07			2.0E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SB340809			IS66SS340001			IS66SB351415			IS66SS350001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	**1.9E-07**	**J**	1.9E-09	**1.1E-05**		1.1E-07	2.8E-06	U		**1.6E-06**	**J**	1.6E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**6.5E-05**		6.5E-07	**5.6E-05**		5.6E-07	**5.7E-05**	**K**	5.7E-07	**2.3E-05**		2.3E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	3.1E-06	U		**7.6E-07**	**J**	7.6E-09	2.8E-06	U		2.8E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.1E-06	U		**1.0E-06**	**J**	1.0E-07	2.8E-06	U		**6.5E-07**	**J**	6.5E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**5.0E-07**	**J**	5.0E-08	**8.1E-07**	**J**	8.1E-08	2.8E-06	U		**3.1E-07**	**J**	3.1E-08
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.1E-06	U		**7.5E-07**	**J**	7.5E-08	2.8E-06	U		**2.6E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**8.9E-07**	**J**	8.9E-08	**1.8E-06**	**J**	1.8E-07	**5.7E-07**	**X**		**4.6E-07**	**X**	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.1E-06	U		2.6E-06	U		2.8E-06	U		2.8E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**9.4E-07**	**X**		**1.8E-06**	**J**	1.8E-07	**1.3E-06**	**J**	1.3E-07	**7.0E-07**	**J**	7.0E-08
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.1E-06	U		**2.9E-07**	**J**	8.6E-09	2.8E-06	U		2.8E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	**3.3E-07**	**J**	3.3E-07	**4.6E-07**	**J**	4.6E-07	2.8E-06	U		**2.3E-07**	**J**	2.3E-07
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.1E-06	U		**9.2E-07**	**J**	9.2E-08	2.8E-06	U		**3.4E-07**	**J**	3.4E-08
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.1E-06	U		**3.9E-07**	**X**		2.8E-06	U		**3.4E-07**	**J**	1.0E-07
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.2E-06	U		1.1E-06	U		1.1E-06	U		1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.2E-06	U		1.1E-06	U		1.1E-06	U		**5.8E-07**	**J**	5.8E-08
Octachlorodibenzofuran	0.0003	MG/KG	3.7E-07	B	1.1E-10	**4.1E-05**		1.2E-08	**2.6E-07**	**X**		**3.1E-06**	**J**	9.2E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**1.3E-02**	**K**	4.0E-06	**2.4E-03**	**K**	7.1E-07	**2.6E-03**	**J**	7.8E-07	**2.4E-03**	**J**	7.1E-07
Total 2,3,7,8-TCDD equivalents					5.1E-06			2.6E-06			1.5E-06			1.5E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SB360809			IS66SS360001			IS66SB371314			IS66SS370001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	3.0E-06	U		**4.6E-06**		4.6E-08	2.7E-06	U		**1.4E-07**	**J**	1.4E-09
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**1.7E-05**		1.7E-07	**6.7E-05**		6.7E-07	**4.9E-06**		4.9E-08	**3.6E-05**		3.6E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	3.0E-06	U		**3.3E-07**	**J**	3.3E-09	2.7E-06	U		2.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**1.2E-06**	**J**	1.2E-07	2.7E-06	U		2.4E-06	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.0E-06	U		**8.3E-07**	**J**	8.3E-08	2.7E-06	U		2.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**5.0E-07**	**J**	5.0E-08	2.7E-06	U		2.4E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**3.7E-07**	**J**	3.7E-08	**1.6E-06**	**J**	1.6E-07	2.7E-06	U		**1.8E-07**	**X**	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		2.7E-06	U		2.7E-06	U		2.4E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.3E-06**	**J**	1.3E-07	**1.6E-06**	**J**	1.6E-07	2.7E-06	U		2.4E-06	U	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.0E-06	U		**4.0E-07**	**J**	1.2E-08	2.7E-06	U		2.4E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	3.0E-06	U		**3.9E-07**	**J**	3.9E-07	2.7E-06	U		2.4E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**4.6E-07**	**J**	4.6E-08	2.7E-06	U		2.4E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.0E-06	U		**4.4E-07**	**J**	1.3E-07	2.7E-06	U		2.4E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.2E-06	U		1.1E-06	U		1.1E-06	U		9.6E-07	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.2E-06	U		**6.6E-07**	**X**		1.1E-06	U		9.6E-07	UJ	
Octachlorodibenzofuran	0.0003	MG/KG	6.1E-06	U		**1.0E-05**		3.1E-09	5.3E-06	U		4.8E-06	U	
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**4.7E-04**	**K**	1.4E-07	**4.4E-03**	**K**	1.3E-06	**2.8E-04**	**K**	8.3E-08	**1.2E-02**	**K**	3.7E-06
Total 2,3,7,8-TCDD equivalents					4.8E-07			3.2E-06			1.3E-07			4.1E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SB381213			IS66SS380001			IS66SB391213			IS66SS390001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	2.8E-06	U		**9.6E-06**	**J**	9.6E-08	2.7E-06	U		**1.6E-07**	**X**	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**7.4E-05**		7.4E-07	**1.2E-04**	**J**	1.2E-06	**4.6E-06**		4.6E-08	**7.7E-05**		7.7E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.8E-06	U		**7.0E-07**	**J**	7.0E-09	2.7E-06	U		2.7E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**1.4E-06**	**J**	1.4E-07	2.7E-06	U		2.7E-06	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**5.8E-07**	**J**	5.8E-08	**1.6E-06**	**J**	1.6E-07	2.7E-06	U		**4.1E-07**	**J**	4.1E-08
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**6.5E-07**	**J**	6.5E-08	2.7E-06	U		2.7E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.1E-06**	**J**	1.1E-07	**2.9E-06**	**J**	2.9E-07	2.7E-06	U		**6.9E-07**	**J**	6.9E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		2.5E-06	UJ		2.7E-06	U		2.7E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.6E-06**	**J**	1.6E-07	**3.9E-06**	**J**	3.9E-07	2.7E-06	U		**1.4E-06**	**J**	1.4E-07
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	2.8E-06	U		**3.8E-07**	**J**	1.1E-08	2.7E-06	U		2.7E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	**1.5E-07**	**X**		**8.8E-07**	**J**	8.8E-07	2.7E-06	U		2.7E-06	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	2.8E-06	U		**6.2E-07**	**J**	6.2E-08	2.7E-06	U		2.7E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	2.8E-06	U		**3.5E-07**	**X**		2.7E-06	U		2.7E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	**3.5E-07**	**X**		**1.4E-07**	**X**		1.1E-06	U		1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U		**4.4E-07**	**J**	4.4E-08	1.1E-06	U		1.1E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	5.5E-06	U		**2.1E-05**		6.2E-09	5.4E-06	U		5.3E-07	B	1.6E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**3.5E-03**	**J**	1.0E-06	**3.4E-03**	**J**	1.0E-06	**2.9E-04**	**K**	8.6E-08	**1.7E-02**	**K**	5.1E-06
Total 2,3,7,8-TCDD equivalents					2.1E-06			4.4E-06			1.3E-07			6.1E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SB400910			IS66SS400001			IS66SB410607			IS66SS410001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	3.0E-06	U		**5.9E-06**		5.9E-08	**1.7E-06**	**J**	1.7E-08	**1.1E-06**	**X**	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**4.0E-06**		4.0E-08	**5.7E-05**		5.7E-07	**3.0E-05**		3.0E-07	**5.5E-05**		5.5E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	3.0E-06	U		**3.0E-07**	**X**		3.3E-06	U		2.6E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**8.0E-07**	**X**		**2.4E-07**	**J**	2.4E-08	**1.8E-07**	**X**	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.0E-06	U		**5.7E-07**	**X**		**3.3E-07**	**X**		**2.2E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**3.0E-07**	**X**		3.3E-06	U		2.6E-06	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	3.0E-06	U		**1.5E-06**	**J**	1.5E-07	**6.2E-07**	**J**	6.2E-08	**8.6E-07**	**X**	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		3.2E-06	U		3.3E-06	U		2.6E-06	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.4E-07**	**X**		**1.4E-06**	**J**	1.4E-07	**4.9E-07**	**X**		**5.3E-07**	**X**	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	3.0E-06	U		3.2E-06	U		3.3E-06	U		2.6E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	3.0E-06	U		**3.4E-07**	**X**		**1.8E-07**	**X**		**1.5E-07**	**X**	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	3.0E-06	U		**4.5E-07**	**J**	4.5E-08	3.3E-06	U		2.6E-06	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	3.0E-06	U		**2.4E-07**	**X**		3.3E-06	U		2.6E-06	U	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.2E-06	U		1.3E-06	U		1.3E-06	U		1.0E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.2E-06	U		**5.6E-07**	**J**	5.6E-08	**3.8E-07**	**J**	3.8E-08	1.0E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	6.1E-06	U		**1.7E-05**		5.1E-09	**5.2E-06**	**J**	1.6E-09	**4.1E-06**	**J**	1.2E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**1.9E-04**		5.7E-08	**3.6E-03**	**J**	1.1E-06	**1.8E-03**	**J**	5.3E-07	**2.7E-03**	**J**	8.1E-07
Total 2,3,7,8-TCDD equivalents					9.7E-08			2.1E-06			9.7E-07			1.4E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SS420001			IS66SS42P0001			IS66SS430001			IS66SS440001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters														
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	**2.2E-06**	**J**	2.2E-08	**2.5E-06**	**J**	2.5E-08	**1.6E-06**	**J**	1.6E-08	**1.9E-06**	**J**	1.9E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**3.3E-05**		3.3E-07	**3.8E-05**		3.8E-07	**3.7E-05**		3.7E-07	**4.4E-05**		4.4E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	2.4E-06	U		2.8E-06	U		2.4E-06	U		2.5E-06	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**7.7E-07**	**J**	7.7E-08	**1.0E-06**	**J**	1.0E-07	**6.5E-07**	**J**	6.5E-08	**6.1E-07**	**J**	6.1E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**4.0E-07**	**J**	4.0E-08	**5.1E-07**	**X**		**3.2E-07**	**X**		**2.5E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**2.6E-07**	**X**		**3.5E-07**	**J**	3.5E-08	**2.3E-07**	**X**		**2.0E-07**	**J**	2.0E-08
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**6.9E-07**	**J**	6.9E-08	**9.9E-07**	**J**	9.9E-08	**6.2E-07**	**J**	6.2E-08	**7.1E-07**	**J**	7.1E-08
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	2.4E-06	U		**9.8E-08**	**X**		2.4E-06	U		**6.7E-08**	**J**	6.7E-09
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**8.0E-07**	**X**		**1.2E-06**	**X**		**8.0E-07**	**X**		**5.5E-07**	**X**	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	**2.6E-07**	**X**		**4.1E-07**	**J**	1.2E-08	**2.8E-07**	**J**	8.3E-09	2.5E-06	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	**2.0E-07**	**J**	2.0E-07	**2.8E-07**	**J**	2.8E-07	**1.6E-07**	**X**		**1.5E-07**	**X**	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**3.8E-07**	**J**	3.8E-08	**6.1E-07**	**J**	6.1E-08	**1.1E-07**	**J**	1.1E-08	**3.1E-07**	**J**	3.1E-08
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	**4.0E-07**	**X**		**4.4E-07**	**X**		**2.7E-07**	**X**		**3.2E-07**	**J**	9.5E-08
2,3,7,8-TCDD (dioxin)	1	MG/KG	9.6E-07	U		1.1E-06	U		9.7E-07	U		1.0E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	**3.6E-07**	**X**		**4.5E-07**	**J**	4.5E-08	9.7E-07	U		1.0E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	**3.7E-06**	**J**	1.1E-09	**4.2E-06**	**J**	1.3E-09	**3.0E-06**	**J**	8.9E-10	**3.6E-06**	**J**	1.1E-09
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**3.9E-03**	**J**	1.2E-06	**3.4E-03**	**J**	1.0E-06	**4.9E-03**	**J**	1.5E-06	**4.6E-03**	**J**	1.4E-06
Total 2,3,7,8-TCDD equivalents					1.9E-06			2.1E-06			2.0E-06			2.1E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.6.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Soil
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

SampleID			IS66SS450001		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other Parameters					
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	MG/KG	**2.1E-06**	**J**	2.1E-08
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	MG/KG	**9.1E-05**		9.1E-07
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	MG/KG	**1.4E-07**	**X**	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**9.6E-07**	**J**	9.6E-08
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**6.3E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**3.1E-07**	**X**	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.2E-06**	**J**	1.2E-07
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	MG/KG	**1.1E-07**	**X**	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	MG/KG	**1.5E-06**	**J**	1.5E-07
1,2,3,7,8-Pentachlorodibenzofuran	0.03	MG/KG	**3.0E-07**	**X**	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	MG/KG	**3.6E-07**	**J**	3.6E-07
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	MG/KG	**2.2E-07**	**X**	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	MG/KG	**3.9E-07**	**X**	
2,3,7,8-TCDD (dioxin)	1	MG/KG	1.1E-06	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	MG/KG	1.1E-06	U	
Octachlorodibenzofuran	0.0003	MG/KG	**3.1E-06**	**J**	9.2E-10
Octachlorodibenzo-p-dioxin	0.0003	MG/KG	**9.4E-03**	**J**	2.8E-06
Total 2,3,7,8-TCDD equivalents					4.5E-06

Minimum equivalent concentration = 9.7E-08
Maximum equivalent concentration = 6.1E-06

Table 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Emissions from Soil*	75-34-3	1,1-Dichloroethane	1.8E-03 L	1.8E-03 L	µg/m^3	IS66SB270910	1/62	0.0048 - 0.032	1.8E-03	N/A	1.5E+00 C	N/A	N/A	NO	BSL
	75-35-4	1,1-Dichloroethene	9.1E-04 J	2.3E-03 L	µg/m^3	IS66SB270910	3/62	0.0048 - 0.032	2.3E-03	N/A	2.1E+01 N	N/A	N/A	NO	BSL
	78-93-3	2-Butanone	7.7E-04 J	1.0E-03 J	µg/m^3	IS66SS310001	2/61	0.01 - 0.035	1.0E-03	N/A	5.2E+02 N	N/A	N/A	NO	BSL
	67-64-1	Acetone	5.7E-05 J	1.8E-03 J	µg/m^3	IS66SS310001	12/61	0.01 - 0.035	1.8E-03	N/A	3.2E+03 N	N/A	N/A	NO	BSL
	75-15-0	Carbon disulfide	1.2E-03 J	1.2E-03 J	µg/m^3	IS66SS370001	1/62	0.0048 - 0.032	1.2E-03	N/A	7.3E+01 N	N/A	N/A	NO	BSL
	67-66-3	Chloroform	1.8E-03 J	1.8E-03 J	µg/m^3	IS66SS22P0001	1/62	0.0048 - 0.032	1.8E-03	N/A	1.1E-01 C	N/A	N/A	NO	BSL
	100-41-4	Ethylbenzene	1.9E-02	1.9E-02	µg/m^3	IS66SB410607	1/62	0.0048 - 0.032	1.9E-02	N/A	9.7E-01 C	N/A	N/A	NO	BSL
	98-82-8	Isopropylbenzene	1.6E-08	1.6E-08	µg/m^3	IS66SB410607	1/62	0.0048 - 0.032	1.6E-08	N/A	4.2E+01 N	N/A	N/A	NO	BSL
	79-20-9	Methyl acetate	1.3E-04 J	1.3E-04 J	µg/m^3	IS66SS230001	1/62	0.0048 - 0.032	1.3E-04	N/A	N/A	N/A	N/A	NO	NTX
	100-42-5	Styrene	1.4E-03 J	1.8E-02	µg/m^3	IS66SS070001	3/62	0.0048 - 0.032	1.8E-02	N/A	1.0E+02 N	N/A	N/A	NO	BSL
	127-18-4	Tetrachloroethene	1.9E-02 J	8.4E-02 J	µg/m^3	IS66SS310001	36/62	0.0048 - 0.032	8.4E-02	N/A	4.1E-01 C	N/A	N/A	NO	BSL
	108-88-3	Toluene	8.7E-03 J	1.6E-02	µg/m^3	IS66SB22P1112	2/62	0.0048 - 0.032	1.6E-02	N/A	5.2E+02 N	N/A	N/A	NO	BSL
	1330-20-7	Xylene, total	1.9E-01	1.9E-01	µg/m^3	IS66SB410607	1/62	0.01 - 0.032	1.9E-01	N/A	1.0E+01 N	N/A	N/A	NO	BSL
	95-95-4	2,4,5-Trichlorophenol	2.0E-09 J	9.6E-09 J	µg/m^3	IS66SB400910	4/62	0.099 - 45	9.6E-09	N/A	N/A	N/A	N/A	NO	NTX
	88-06-2	2,4,6-Trichlorophenol	4.0E-09 J	1.2E-08 J	µg/m^3	IS66SB231516	13/62	0.099 - 18	1.2E-08	N/A	7.8E-01 C	N/A	N/A	NO	BSL
	120-83-2	2,4-Dichlorophenol	1.9E-09 J	1.0E-08 J	µg/m^3	IS66SB22P1112 : IS66SB231516 : IS66SS250001	8/62	0.02 - 18	1.0E-08	N/A	N/A	N/A	N/A	NO	NTX
	121-14-2	2,4-Dinitrotoluene	6.0E-09 J	6.0E-09 J	µg/m^3	IS66SB340809	1/62	0.02 - 1.2	6.0E-09	N/A	2.7E-02 C	N/A	N/A	NO	BSL
	91-57-6	2-Methylnaphthalene	9.0E-03 L	1.9E+00 J	µg/m^3	IS66SS150001	9/62	0.02 - 18	1.9E+00	N/A	N/A	N/A	N/A	NO	NTX
	m&pCRESOL	3- and 4-Methylphenol	1.0E-08 J	1.2E-08 J	µg/m^3	IS66SB251011	2/36	0.099 - 0.15	1.2E-08	N/A	6.3E+01 N	N/A	N/A	NO	BSL
	83-32-9	Acenaphthene	2.4E-02 J	2.2E+02 J	µg/m^3	IS66SS15P0001	18/62	0.02 - 18	2.2E+02	N/A	N/A	N/A	N/A	NO	NTX
	208-96-8	Acenaphthylene	1.4E-02 L	2.9E+00 J	µg/m^3	IS66SS210001	12/62	0.02 - 18	2.9E+00	N/A	N/A	N/A	N/A	NO	NTX
	98-86-2	Acetophenone	4.4E-02 J	4.4E-02 J	µg/m^3	IS66SB070103	1/62	0.33 - 18	4.4E-02	N/A	N/A	N/A	N/A	NO	NTX
	120-12-7	Anthracene	3.0E-01 J	1.3E+04 J	µg/m^3	IS66SS15P0001	30/62	0.02 - 18	1.3E+04	N/A	N/A	N/A	N/A	NO	NTX
	1912-24-9	Atrazine	1.1E-09 J	3.5E-09 J	µg/m^3	IS66SB400910	9/62	0.02 - 18	3.5E-09	N/A	N/A	N/A	N/A	NO	NTX
	56-55-3	Benzo(a)anthracene	3.5E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	44/62	0.02 - 110	1.3E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	50-32-8	Benzo(a)pyrene	3.2E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	36/62	0.02 - 110	1.3E-04	N/A	8.7E-04 C	N/A	N/A	NO	BSL
	205-99-2	Benzo(b)fluoranthene	4.4E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	40/62	0.02 - 110	1.3E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	191-24-2	Benzo(g,h,i)perylene	1.6E-09 J	6.8E-05 J	µg/m^3	IS66SS15P0001	32/62	0.02 - 18	6.8E-05	N/A	N/A	N/A	N/A	NO	NTX
	207-08-9	Benzo(k)fluoranthene	3.2E-09 J	1.1E-04 J	µg/m^3	IS66SS15P0001	32/62	0.02 - 110	1.1E-04	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	117-81-7	bis(2-Ethylhexyl)phthalate	3.7E-08 K	2.0E-05	µg/m^3	IS66SS080001	7/62	0.099 - 18	2.0E-05	N/A	1.0E+00 C	N/A	N/A	NO	BSL
	86-74-8	Carbazole	1.0E-07 J	3.3E-05 J	µg/m^3	IS66SS15P0001	8/62	0.33 - 18	3.3E-05	N/A	N/A	N/A	N/A	NO	NTX
	218-01-9	Chrysene	1.5E-09 J	1.3E-04 J	µg/m^3	IS66SS15P0001	38/62	0.02 - 110	1.3E-04	N/A	8.7E-02 C	N/A	N/A	NO	BSL
	53-70-3	Dibenz(a,h)anthracene	1.8E-09 J	3.2E-05 J	µg/m^3	IS66SS15P0001	26/62	0.02 - 18	3.2E-05	N/A	8.0E-04 C	N/A	N/A	NO	BSL
	132-64-9	Dibenzofuran	1.0E+00 J	5.4E+01 J	µg/m^3	IS66SS15P0001	5/62	0.33 - 18	5.4E+01	N/A	N/A	N/A	N/A	NO	NTX
	131-11-3	Dimethyl phthalate	1.5E-09 J	4.0E-09 J	µg/m^3	IS66SB400910	11/62	0.02 - 18	4.0E-09	N/A	N/A	N/A	N/A	NO	NTX
	84-74-2	Di-n-butylphthalate	4.0E-07 J	4.0E-07 J	µg/m^3	IS66SS150001	1/62	0.33 - 18	4.0E-07	N/A	N/A	N/A	N/A	NO	NTX

Table 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	117-84-0	Di-n-octylphthalate	7.1E-08 J	7.1E-08 J	µg/m^3	IS66SB400910	1/62	0.099 - 18	7.1E-08	N/A	1.0E+00 C	N/A	N/A	NO	BSL
	206-44-0	Fluoranthene	1.6E-09 J	2.6E-04 J	µg/m^3	IS66SS15P0001	41/62	0.02 - 110	2.6E-04	N/A	N/A	N/A	N/A	NO	NTX
	86-73-7	Fluorene	6.2E-02 L	1.5E+02 J	µg/m^3	IS66SS15P0001	12/62	0.02 - 18	1.5E+02	N/A	N/A	N/A	N/A	NO	NTX
	118-74-1	Hexachlorobenzene	2.6E-09 J	2.6E-09 J	µg/m^3	IS66SB400910	1/62	0.02 - 18	2.6E-09	N/A	5.3E-03 C	N/A	N/A	NO	BSL
	77-47-4	Hexachlorocyclopentadiene	2.9E-09 L	3.9E-09 J	µg/m^3	IS66SB400910	3/62	0.02 - 18	3.9E-09	N/A	2.1E-02 N	N/A	N/A	NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	1.5E-09 J	8.8E-05 J	µg/m^3	IS66SS15P0001	35/62	0.02 - 18	8.8E-05	N/A	8.7E-03 C	N/A	N/A	NO	BSL
	91-20-3	**Naphthalene**	**1.5E-01 L**	**2.1E+01 J**	**µg/m^3**	**IS66SS15P0001**	**7/62**	**0.02 - 18**	**2.1E+01**	**N/A**	**7.2E-02 C***	**N/A**	**N/A**	**YES**	**ASL**
	85-01-8	Phenanthrene	1.5E-09 J	1.5E-04 J	µg/m^3	IS66SS15P0001	39/62	0.02 - 110	1.5E-04	N/A	N/A	N/A	N/A	NO	NTX
	108-95-2	Phenol	6.3E-09 J	6.3E-09 J	µg/m^3	IS66SB400910	1/62	0.099 - 18	6.3E-09	N/A	2.1E+01 N	N/A	N/A	NO	BSL
	129-00-0	Pyrene	6.1E-02 J	6.4E+03 J	µg/m^3	IS66SS15P0001	39/62	0.02 - 110	6.4E+03	N/A	N/A	N/A	N/A	NO	NTX
	72-54-8	4,4'-DDD	5.0E-10 J	6.1E-05	µg/m^3	IS66SB040912	16/62	0.0031 - 6.1	6.1E-05	N/A	3.5E-02 C	N/A	N/A	NO	BSL
	72-55-9	4,4'-DDE	1.6E-10 J	2.1E-07 J	µg/m^3	IS66SB040912	34/62	0.0031 - 0.31	2.1E-07	N/A	2.5E-02 C	N/A	N/A	NO	BSL
	50-29-3	4,4'-DDT	4.4E-10 J	4.6E-07	µg/m^3	IS66SB040912	31/62	0.0031 - 0.31	4.6E-07	N/A	2.5E-02 C	N/A	N/A	NO	BSL
	309-00-2	Aldrin	8.8E-09 J	8.8E-09 J	µg/m^3	IS66SS15P0001	1/62	0.0016 - 0.16	8.8E-09	N/A	5.0E-04 C	N/A	N/A	NO	BSL
	319-84-6	alpha-BHC	5.7E-10 J	2.9E-09 J	µg/m^3	IS66SB070103	3/62	0.0016 - 0.16	2.9E-09	N/A	1.4E-03 C	N/A	N/A	NO	BSL
	5103-71-9	alpha-Chlordane	4.6E-10 J	1.7E-08 J	µg/m^3	IS66SS050001	10/62	0.0016 - 0.16	1.7E-08	N/A	2.4E-02 C*	N/A	N/A	NO	BSL
	319-85-7	beta-BHC	1.9E-10 J	7.1E-09 J	µg/m^3	IS66SS150001	16/62	0.0016 - 0.16	7.1E-09	N/A	4.6E-03 C	N/A	N/A	NO	BSL
	319-86-8	delta-BHC	3.9E-10 J	3.9E-10 J	µg/m^3	IS66SS050001	1/62	0.0016 - 0.16	3.9E-10	N/A	4.8E-03 C	N/A	N/A	NO	BSL
	60-57-1	Dieldrin	5.4E-10 J	5.2E-08 J	µg/m^3	IS66SS410001	18/62	0.0031 - 0.31	5.2E-08	N/A	5.3E-04 C	N/A	N/A	NO	BSL
	959-98-8	Endosulfan I	3.1E-10 J	1.1E-08 J	µg/m^3	IS66SS15P0001	9/62	0.0016 - 0.16	1.1E-08	N/A	N/A	N/A	N/A	NO	NTX
	33213-65-9	Endosulfan II	8.8E-10 J	1.7E-08 J	µg/m^3	IS66SS150001	8/62	0.0031 - 0.31	1.7E-08	N/A	N/A	N/A	N/A	NO	NTX
	1031-07-8	Endosulfan sulfate	1.6E-09 J	2.8E-08 J	µg/m^3	IS66SS150001	6/62	0.0031 - 0.31	2.8E-08	N/A	N/A	N/A	N/A	NO	NTX
	72-20-8	Endrin	5.9E-10 J	8.8E-10 J	µg/m^3	IS66SS120001	3/62	0.0031 - 0.31	8.8E-10	N/A	N/A	N/A	N/A	NO	NTX
	7421-93-4	Endrin aldehyde	8.1E-10 J	4.6E-08 J	µg/m^3	IS66SS15P0001	11/62	0.0031 - 0.31	4.6E-08	N/A	N/A	N/A	N/A	NO	NTX
	53494-70-5	Endrin ketone	8.1E-10 J	7.1E-08 J	µg/m^3	IS66SS15P0001	13/62	0.0031 - 0.31	7.1E-08	N/A	N/A	N/A	N/A	NO	NTX
	58-89-9	gamma-BHC (Lindane)	2.6E-10 J	2.6E-10 J	µg/m^3	IS66SS42P0001	1/62	0.0016 - 0.16	2.6E-10	N/A	7.8E-03 C	N/A	N/A	NO	BSL
	5103-74-2	gamma-Chlordane	2.1E-10 J	1.8E-07 J	µg/m^3	IS66SB040912	16/62	0.0016 - 0.16	1.8E-07	N/A	2.4E-02 C*	N/A	N/A	NO	BSL
	76-44-8	Heptachlor	6.2E-10 J	7.0E-10 J	µg/m^3	IS66SS020001	2/62	0.0016 - 0.16	7.0E-10	N/A	1.9E-03 C	N/A	N/A	NO	BSL
	1024-57-3	Heptachlor epoxide	4.6E-10 J	1.5E-07 J	µg/m^3	IS66SB040912	6/62	0.0016 - 0.16	1.5E-07	N/A	9.4E-04 C	N/A	N/A	NO	BSL
	72-43-5	Methoxychlor	6.0E-09 J	1.7E-07 J	µg/m^3	IS66SS150001	10/62	0.016 - 1.6	1.7E-07	N/A	N/A	N/A	N/A	NO	NTX
	TOTALTEQ	2,3,7,8-TCDD TEQ	7.1E-14	4.5E-12	µg/m^3	IS66SS390001	36/36	See Table 2.7.A	4.5E-12	N/A	6.4E-08 C	N/A	N/A	NO	BSL
	55-63-0	Nitroglycerin	1.4E-06	1.4E-06	µg/m^3	IS66SS310001	1/62	0.66 - 4	1.4E-06	N/A	N/A	N/A	N/A	NO	NTX
	14797-73-0	Perchlorate	2.1E-10 J	1.3E-08 J	µg/m^3	IS66SS070001	42/62	0.0023 - 0.007	1.3E-08	N/A	N/A	N/A	N/A	NO	NTX
	7429-90-5	Aluminum	2.0E-03	1.3E-02	µg/m^3	IS66SB221112 : IS66SS410001	62/62	17 - 97.1	1.3E-02	N/A	5.2E-01 N	N/A	N/A	NO	BSL
	7440-36-0	Antimony	6.6E-08 J	2.1E-07 J	µg/m^3	IS66SB251011	3/59	0.46 - 29.1	2.1E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-38-2	Arsenic	8.8E-07 J	7.9E-05	µg/m^3	IS66SS140001	55/62	0.29 - 4.9	7.9E-05	N/A	5.7E-04 C*	N/A	N/A	NO	BSL
	7440-39-3	Barium	8.5E-06	1.5E-04	µg/m^3	IS66SS15P0001	62/62	0.29 - 97.1	1.5E-04	N/A	5.2E-02 N	N/A	N/A	NO	BSL
	7440-41-7	Beryllium	1.6E-07 J	2.1E-06	µg/m^3	IS66SS110001	43/62	0.29 - 2.4	2.1E-06	N/A	1.0E-03 C*	N/A	N/A	NO	BSL
	7440-43-9	Cadmium	1.7E-07 J	1.2E-06 J	µg/m^3	IS66SB05P0812	5/62	0.58 - 4.1	1.2E-06	N/A	1.0E-03 C**	N/A	N/A	NO	BSL
	7440-70-2	Calcium	2.9E-05	1.7E-02	µg/m^3	IS66SB030306	62/62	5.8 - 2430	1.7E-02	N/A	N/A	N/A	N/A	NO	NUT
	7440-47-3	**Chromium**	**3.2E-06**	**4.1E-05 J**	**µg/m^3**	**IS66SB320809**	**62/62**	**0.29 - 4.9**	**4.1E-05**	**N/A**	**1.1E-05 C**	**N/A**	**N/A**	**YES**	**ASL**
	7440-48-4	Cobalt	6.9E-07	1.3E-05 J	µg/m^3	IS66SS110001	62/62	0.058 - 24.3	1.3E-05	N/A	2.7E-04 C*	N/A	N/A	NO	BSL
	7440-50-8	Copper	3.2E-06	4.4E-05	µg/m^3	IS66SS15P0001	62/62	1.4 - 12.1	4.4E-05	N/A	N/A	N/A	N/A	NO	NTX
	57-12-5	Cyanide	6.1E-08 J	4.2E-07 J	µg/m^3	IS66SS210001	11/62	0.5 - 1.2	4.2E-07	N/A	N/A	N/A	N/A	NO	NTX
	7439-89-6	Iron	1.9E-03	5.4E-02 J	µg/m^3	IS66SB320809	62/62	5.8 - 48.5	5.4E-02	N/A	N/A	N/A	N/A	NO	NTX
	7439-92-1	Lead	3.2E-06	1.0E-03 J	µg/m^3	IS66SB05P0812	62/62	0.29 - 2.1	1.0E-03	N/A	N/A	N/A	N/A	NO	NTX
	7439-95-4	Magnesium	1.3E-04	2.1E-03	µg/m^3	IS66SB311415	61/62	5.8 - 2430	2.1E-03	N/A	N/A	N/A	N/A	NO	NUT
	7439-96-5	Manganese	8.3E-06	3.8E-04	µg/m^3	IS66SS150001	62/62	0.29 - 7.3	3.8E-04	N/A	5.2E-03 N	N/A	N/A	NO	BSL
	7439-97-6	Mercury	2.9E-09 J	1.6E-05 J	µg/m^3	IS66SS200001	41/62	0.026 - 0.48	1.6E-05	N/A	3.1E-03 N	N/A	N/A	NO	BSL
	7440-02-0	Nickel	1.8E-06 J	6.6E-05	µg/m^3	IS66SS020001	62/62	2.3 - 19.4	6.6E-05	N/A	9.4E-03 C*	N/A	N/A	NO	BSL

Table 2.7
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
	7440-09-7	Potassium	2.1E-04 J	1.0E-03	µg/m^3	IS66SB251011	62/62	58 - 2430	1.0E-03	N/A	N/A	N/A	N/A	NO	NUT
	7782-49-2	Selenium	6.6E-08 J	2.5E-06	µg/m^3	IS66SS150001	40/62	0.29 - 2.4	2.5E-06	N/A	2.1E+00 N	N/A	N/A	NO	BSL
	7440-22-4	Silver	7.4E-09 J	4.0E-07 J	µg/m^3	IS66SS200001	41/62	0.058 - 4.9	4.0E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-23-5	Sodium	2.2E-05 J	1.8E-04	µg/m^3	IS66SB251011	26/62	58 - 2430	1.8E-04	N/A	N/A	N/A	N/A	NO	NUT
	7440-28-0	Thallium	4.4E-08 J	2.4E-07	µg/m^3	IS66SS340001	36/62	0.12 - 4.9	2.4E-07	N/A	N/A	N/A	N/A	NO	NTX
	7440-62-2	Vanadium	7.8E-06	1.2E-04 J	µg/m^3	IS66SB050812	62/62	0.29 - 24.3	1.2E-04	N/A	1.0E-02 N	N/A	N/A	NO	BSL
	7440-66-6	Zinc	4.4E-06	3.2E-04 J	µg/m^3	IS66SB05P0812	62/62	1.4 - 9.7	3.2E-04	N/A	N/A	N/A	N/A	NO	NTX

* Surface soil & subsurface soil combined

[1] Minimum/Maximum calculated air concentrations from soil concentrations. Air concentrations calculated as Cair = Csoil*1000*(1/PEF+1/VF)
VF calculated for volatile and semi-volatile analytes identified as volatile in the Regional Screening Levels for Chemical Contaminants at Superfund Sites (Oak Ridge National Laboratory, Nov. 2010). VF calculated on Table 2 Supplement. PEF = 1.36 x 10^9 m^3/kg.

[2] Maximum concentration is used for screening.

[3] Background values not available.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Residential Air. [Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for p-Cresol used as surrogate for 3- and 4-methylphenol.
RSL value for technical chlordane used as surrogate for alpha-chlordane.
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value for technical chlordane used as surrogate for gamma-chlordane.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Chromium(VI) used as surrogate for chromium.
RSL value for Manganese (water) used as surrogate for manganese.
RSL value for Mercury (inorganic salts) used as surrogate for mercury.

[5] Rationale Codes

Selection Reason:	Above Screening Levels (ASL)
Deletion Reason:	No Toxicity Information (NTX)
	Essential Nutrient (NUT)
	Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
µg/m^3 = micrograms per cubic meter
C* = where: N RSL < 100X C RSL
N/A = Not applicable
C** = where: N RSL < 10X C RSL

Table 2.7 Supplement A
Calculation of Volatilization Factors
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Diffusivity in Air (D_i) (cm^2/s)	Henry's Law Constant (H') (unitless)	Diffusivity in Water (D_w) (cm^2/s)	Soil Organic Carbon Partition Coeff. (K_{oc}) (cm^3/g)	Soil Water Partition Coeff. ($K_d = K_{oc} \times F_{oc}$) ($g/cm^3$)	Solubility in Water (S) (mg/L)	Apparent Diffusivity (D_A) (cm^2/s)	Volatilization Factor (VF) (m^3/kg)	Soil Saturation Concentration (C_{sat}) (mg/kg)
Volatile Organics									
1,1-Dichloroethane	8.40E-02	2.30E-01	1.10E-05	3.18E+01	1.9E-01	5.04E+03	3.1E-03	2.9E+03	1.7E+03
1,1-Dichloroethene	8.60E-02	1.10E+00	1.10E-05	3.18E+01	1.9E-01	2.42E+03	1.0E-02	1.6E+03	1.2E+03
2-Butanone	9.1E-02	2.3E-03	1.0E-05	4.5E+00	2.7E-02	2.2E+05	8.9E-05	1.7E+04	2.8E+04
Acetone	1.1E-01	1.4E-03	1.2E-05	2.4E+00	1.4E-02	1.0E+06	7.1E-05	1.9E+04	1.1E+05
Carbon disulfide	1.1E-01	5.9E-01	1.3E-05	2.2E+01	1.3E-01	2.2E+03	9.8E-03	1.6E+03	7.4E+02
Chloroform	7.70E-02	1.50E-01	1.10E-05	3.18E+01	1.9E-01	7.9E+03	1.9E-03	3.6E+03	2.5E+03
Ethylbenzene	6.80E-02	3.20E-01	8.50E-06	4.46E+02	2.7E+00	1.69E+02	4.1E-04	7.9E+03	4.8E+02
Methyl Acetate	9.6E-02	4.7E-03	1.1E-05	3.1E+00	1.8E-02	2.4E+05	2.0E-04	1.1E+04	2.9E+04
Styrene	7.1E-02	1.1E-01	8.8E-06	4.5E+02	2.7E+00	3.1E+02	1.5E-04	1.3E+04	8.7E+02
Tetrachloroethene	5.0E-02	7.2E-01	9.5E-06	9.5E+01	5.7E-01	2.1E+02	2.4E-03	3.2E+03	1.7E+02
Toluene	7.8E-02	2.7E-01	9.2E-06	2.3E+02	1.4E+00	5.3E+02	7.2E-04	5.9E+03	8.2E+02
Xylene, total	8.50E-02	2.10E-01	9.90E-06	3.83E+02	2.3E+00	1.06E+02	3.9E-04	8.1E+03	2.6E+02
2-Methylnaphthalene	5.24E-02	2.12E-02	7.78E-06	2.5E+03	1.5E+01	2.5E+01	4.0E-06	8.0E+04	3.7E+02
Semivolatile Organics									
Acenapthene	5.10E-02	7.50E-03	8.30E-06	5.03E+03	3.0E+01	3.9E+00	6.8E-07	1.9E+05	1.2E+02
Acetophenone	6.50E-02	4.30E-04	8.70E-06	5.19E+01	3.1E-01	6.13E+03	3.8E-06	8.2E+04	2.5E+03
Anthracene	3.9E-02	2.3E-03	7.9E-06	1.6E+04	9.8E+01	4.3E-02	4.9E-08	7.2E+05	4.3E+00
Dibenzofuran	4.1E-02	8.7E-03	7.4E-06	9.2E+03	5.5E+01	3.1E+00	3.5E-07	2.7E+05	1.7E+02
Fluorene	4.40E-02	3.90E-03	7.90E-06	9.16E+03	5.5E+01	1.7E+00	1.7E-07	3.9E+05	9.3E+01
Naphthalene	6.0E-02	1.8E-02	8.4E-06	1.5E+03	9.3E+00	3.1E+01	6.2E-06	6.4E+04	2.9E+02
Pyrene	2.8E-02	4.9E-04	7.2E-06	5.4E+04	3.3E+02	1.4E-01	2.3E-09	3.3E+06	4.4E+01

Volatilization factor (VF) = (m^3/kg)

$$\frac{Q/C * (3.14 * D_A * T)^{1/2} * 10^{-4}\ m^2/cm^2}{2 * \rho_b * D_A}$$

Apparent Diffusivity (D_A) = (cm^2/s)

$$\frac{[(\Theta_a^{10/3} * D_i * H' + \Theta_w^{10/3} * D_w)/n^2]}{(\rho_b * K_d + \Theta_w + \Theta_a * H')}$$

Soil Saturation Concentration (C_{sat}) =

$$S/\rho_b * (K_d * \rho_b + \Theta_w + H' * \Theta_a)$$

Parameters	Values
Q/C - Inverse of the mean concentration at the center of a 0.5-acre-square source (g/m^2-s per kg/m^3)	87.4
T - Exposure interval(s)	9.5E+08
r_b - Soil bulk density (g/cm^3)	1.5
Q_a - Air-filled soil porosity (L_{air}/L_{water}) = n - Q_w	0.28
n - Total soil porosity (Lpore/Lsoil) = 1 - (r_b/r_s)	0.43
Q_w - Water-filled soil porosity (Lwater/Lsoil)	0.15
r_s - Soil particle density (g/cm^3)	2.65
f_{oc} - fraction organic carbon in soil (g/g)	0.006

Equations and chemical properties from USEPA, 1996. *Soil Screening Guidance: User's Guide.* EPA/540/R-96/018.
Physical/chemical properties from USEPA Regional Screening Table, November 2010.

Table 2.8
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Shallow Groundwater- Tap Water	108-88-3	Toluene	5.5E+00	5.5E+00	UG/L	IS66GW03P0910	1/4	1 - 1	5.5E+00	7.0E+00	2.3E+02 N	1.0E+03	MCL	NO	BSL
	132-64-9	Dibenzofuran	2.8E-01	2.8E-01	UG/L	IS66GW030910	1/4	0.2 - 0.21	2.8E-01	ND	3.7E+00 N			NO	BSL
	91-20-3	**Naphthalene**	**1.7E+00**	**1.7E+00**	**UG/L**	**IS66GW030910**	**1/4**	**0.2 - 0.21**	**1.7E+00**	**ND**	**1.4E-01 C***			**YES**	**ASL**
	319-86-8	delta-BHC	3.0E-02 J	3.0E-02 J	UG/L	IS66GW040910	1/4	0.051 - 0.054	3.0E-02	ND	3.7E-02 C			NO	BSL
	76-44-8	**Heptachlor**	**2.1E-02 J**	**2.1E-02 J**	**UG/L**	**IS66GW040910**	**1/4**	**0.051 - 0.054**	**2.1E-02**	**ND**	**1.5E-02 C**	**4.0E-01**		**YES**	**ASL**
	TOTALTEQ	2,3,7,8-TCDD TEQ	4.3E-08	4.3E-08	UG/L	IS66GW030910	4/4	See Table 2.8.A	4.3E-08	ND	5.20E-07 C*			NO	BSL
Total Metals	7429-90-5	Aluminum	7.6E+01 J	1.0E+03	UG/L	IS66GW030910	3/4	300 - 300	1.0E+03	2.9E+08	3.7E+03 N	50 to 200	2MCL	NO	BSL
	7440-36-0	Antimony	1.1E-01 J	2.0E-01 J	UG/L	IS66GW030910	3/4	1 - 1	2.0E-01	ND	1.5E+00 N	6.0E+00	MCL	NO	BSL
	7440-38-2	**Arsenic**	**1.7E+00 J**	**1.3E+01**	**UG/L**	**IS66GW030910**	**2/4**	**5 - 5**	**1.3E+01**	**ND**	**4.5E-02 C**	**1.0E+01**	**MCL**	**YES**	**ASL**
	7440-39-3	Barium	6.0E+01	1.6E+02	UG/L	IS66GW030910	4/4	5 - 5	1.6E+02	2.5E+02	7.3E+02 N	2.0E+03	MCL	NO	BSL
	7440-41-7	Beryllium	9.0E-02 J	1.8E-01 J	UG/L	IS66GW040910	3/4	1 - 1	1.8E-01	ND	7.3E+00 N	4.0E+00	MCL	NO	BSL
	7440-43-9	Cadmium	1.3E-01 J	2.6E-01 J	UG/L	IS66GW040910	3/4	1 - 1	2.6E-01	2.8E+00	1.8E+00 N	5.0E+00	MCL	NO	BSL
	7440-70-2	Calcium	2.5E+03	4.2E+04	UG/L	IS66GW030910	4/4	100 - 100	4.2E+04	6.0E+05	N/A			NO	NUT
	7440-48-4	**Cobalt**	**3.3E-01 J**	**4.6E+01**	**UG/L**	**IS66GW040910**	**4/4**	**1 - 1**	**4.6E+01**	**4.0E+01**	**1.1E+00 N**			**YES**	**ASL**
	57-12-5	Cyanide	6.0E+00 J	6.0E+00 J	UG/L	IS66GW020910	1/4	10 - 10	6.0E+00	ND	7.3E+01 N	2.0E+02	MCL	NO	BSL
	7439-89-6	**Iron**	**1.8E+03**	**2.1E+04**	**UG/L**	**IS66GW030910**	**4/4**	**100 - 100**	**2.1E+04**	**5.7E+04**	**2.6E+03 N**	**3.0E+02**	**2MCL**	**YES**	**ASL**
	7439-95-4	Magnesium	1.4E+03	1.3E+04	UG/L	IS66GW040910	4/4	100 - 100	1.3E+04	3.1E+04	N/A			NO	NUT
	7439-96-5	**Manganese**	**2.9E+02**	**8.8E+02**	**UG/L**	**IS66GW050910**	**4/4**	**5 - 5**	**8.8E+02**	**2.8E+04**	**8.8E+01 N**	**5.0E+01**	**2MCL**	**YES**	**ASL**
	7440-02-0	Nickel	1.8E+00 J	5.1E+01	UG/L	IS66GW040910	3/4	40 - 40	5.1E+01	3.9E+01	7.3E+01 N			NO	BSL
	7440-09-7	Potassium	5.4E+02 J	6.5E+03	UG/L	IS66GW030910	4/4	1000 - 1000	6.5E+03	8.3E+04	N/A			NO	NUT
	7440-23-5	Sodium	1.2E+04	1.3E+05	UG/L	IS66GW030910	4/4	1000 - 1000	1.3E+05	8.0E+04	N/A			NO	NUT
	7440-62-2	Vanadium	2.3E+00 J	9.9E+00	UG/L	IS66GW030910	2/4	5 - 5	9.9E+00	2.4E+01	1.8E+01 N			NO	BSL
	7440-66-6	Zinc	2.1E+01 J	4.6E+01	UG/L	IS66GW040910	2/4	25 - 25	4.6E+01	4.5E+01	1.1E+03 N	5.0E+03	2MCL	NO	BSL

[1] Minimum/Maximum detected concentrations.

[2] Maximum concentration is used for screening.

[3] Values are 95% UTL from Background Investigation Report (Tetra Tech, 2002), Tables A-6 (filtered) and A-8 (un-filtered).

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Tap Water. [Online]. Available: http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/index.htm
RSL value for technical-HCH used as surrogate for delta-BHC.
RSL value and Toxicity equivalence factors from Recommended Toxicity Equivalence Factors (TEFs) for Human Health Risk Assessments of 2,3,7,8-Tetrachlorodibenzo-p-dioxin and Dioxin-Like Compounds (USEPA, 2010).
RSL value for Manganese (water) used as surrogate for manganese.

[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
C = Carcinogenic
N = Noncarcinogenic
MCL = Maximum Contaminant Level from EPA's National Primary Drinking Water Standards (USEPA, 2009)
2MCL = Secondary MCL (USEPA, 2009)
N/A = Not applicable
UG/L = micrograms per liter
C* = where: N RSL < 100X C RSL

Table 2.8.A
Calculation of 2,3,7,8-TCDD Equivalent Concentrations - Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Sample ID			IS66GW020910			IS66GW030910			IS66GW03P0910			IS66GW040910			IS66GW050910		
Chemical Name	**TEF**	**Units**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**	**Conc.**	**Data Qualifier**	**Equivalent Conc.**
Other parameters																	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0.01	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0.01	NG/L	**1.1E-03**	**X**		2.3E-03	B		1.8E-03	B		1.3E-03	B		2.6E-02	U	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0.01	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,4,7,8-Hexachlorodibenzofuran	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,6,7,8-Hexachlorodibenzofuran	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,7,8,9-Hexachlorodibenzofuran	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,7,8-Pentachlorodibenzofuran	0.03	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
2,3,4,6,7,8-Hexachlorodibenzofuran	0.1	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
2,3,4,7,8-Pentachlorodibenzofuran	0.3	NG/L	2.7E-02	U		2.7E-02	U		2.6E-02	U		2.7E-02	U		2.6E-02	U	
2,3,7,8-TCDD (dioxin)	1	NG/L	1.1E-02	U		1.1E-02	U		1.0E-02	U		1.1E-02	U		1.0E-02	U	
2,3,7,8-Tetrachlorodibenzofuran	0.1	NG/L	1.1E-02	U		1.1E-02	U		1.0E-02	U		1.1E-02	U		1.0E-02	U	
Octachlorodibenzofuran	0.0003	NG/L	5.4E-02	U		5.3E-02	U		5.1E-02	U		5.3E-02	U		5.1E-02	U	
Octachlorodibenzo-p-dioxin	0.0003	NG/L	8.4E-03	B		**1.4E-01**		4.3E-05	**1.4E-01**		4.3E-05	2.0E-02	B		3.8E-03	B	
Total 2,3,7,8-TCDD equivalents					0.0E+00			4.3E-05			4.3E-05			0.0E+00			0.0E+00

Minimum equivalent concentration = 0.0E+00
Maximum equivalent concentration = 4.3E-05

Table 2.9

OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Water Vapors at Showerhead and Excavation Pit	108-88-3	Toluene	5.5E+00	5.5E+00	UG/L	IS66GW03P0910	1/4	1 - 1	5.5E+00	N/A	2.3E+02 N	1.0E+03	MCL	NO	BSL
	132-64-9	Dibenzofuran	2.8E-01	2.8E-01	UG/L	IS66GW030910	1/4	0.2 - 0.21	2.8E-01	N/A	3.7E+00 N			NO	BSL
	91-20-3	**Naphthalene**	**1.7E+00**	**1.7E+00**	**UG/L**	**IS66GW030910**	**1/4**	**0.2 - 0.21**	**1.7E+00**	**N/A**	**1.4E-01 C***			**YES**	**ASL**

[1] Minimum/Maximum detected concentration.

[2] Maximum concentration is used for screening.

[3] Background values not available.

[4] Oak Ridge National Laboratory (ORNL). November, 2010. Regional Screening Levels for Chemical Contaminants at Superfund Sites. Tap Water. [Online]. Available: http://epa-prgs.ornl.gov/chemicals/index.shtml. Adjusted (n RSLs adjusted by dividing by 10) tap water RSLs.

[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)

Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern

ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered

J = Estimated Value

C = Carcinogenic

N = Noncarcinogenic

MCL = Maximum Contaminant Level from EPA's National Primary Drinking Water Standards (USEPA, 2009)

C* = where: N RSL < 100X C RSL

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Checked by: TC/SH

Table 2.10
OCCURRENCE, DISTRIBUTION AND SELECTION OF CHEMICALS OF POTENTIAL CONCERN
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Indoor Air (Residential)

Exposure Point	CAS Number	Chemical	Minimum [1] Concentration Qualifier	Maximum [1] Concentration Qualifier	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration [2] Used for Screening	Background [3] Value	Screening [4] Toxicity Value	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag	Rationale for [5] Contaminant Deletion or Selection
Shallow Groundwater - Vapor Intrusion to Indoor Air	108-88-3	Toluene	5.5E+00	5.5E+00	UG/L	IS66GW03P0910	1/4	1 - 1	5.5E+00	N/A	2.7E+03	1.0E+03	MCL	NO	BSL
	132-64-9	Dibenzofuran	2.8E-01	2.8E-01	UG/L	IS66GW030910	1/4	0.2 - 0.21	2.8E-01	N/A	NA			NO	NTX
	91-20-3	Naphthalene	1.7E+00	1.7E+00	UG/L	IS66GW030910	1/4	0.2 - 0.21	1.7E+00	N/A	6.5E+00			NO	BSL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Background values not available.
[4] Generic vapor intrusion screening values (USEPA, 2002); see Table 2.1 Supplement A
[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Below Screening Level (BSL)

COPC = Chemical of Potential Concern
ARAR/TBC = Applicable or Relevant and Appropriate Requirement/ To Be Considered
J = Estimated Value
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
MCL = Maximum Contaminant Level from EPA's National Primary Drinking Water Standards (USEPA, 2009)

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Checked by: TC/SH

Table 2.10.A

Development of Target Groundwater Concentrations for Protection of Residential Air[(1)]
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Parameter	Symbol	Value
Henry's Law Constant	H	chem-specific
Empirical Attenuation Factor	alpha	1.0E-03

CAS	Chemical	Cancer based Concentration in Indoor Air ($\mu g/m^3$) (2)	Non-cancer based Concentration in Indoor Air ($\mu g/m^3$) (2)	Target Concentration in Indoor Air ($\mu g/m^3$) (2)	key	Concentration in Soil Gas ($\mu g/m^3$)	Henry's Law Constant (3)	Target Concentration in Groundwater ($\mu g/m^3$)	Target Concentration in Groundwater (µg/L)
108-88-3	Toluene		5.20E+02	5.20E+02	NC	5.20E+05	1.93E-01	2.69E+06	2.69E+03
132-64-9	Dibenzofuran			(4)		--	--	--	--
91-20-3	Naphthalene	7.20E-02	3.10E-01	7.20E-02	CA	7.20E+01	1.10E-02	6.53E+03	6.53E+00

(1) The vapor intrusion screening levels [i.e., target groundwater concentration from Table 2c, Subsurface Vapor Intrusion Guidance (USEPA, 2002)] were updated using the methodology presented in Appendix D of Subsurface Vapor Intrusion Guidance (EPA, 2002).
(2) Concentration in indoor air based on USEPA Residential Indoor Air RSL (based on ELCR = $1x10^{-6}$ or HI = 0.1).
(3) Dimensionless Henry's Law Constant at System Temperature (see Table 2.1 Supplement B for calculation).

C_{gw} [µg/L] = $C_{target,ia}$ ($\mu g/m^3$) * 10^{-3} m^3/L * $1/H'_{TS}$ *1/α
where,
C_{gw} Target groundwater concentration (i.e., GWSL),
$C_{target,ia}$ Target indoor air concentration (i.e., RSLs for residential air),
α Attenuation factor ([AF] default ratio of indoor air concentration to source vapor concentration; 1×10^{-3}), and
H'_{TS} Henry's law constant at system (groundwater) temperature (dimensionless)

(4) Dibenzofuran is volatile, but no inhalation toxicity values are available.

Table 2.10.B
Development of Target Groundwater Concentrations for Protection of Residential Air
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Parameter		Symbol	Value
System Temperature (deg K)		TS	2.91E+02
Groundwater Temperature (deg C)			1.81E+01
Gas Constant (cal/mole-K)		R_C	1.99E+00
Gas Constant (atm-m^3/mole-K)		R	8.21E-05

Chemical	CAS#	CAS#	Henry's Law Constant at Reference Temperature (atm-m^3/mole)	Reference Temperature T_R (deg C)	Enthalpy of Vaporization at the Normal Boiling Point (cal/mole)	Normal Boiling Point (deg K)	Normal Critical Temperature (deg K)	Reference Temperature T_R (deg K)	T_B/T_C	Value of Exponent n as a function of T_B/T_C	Enthalpy of Vaporization at the System Temperature (cal/mole)	Dimensionless Henry's Law Constant at System Temperature
Toluene	108883	108-88-3	6.64E-03	2.50E+01	7.93E+03	3.84E+02	5.92E+02	2.98E+02	6.49E-01	3.64E-01	9.07E+03	1.93E-01
Dibenzofuran	132649	132-64-9	2.13E-04	2.50E+01	6.64E+04	5.60E+02	8.24E+02	2.98E+02	6.80E-01	3.87E-01	8.71E+04	2.74E-04
Naphthalene	91203	91-20-3	4.40E-04	2.50E+01	1.04E+04	4.91E+02	7.48E+02	2.98E+02	6.56E-01	3.70E-01	1.28E+04	1.10E-02

Physical and chemical properties were obtained from the Johnson and Ettinger Model Vlookup Sheet (EPA, 2004) except for Henry's Law Constant and reference temperature.
Henry's law constant was obtained from the Regional Screening Level (RSL) tables (USEPA, 2010).
Site-specific groundwater temperature based on the September 2010 sampling event.

Dimensionless Henry's law constant at the system temperature:

$$H'_{TS} = \frac{\exp\left[-\frac{\Delta H_{v,TS}}{R_c T_s}\left(\frac{1}{T_S}-\frac{1}{T_R}\right)\right] H_R}{RT_S}$$

where,
H'TS = Henry's law constant at the system temperature (dimensionless)
ΔHv,TS = Enthalpy of vaporization at the system temperature (cal/mol)
TS = System temperature (°K)
TR = Henry's law constant reference temperature (°K)
HR = Henry's law constant at the reference temperature (atm-m3/mol)
Rc = Gas constant (= 1.9872 cal/mol - °K)
R = Gas constant (= 8.205 x 10-5 atm-m3/mol-°K)

Enthalpy of vaporization at the system temperature:

$$\Delta H_{v,TS} = \Delta H_{v,b}\left[\frac{(1-T_S/T_C)}{(1-T_B/T_C)}\right]^n$$

where,
ΔHv,TS = Enthalpy of vaporization at the system temperature (cal/mol)
ΔHv,b = Enthalpy of vaporization at the normal boiling point (cal/mol)
TS = System temperature (°K)
TC = Critical temperature (°K)
TB = Normal boiling point (°K)
n = Constant (unitless) (The value of n is a function of the ratio of TB /TC.)

Table 3.1
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Surface Soil											
	Benzo(a)anthracene	MG/KG	5.017	49.651	NP	1.7E+02	J	5.0E+01	MG/KG	99% KM	1
	Benzo(a)pyrene	MG/KG	5.367	52.763	NP	1.8E+02	J	5.3E+01	MG/KG	99% KM	1
	Benzo(b)fluoranthene	MG/KG	5.388	52.635	NP	1.8E+02	J	5.3E+01	MG/KG	99% KM	1
	Benzo(k)fluoranthene	MG/KG	4.556	44.108	NP	1.5E+02	J	4.4E+01	MG/KG	99% KM	1
	Chrysene	MG/KG	5.279	52.573	NP	1.8E+02	J	5.3E+01	MG/KG	99% KM	1
	Dibenz(a,h)anthracene	MG/KG	1.275	12.935	NP	4.4E+01	J	1.3E+01	MG/KG	99% KM	1
	Dibenzofuran	MG/KG	0.6511	3.859	NP	9.2E+00	J	3.9E+00	MG/KG	99% KM	1
	Fluoranthene	MG/KG	10.102	102.03	NP	3.5E+02	J	1.0E+02	MG/KG	99% KM	1
	Indeno(1,2,3-cd)pyrene	MG/KG	3.635	35.232	NP	1.2E+02	J	3.5E+01	MG/KG	99% KM	1
	Naphthalene	MG/KG	0.2189	0.5444	NP	6.1E+00	J	5.4E-01	MG/KG	95% KM-t	1,2
	Pyrene	MG/KG	8.19	81.765	NP	2.8E+02	J	8.2E+01	MG/KG	99% KM	1
	Dieldrin	MG/KG	0.004317	0.008147	NP	7.1E-02	J	8.1E-03	MG/KG	95% KM (BCA)	4
	2,3,7,8-TCDD TEQ	MG/KG	2.2824E-06	2.977E-06	G	6.1E-06		3.0E-06	MG/KG	(App-G)	1, 3
	Nitroglycerin	MG/KG	N/A	N/A		1.9E+00		1.9E+00	MG/KG	Max	6
	Aluminum	MG/KG	8692	9669	N	1.8E+04		9.7E+03	MG/KG	95% Stud-t	1,2,3
	Arsenic	MG/KG	8.897	27.43	NP	1.1E+02		2.7E+01	MG/KG	97.5% KM	4
	Chromium	MG/KG	14.24	15.63	N	2.8E+01		1.6E+01	MG/KG	95% Stud-t	1,2,3
	Cobalt	MG/KG	6.354	7.394	G	1.8E+01	J	7.4E+00	MG/KG	App-G	1,3
	Iron	MG/KG	14398	16601	G	3.6E+04		1.7E+04	MG/KG	App-G	1,3
	Manganese	MG/KG	196	245.5	G	5.2E+02		2.5E+02	MG/KG	App-G	1,3
	Mercury	MG/KG	0.776	6.579	NP	2.2E+01	J	6.6E+00	MG/KG	99% KM	4
	Vanadium	MG/KG	33.76	39.04	NP	1.2E+02		3.9E+01	MG/KG	95% Stud-t	4

Table 3.1

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Maximum Detected Value (Max); 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Student's-T test UCL (95% Stud-t); 95% Approximate Gamma UCL (App-G); 95% Kaplan-Meier (BCA) UCL (95% KM (BCA)); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 99% Kaplan-Meier Chebyshev UCL (99% KM)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.2

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Particulate and Volatile Emissions from Surface Soil	Naphthalene	mg/m^3	3.4E-06	8.5E-06 NP	9.5E-05 J	8.5E-06	mg/m^3	95% KM-t	1,2
	Chromium	mg/m^3	1.0E-08	1.1E-08 N	2.1E-08	1.1E-08	mg/m^3	95% Stud-t	1,2,3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Student's-T test UCL (95% Stud-t)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.3
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Ash
Exposure Medium: Ash

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)	Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Ash										
	Aluminum	MG/KG	8.1E+03	9.8E+03	N	1.1E+04	9.8E+03	MG/KG	95% Stud-t	1,2,3
	Arsenic	MG/KG	6.3E+01	9.5E+01	N	1.2E+02	9.5E+01	MG/KG	95% Stud-t	1,2,3
	Chromium	MG/KG	2.0E+01	2.4E+01	N	2.9E+01	2.4E+01	MG/KG	95% Stud-t	1,2,3
	Cobalt	MG/KG	1.2E+01	1.6E+01	N	1.7E+01	1.6E+01	MG/KG	95% Stud-t	1,2,3
	Iron	MG/KG	3.8E+04	4.6E+04	N	5.1E+04	4.6E+04	MG/KG	95% Stud-t	1,2,3
	Manganese	MG/KG	2.4E+02	3.6E+02	N	4.6E+02	3.6E+02	MG/KG	95% Stud-t	1,2,3
	Vanadium	MG/KG	8.8E+01	1.2E+02	N	1.5E+02	1.2E+02	MG/KG	95% Stud-t	1,2,3

Notes:
ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Student's-T test UCL (95% Stud-t)

UCL Rationale:
(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.
(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.
(3) Test indicates data are gamma distributed.
(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).
(5) Maximum value used because calculated UCL exceeds maximum concentration.
(6) Maximum detected concentration used because constituent detected in only one sample.
(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.4

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Ash
Exposure Medium: Ash

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Ash	Chromium	MG/KG	1.5E-08	1.8E-08 N	2.1E-08	1.8E-08	MG/KG	95% Stud-t	1,2,3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Student's-T test UCL (95% Stud-t)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.5

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)	Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Sediment										
	Benzo(a)pyrene	MG/KG	3.3E-01	4.4E-01	NP	7.7E-01	4.4E-01	MG/KG	95% KM-t	2,3
	Dibenz(a,h)anthracene	MG/KG	8.4E-02	1.2E-01	NP	2.1E-01	1.2E-01	MG/KG	95% KM-t	2,3
	Arsenic	MG/KG	6.0E+00	7.6E+00	NP	1.4E+01	7.6E+00	MG/KG	95% KM-t	1,2,3
	Chromium	MG/KG	1.3E+01	1.7E+01	N	3.0E+01	1.7E+01	MG/KG	95% Stud-t	1,2,3
	Cobalt	MG/KG	1.4E+01	1.9E+01	G	4.1E+01	1.9E+01	MG/KG	App-G	1,3

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Maximum Detected Value (Max); 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Student's-T test UCL (95% Stud-t); 95% Approximate Gamma UCL (App-G); 95% Kaplan-Meier (BCA) UCL (95% KM (BCA)); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 99% Kaplan-Meier Chebyshev UCL (99% KM)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

Table 3.5

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.6
MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)		Maximum Concentration (Qualifier)		Exposure Point Concentration			
								Value	Units	Statistic	Rationale
Soil*											
	Benzo(a)anthracene	MG/KG	3.359	15.461	NP	1.7E+02	J	1.5E+01	MG/KG	97.5% KM	4
	Benzo(a)pyrene	MG/KG	3.566	16.394	NP	1.8E+02	J	1.6E+01	MG/KG	97.5% KM	1
	Benzo(b)fluoranthene	MG/KG	3.585	16.4	NP	1.8E+02	J	1.6E+01	MG/KG	97.5% KM	1
	Benzo(k)fluoranthene	MG/KG	3.038	13.747	NP	1.5E+02	J	1.4E+01	MG/KG	97.5% KM	4
	Chrysene	MG/KG	3.526	16.346	NP	1.8E+02	J	1.6E+01	MG/KG	97.5% KM	1
	Dibenz(a,h)anthracene	MG/KG	0.8334	3.972	NP	4.4E+01	J	4.0E+00	MG/KG	97.5% KM	4
	Dibenzofuran	MG/KG	0.3343	0.7038	NP	9.2E+00	J	7.0E-01	MG/KG	95% KM (BCA)	4
	Fluoranthene	MG/KG	6.724	31.634	NP	3.5E+02	J	3.2E+01	MG/KG	97.5% KM	1
	Indeno(1,2,3-cd)pyrene	MG/KG	2.43	10.997	NP	1.2E+02	J	1.1E+01	MG/KG	97.5% KM	1
	Naphthalene	MG/KG	0.1849	0.3053	NP	6.1E+00	J	3.1E-01	MG/KG	95% KM-t	1,3
	Pyrene	MG/KG	5.504	25.453	NP	2.8E+02	J	2.5E+01	MG/KG	97.5% KM	1
	4,4'-DDD	MG/KG	1.364	7.32	NP	8.3E+01		7.3E+00	MG/KG	97.5% KM	4
	Dieldrin	MG/KG	0.003571	0.005274	NP	7.1E-02	J	5.3E-03	MG/KG	95% KM (BCA)	4
	Heptachlor epoxide	MG/KG	0.004202	0.01964	NP	2.1E-01	J	2.0E-02	MG/KG	97.5% KM	4
	2,3,7,8-TCDD TEQ	MG/KG	1.956E-06	2.5681E-06	G	6.1E-06		2.6E-06	MG/KG	App-G	1, 3
	Nitroglycerin	MG/KG	1949.6774	N/A		1.9E+00		1.9E+00	MG/KG	Max	6
	Aluminum	MG/KG	9641	10193	NP	1.8E+04		1.0E+04	MG/KG	95% Stud-t	1
	Arsenic	MG/KG	7.827	10.36	NP	1.1E+02		1.0E+01	MG/KG	95% KM (BCA)	4
	Chromium	MG/KG	16.16	17.24	NP	5.6E+01	J	1.7E+01	MG/KG	95% Stud-t	4
	Cobalt	MG/KG	7.291	8.834	NP	1.8E+01	J	8.8E+00	MG/KG	95%-Cheb-m	4
	Iron	MG/KG	17504	21590	NP	7.3E+04	J	2.2E+04	MG/KG	95%-Cheb-m	4
	Lead	MG/KG	63.05	135.6	NP	1.4E+03	J	1.4E+02	MG/KG	95%-Cheb-m	4
	Manganese	MG/KG	158	191.6	NP	5.2E+02		1.9E+02	MG/KG	95%-H	1
	Mercury	MG/KG	0.492	2.064	NP	2.2E+01	J	2.1E+00	MG/KG	97.5% KM	4
	Vanadium	MG/KG	35.656452	39.88	NP	1.7E+02	J	4.0E+01	MG/KG	95% Stud-t	4

Table 3.6

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Maximum Detected Value (Max); 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Student's-T test UCL (95% Stud-t); 95% Approximate Gamma UCL (App-G); 95% Kaplan-Meier (BCA) UCL (95% KM (BCA); 97.5% Kaplan-Meier Chebyshev UCL (97.5% KM); 95% Chebyshev (Mean, Sd) UCL (95% Cheb-m); 95% H-UCL (95%-H)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.7

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Air	Naphthalene	mg/m^3	2.9E-03	4.8E-03 NP	9.5E-05 J	9.5E-05	mg/m^3	95% KM-t	1,3
	Chromium	mg/m^3	1.2E-08	1.3E-08 NP	4.1E-08 J	1.2E-08	mg/m^3	95% Stud-t	4

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: 95% Kaplan-Meier (t) UCL (95% KM-t); 95% Student's-T test UCL (95% Stud-t)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because less than 5 samples.

J - Estimated Value
mg/kg - milligrams per kilogram
N - Normal
G - Gamma
NP - Non-Parametric
NA = Not Applicable

Table 3.8

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)		Exposure Point Concentration			
							Value	Units	Statistic	Rationale
Shallow Groundwater-Tap Water	Naphthalene	UG/L	N/A	N/A	1.7E+00		1.7E+00	UG/L	Max	7
	Heptachlor	UG/L	N/A	N/A	2.1E-02	J	2.1E-02	UG/L	Max	7
	Arsenic	UG/L	N/A	N/A	1.3E+01		1.3E+01	UG/L	Max	7
	Cobalt	UG/L	N/A	N/A	4.6E+01		4.6E+01	UG/L	Max	7
	Iron	UG/L	N/A	N/A	2.1E+04		2.1E+04	UG/L	Max	7
	Manganese	UG/L	N/A	N/A	8.8E+02		8.8E+02	UG/L	Max	7

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because too few samples (i.e., <5 samples).

Table 3.8

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

J - Estimated Value
ug/L - micrograms per liter
NA - Not Applicable

Table 3.9

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale
Shallow Groundwater-Water Vapors at Showerhead and in Excavation Pit	Naphthalene	UG/L	5.0E-01	N/A	1.7E+00	1.7E+00	UG/L	Max	7

Notes:

ProUCL, Version 4.00.05 used to determine distribution of data and calculate 95% UCL, following recommendations in users guide (USEPA. May 2010. Prepared by Lockheed Martin Environmental Services).

Options: Maximum Detected Value (Max)

UCL Rationale:

(1) Shapiro-Wilk W Test/Lilliefors test indicates data are log-normally distributed.

(2) Shapiro-Wilk W Test/Lilliefors indicates data are normally distributed.

(3) Test indicates data are gamma distributed.

(4) Distribution tests are inconclusive (data are not normal, log-normal, or gamma-distributed).

(5) Maximum value used because calculated UCL exceeds maximum concentration.

(6) Maximum detected concentration used because constituent detected in only one sample.

(7) Maximum detected concentration used because too few distinct results.

J - Estimated Value

Table 3.9

MEDIUM-SPECIFIC EXPOSURE POINT CONCENTRATION SUMMARY

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Point	Chemical of Potential Concern	Units	Arithmetic Mean	95% UCL (Distribution)	Maximum Concentration (Qualifier)	Exposure Point Concentration			
						Value	Units	Statistic	Rationale

ug/L - micrograms per liter
G - Gamma
N - Normal
NP - Non-Parametric
NA - Not Applicable
K - Biased High

TABLE 4.1.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser/Visitor	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	51	kg	EPA, 1997, (3)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.1.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Trespasser/Visitor	Adult	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Surface Soil	CS	Chemical Concentration in Soil	See Table 3.1.RME	mg/kg	See Table 3.1.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,900	cm^2	EPA, 2004, (4)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (5)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				BW	Body Weight	51	kg	EPA, 1997,(3)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.1.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Surface Soil

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

(1) Professional Judgement assuming 2 day per week for 26 weeks per year.

(2) Professional Judgement assuming adolescents from 9 to 18 years of age.

(3) Body weight is average value for the 9 year old and 18 year old male body weight.

(4) Surface area includes face, forearms, hands, and lower legs for children 9-18 year old.

(5) Soil to skin adherence factor is based on 95th percentile adherence factor for soccer players #1 (age 13-15 years).

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

TABLE 4.2.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Surface Soil
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adult	Emissions from Surface Soil	CS	Chemical Concentration in Soil	See Table 3.2.RME	mg/kg	See Table 3.2.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(1)	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Emissions from Surface Soil	CS	Chemical Concentration in Soil	See Table 3.2.RME	mg/kg	See Table 3.2.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(1)	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

Notes:

(1) Professional Judgement assuming 2 day per week for 26 weeks per year, and 4 hours per day.

(2) Professional Judgement assuming adolescents from 9 to 18 years of age.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

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TABLE 4.3.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Ash

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser/Visitor	Adult	Ash	CS	Chemical Concentration in Soil	See Table 3.3.RME	mg/kg	See Table 3.3.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Ash	CS	Chemical Concentration in Soil	See Table 3.3.RME	mg/kg	See Table 3.3.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	51	kg	EPA, 1997, (3)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.3.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Ash

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Trespasser/Visitor	Adult	Ash	CS	Chemical Concentration in Soil	See Table 3.3.RME	mg/kg	See Table 3.3.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Ash	CS	Chemical Concentration in Soil	See Table 3.3.RME	mg/kg	See Table 3.3.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,900	cm^2	EPA, 2004, (4)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (5)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				BW	Body Weight	51	kg	EPA, 1997,(3)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.3.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Ash

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

Notes:

(1) Professional Judgement assuming 2 day per week for 26 weeks per year.

(2) Professional Judgement assuming adolescents from 9 to 18 years of age.

(3) Body weight is average value for the 9 year old and 18 year old male body weight.

(4) Surface area includes face, forearms, hands, and lower legs for children 9-18 year old.

(5) Soil to skin adherence factor is based on 95th percentile adherence factor for soccer players #1 (age 13-15 years).

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

TABLE 4.4.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Ash
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adult	Emissions from Ash	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(1)	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Emissions from Ash	CS	Chemical Concentration in Soil	See Table 3.4.RME	mg/kg	See Table 3.4.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.36E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(1)	
				EF	Exposure Frequency	52	days/year	(1)	
				ED	Exposure Duration	9	years	(2)	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

Notes:

(1) Professional Judgement assuming 2 day per week for 26 weeks per year, and 4 hours per day.

(2) Professional Judgement assuming adolescents from 9 to 18 years of age.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

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TABLE 4.5.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Trespasser/Visitor	Adult	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-Sed	Ingestion Rate of Sediment	50	mg/day	EPA, 1991 (1)	CSed x IR-Sed x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	Prof Judgment (2)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				IR-Sed	Ingestion Rate of Sediment	50	mg/day	EPA, 1991 (1)	CSed x IR-Sed x EF x ED x CF3 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	Prof Judgment (2)	
				ED	Exposure Duration	9	years	(3)	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				BW	Body Weight	51	kg	EPA, 1997, (4)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.5.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Trespasser/Visitor	Adult	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004, (5)	CSed x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (6)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	4,800	cm^2	EPA, 2004, (5)	CSed x SA x SSAF x DABS x CF3 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (6)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	9	years	(3)	
				BW	Body Weight	51	kg	EPA, 1997, (4)	
				AT-C	Averaging Time (Cancer)	25550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3285	days	EPA, 1989	

(1) Professional Judgement assuming 1/2 the default value for the residential and construction worker soil scenarios.
(2) Professional Judgment assuming 1 day per week for 52 weeks per year
(3) Professional Judgement assuming adolescents from 9 to 18 years of age.
(4) Body weight is average of the mean values for boys and girls for the ages 9 through 18.
(5) The skin surface area includes face, hands, forearms, lower legs, and feet.
(6) RME SSAF is geometric mean soil adherence factor for reed gatherers.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

TABLE 4.6.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	200	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S-A	Ingestion Rate of Soil, Adult	100	mg/day	EPA, 1991	CS x IR-S-Adj x EF x CF1 x 1/AT
				IR-S-C	Ingestion Rate of Soil, Child	200	mg/day	EPA, 1991	
				IR-S-Adj	Ingestion Rate of Soil, Age-adjusted	114.29	mg-year/kg-day	Calculated	IR-S-Adj (mg-year/kd-day) =
				EF	Exposure Frequency	350	days/year	EPA, 1991	(ED-C x IR-S-C / BW-C) + (ED-A x IR-S-A / BW-A)
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
	Construction Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	480	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	125	days/year	(1)	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	

TABLE 4.6.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
	Trespasser/Visitor	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	EPA, 1991	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	9	years	(6)	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	51	kg	EPA, 1997, (7)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

TABLE 4.6.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Resident	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 1995; EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
	Resident	Child	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	2,800	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
	Resident	Child/Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA-A	Skin Surface Area Available for Contact, Adult	5,700	cm^2	EPA, 2004	CS x DA-Adj x DABS x CF1 x EF x 1/AT
				SA-C	Skin Surface Area Available for Contact, Child	2,800	cm^2	EPA, 2004	
				SSAF-A	Soil to Skin Adherence Factor, Adult	0.07	mg/cm^2-day	EPA, 2004	DA-Adj (mg-year/kg-day) =
				SSAF-C	Soil to Skin Adherence Factor, Child	0.2	mg/cm^2-day	EPA, 2004	
				DA-Adj	Dermal Absorption, Age-adjusted	361	mg-year/kg-day	Calculated	(ED-C x SA-C x SSAF-C / BW-C) + (ED-A x SA-A x SSAF-A / BW-A)
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 1995; EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE 4.6.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Construction Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004, (3)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (4)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	125	days/year	(1)	
				ED	Exposure Duration	1	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.2	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE 4.6.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Soil*

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Trespasser/Visitor	Adult	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.07	mg/cm^2-day	EPA, 2004	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Adolescent	Soil*	CS	Chemical Concentration in Soil	See Table 3.6.RME	mg/kg	See Table 3.6.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,900	cm^2	EPA, 2004, (8)	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004, (9)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(5)	
				ED	Exposure Duration	9	years	(6)	
				BW	Body Weight	51	kg	EPA, 1997, (7)	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

Notes:

* Surface soil & subsurface soil combined

(1) Assumed duration of construction project is 1/2 of a working year.

(2) Professional Judgement assuming 1 day per week for one-half the year (i.e., 26 weeks).

(3) Surface area for commercial/industrial worker.

(4) Soil to skin adherence factor is based on 95th percentile adherence factor for construction workers.

(5) Professional Judgement assuming 2 day per week for 26 weeks per year.

(6) Professional Judgement assuming adolescents from 9 to 18 years of age.

(7) Body weight is average value for the 9 year old and 18 year old male body weight.

(8) Surface area includes face, forearms, hands, and lower legs for children 9-18 year old.

(9) Soil to skin adherence factor is based on 95th percentile adherence factor for soccer players #1 (age 13-15 years).

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1995: Assessing Dermal Exposure from Soil. EPA Region III. EPA/903-K-95-003.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

TABLE 4.67RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ET	Exposure Time	24	hour/day	--	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 1996	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 1996	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	24	hour/day	--	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	- -	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 1996	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 1996	CA (mg/m3) = CS (1/PEF + 1/VF)
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ET	Exposure Time	24	hr/day	EPA, 1991	
				ED	Exposure Duration	30	years	EPA, 2002	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE 4.67RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	- -	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 1996	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 1996	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	8	hr/day	(1)	
				EF	Exposure Frequency	125	days/year	(1)	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3	- -	CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 1996	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 1996	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	8	hr/day	(2)	
				EF	Exposure Frequency	250	days/year	EPA, 1991	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	
	Trespasser/Visitor	Adult	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(3)	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	

TABLE 4.67RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Soil*
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Trespasser/Visitor	Adolescent	Emissions from Soil*	CS	Chemical Concentration in Soil	See Table 3.7.RME	mg/kg	See Table 3.7.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calc	mg/m^3		CA x ET x EF x ED x CF x 1/AT
				PEF	Particulate Emissions Factor	1.32E+09	m^3/kg	EPA, 2002	
				VF	Volatilization Factor for volatile constituents	calc	m^3/kg	EPA, 2002	CA (mg/m^3) = CS (1/PEF + 1/VF)
				ET	Exposure Time	4	hr/day	(3)	
				EF	Exposure Frequency	52	days/year	(3)	
				ED	Exposure Duration	9	years	(4)	
				CF	Conversion Factor 1	1/24	day/hr	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	3,285	days	EPA, 1989	

* Surface soil & subsurface soil combined

(1) Professional Judgement. Assumed duration of construction project is 1/2 of a working year, and construction workers work 8 hours/day.

(2) Professional Judgement. Assume 8 hour workday

(3) Professional Judgement assuming 2 day per week for 26 weeks per year, and 4 hours per day.

(4) Professional Judgement assuming adolescents from 9 to 18 years of age.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1996: Soil Screening Guidance: User's Guide. OSWER. EPA/540/R-96/018.

EPA, 2002: Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites. OSWER 9355.4-24.

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	Chronic Daily Intake (CDI) (mg/kg-day) = CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				IR-W	Ingestion Rate of Water	2	liters/day	EPA, 1997	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) = CW x IR-W x EF x ED x CF2 x 1/BW x 1/AT
				IR-W	Ingestion Rate of Water	1	liters/day	EPA, 1997	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) = CW x IR-W-Adj x EF x CF2 x 1/AT
				IR-W-A	Ingestion Rate of Water, Adult	2	liters/day	EPA, 1997	
				IR-W-C	Ingestion Rate of Water, Child	1	liters/day	EPA, 1997	
				IR-W-Adj	Ingestion Rate of Water, Age-adjusted	1.09	liter-year/kg-day	calculated	IR-W-Adj (liter-year/kd-day) = (ED-C x IR-W-C / BW-C) + (ED-A x IR-W-A / BW-A)
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Resident	Adult	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm^2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	0.58	hr/event	EPA, 2004	t_{event}<t*: DAevent (mg/cm^2-event) =
				SA	Skin Surface Area Available for Contact	18,000	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	350	days/year	EPA, 2004	
				ED	Exposure Duration	24	years	EPA, 2004	t_{event}>t*: DAevent (mg/cm^2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + $3B^2$)/$(1+B)^2$)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	l/cm^3	- -	
Dermal	Resident	Child	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm^2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	1.0	hr/event	EPA, 2004	t_{event}<t*: DAevent (mg/cm^2-event) =
				SA	Skin Surface Area Available for Contact	6,600	cm^2	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	350	days/year	EPA, 2004	
				ED	Exposure Duration	6	years	EPA, 2004	t_{event}>t*: DAevent (mg/cm^2-event) =

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Child	Shallow Groundwater Tap Water	BW	Body Weight	15	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x ((1 + 3B + $3B^2$)/$(1+B)^2$)) x CF2 x CF3
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	l/cm^3	- -	
		Child/Adult	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) = DA-Adj x EF x 1/AT
				DAevent-A	Dermally Absorbed Dose per Event, Ad	calculated	mg/cm^2-event	calculated	
				DAevent-C	Dermally Absorbed Dose per Event, Ch	calculated	mg/cm^2-event	calculated	DA-Adj = (Daevent-A x SA-A x ED-A x 1/BW-A)
				DA-Adj	Dermally Absorbed Dose, Age-adjusted	calculated	mg-year/event-kg	calculated	+ (Daevent-C x SA-C x ED-C x 1/BW-C)
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm^2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}-A	Event Time, Adult	0.58	hr/event	EPA, 2004	t_{event}<t*: DAevent (mg/cm^2-event) =
				t_{event}-C	Event Time, Child	1.0	hr/event	EPA, 2004	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				SA-A	Skin Surface Area, Adult	18,000	cm^2	EPA, 2004	x CF2 x CF3
				SA-C	Skin Surface Area, Child	6,600	cm^2	EPA, 2004	
				EV	Event Frequency	1	events/day	EPA, 2004	t_{event}>t*: DAevent (mg/cm^2-event) =
				EF	Exposure Frequency	350	days/year	EPA, 2004	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				ED-A	Exposure Duration, Adult	24	years	EPA, 2004	((1 + 3B + $3B^2$)/$(1+B)^2$)) x CF2 x CF3
				ED-C	Exposure Duration, Child	6	years	EPA, 2004	
				BW-A	Body Weight, Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	l/cm^3	- -	

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Resident	Adult	Shallow Groundwater Tap Water	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm^2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	8	hr/day	(1)	t_{event}<t*: DAevent (mg/cm^2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004, (2)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	125	days/year	VDEQ, 2010	
				ED	Exposure Duration	1	years	EPA, 1991	t_{event}>t*: DAevent (mg/cm^2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	((1 + 3B + 3B^2)/(1+B)^2)) x CF2 x CF3
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	l/cm^3	- -	
	Construction Worker	Adult	Shallow Groundwater in Excavation	CW	Chemical Concentration in Water	See Table 3.8.RME	µg/l	See Table 3.8.RME	CDI (mg/kg-day) =
				DAevent	Dermally Absorbed Dose per Event	calculated	mg/cm^2-event	calculated	DAevent x SA x EV x EF x ED x 1/BW x 1/AT
				FA	Fraction absorbed water	chemical specific	dimensionless	EPA, 2004	
				K_p	Permeability Coefficient	chemical specific	cm/hr	EPA, 2004	Inorganics: DAevent (mg/cm^2-event) =
				τ	Lag Time	chemical specific	hr/event	EPA, 2004	Kp x CW x t_{event} x CF2 x CF3
				t*	Time to Reach Steady-state	chemical specific	hours	EPA, 2004	
				B	Ratio of Permeability of Stratum Corneum to Epidermis	chemical specific	dimensionless	EPA, 2004	Organics :
				t_{event}	Event Time	8	hr/day	(1)	t_{event}<t*: DAevent (mg/cm^2-event) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004, (2)	2 x FA x Kp x CW x (sqrt((6 x τ x t_{event})/π))
				EV	Event Frequency	1	events/day	EPA, 2004	x CF2 x CF3
				EF	Exposure Frequency	125	days/year	VDEQ, 2010	
				ED	Exposure Duration	1	years	EPA, 1991	t_{event}>t*: DAevent (mg/cm^2-event) =
				BW	Body Weight	70	kg	EPA, 1991	FA x Kp x CW x (t_{event}/(1+B) + 2 x τ x

TABLE 4.8.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Groundwater

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal (continued)	Construction Worker	Adult	Shallow Groundwater in Excavation	AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	$((1 + 3B + 3B^2)/(1+B)^2)) \times CF2 \times CF3$
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
				CF2	Conversion Factor 2	0.001	mg/µg	- -	
				CF3	Conversion Factor 3	0.001	l/cm^3	- -	

(1) Professional judgment based on construction activities that would occur 8 hrs per day for the RME.

(2) Skin surface area in contact with groundwater assumed to be hands, forearms, lower legs, and feet.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

VDEQ, 2010: Viriginia Department of Enviromental Quality, Voluntary Remediaion Program Risk Assessment Guidance.

TABLE 4.9.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Resident	Adult	Shallow Groundwater - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Table 3.9.RME	µg/l	See Table 3.9.RME	Exposure Concentration (EC) (mg/m^3) =
				CAa	Chemical Concentration in Air from Show	Calculated	mg/m^3	Calculated	CAa x ETa x EDa x EF x CF1 x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDa	Exposure Duration	24	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				ETa	Exposure Time	0.58	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Shallow Groundwater - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Table 3.9.RME	µg/l	See Table 3.9.RME	Exposure Concentration (EC) (mg/m^3) =
				CAc	Chemical Concentration in Air from Show	Calculated	mg/m^3	Calculated	CA_c x ET_c x ED_c x EF x CF1 x 1/AT
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDc	Exposure Duration	6	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				ETc	Exposure Time	1	hr/day	EPA, 2004	calculate Ca-a and Ca-c
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Shallow Groundwater - Water Vapors at Showerhead	CW	Chemical Concentration in Water	See Table 3.9.RME	µg/l	See Table 3.9.RME	Exposure Concentration (EC) (mg/m^3) =
				Ca-a	Air Concentration for shower, Adult	Calculated	ug/m^3	Calculated	(CAc x ETc x EDc + CAa x ETa x EDa) x EF x CF1 x 1/AT
				Ca-c	Air Concentration for shower, child	Calculated	ug/m^3	Calculated	
				EF	Exposure Frequency	350	days/year	EPA, 1991	
				EDa	Exposure Duration, Adult	24	years	EPA, 1991	Use Foster & Chrostowski Shower model to
				EDc	Exposure Duration, Child	6	years	EPA, 1991	calculate Ca-a and Ca-c
				ETa	Exposure Time	0.58	hr/day	EPA, 2004	
				ETc	Exposure Time	1	hr/day	EPA, 2004	
				CF1	Conversion Factor 1	1/24	day/hour	- -	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	

TABLE 4.9.RME

VALUES USED FOR DAILY INTAKE CALCULATIONS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Air

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Inhalation	Construction Worker	Adult	Shallow Groudnwater - Water Vapors at Excavation Pit	CW	Chemical Concentration in Water	See Table 3.9.RME	µg/l	See Table 3.9.RME	Exposure Concentration (EC) (mg/m^3) =
				CA	Chemical Concentration in Air	calculated	mg/m^3		CA x ET x EF x ED x CF1 x 1/AT
				ET	Exposure Time	8	hr/day	(1)	
				EF	Exposure Frequency	125	days/year	VDEQ, 2010	
				ED	Exposure Duration	1	years	EPA, 1991	CA calculated using Virginia Voluntary Remediation
				CF1	Conversion Factor 1	1/24	day/hour	- -	Program Method
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	

Notes:

(1) Professional judgment based on construction activities that would occur 8 hrs per day for the RME.

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.

EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.

EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

VDEQ, 2010: Viriginia Department of Envirommental Quality, Voluntary Remediaion Program Risk Assessment Guidance.

TABLE 4.10.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Ingestion	Resident	Adult	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	50	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	24	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
		Child	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S	Ingestion Rate of Soil	100	mg/day	(1)	CS x IR-S x EF x ED x CF1 x 1/BW x 1/AT
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	6	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
		Child/Adult	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-S-A	Ingestion Rate of Soil, Adult	50	mg/day	(1)	CS x IR-S-Adj x EF x CF1 x 1/AT
				IR-S-C	Ingestion Rate of Soil, Child	100	mg/day	(1)	
				IR-S-Adj	Ingestion Rate of Soil, Age-adjusted	57.14	mg-year/kg-day	Calculated	IR-S-Adj (mg-year/kd-day) =
				EF	Exposure Frequency	52	days/year	(2)	(ED-C x IR-S-C / BW-C) + (ED-A x IR-S-A / BW-A)
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
Ingestion	Construction Worker	Adult	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				IR-Sed	Ingestion Rate of Sediment	240	mg/day	EPA, 1991 (1)	CSed x IR-Sed x EF x ED x CF3 x 1/BW x 1/AT
				EF	Exposure Frequency	10	days/year	Prof Judgment (3)	
				ED	Exposure Duration	1	years	EPA, 1991	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Sediment	CSed	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	Chronic Daily Intake (CDI) (mg/kg-day) =
				IR-Sed	Ingestion Rate of Sediment	50	mg/day	Prof. Judgment (1)	CSed x IR-Sed x EF x ED x CF x 1/BW x 1/AT
				EF	Exposure Frequency	10	days/year	Prof. Judgment (4)	
				ED	Exposure Duration	25	years	EPA, 1991	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE 4.10.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name
Dermal	Resident	Adult	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004 (5)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 1995; EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	24	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	8,760	days	EPA, 1989	
	Resident	Child	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	2,800	cm^2	EPA, 2004	CS x SA x SSAF x DABS x CF1 x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004 (5)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 2004	
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(2)	
				ED	Exposure Duration	6	years	EPA, 1991	
				BW	Body Weight	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	2,190	days	EPA, 1989	
	Resident	Child/Adult	Sediment	CS	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA-A	Skin Surface Area Available for Contact, Adult	5,700	cm^2	EPA, 2004	CS x DA-Adj x DABS x CF1 x EF x 1/AT
				SA-C	Skin Surface Area Available for Contact, Child	2,800	cm^2	EPA, 2004	
				SSAF-A	Soil to Skin Adherence Factor, Adult	0.3	mg/cm^2-day	EPA, 2004 (5)	DA-Adj (mg-year/kg-day) =
				SSAF-C	Soil to Skin Adherence Factor, Child	0.3	mg/cm^2-day	EPA, 2004 (5)	
				DA-Adj	Dermal Absorption, Age-adjusted	922	mg-year/kg-day	Calculated	(ED-C x SA-C x SSAF-C / BW-C)
				DABS	Dermal Absorption Factor Solids	Chemical specific	--	EPA, 1995; EPA, 2004	+ (ED-A x SA-A x SSAF-A / BW-A)
				CF1	Conversion Factor 1	0.000001	kg/mg	- -	
				EF	Exposure Frequency	52	days/year	(1)	
				ED-A	Exposure Duration, Adult	24	years	EPA, 1991	
				ED-C	Exposure Duration, Child	6	years	EPA, 1991	
				BW-A	Body Weight , Adult	70	kg	EPA, 1991	
				BW-C	Body Weight, Child	15	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
Dermal	Construction Worker	Adult	Sediment	CSed	Chemical Concentration in Sediment	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	5,700	cm^2	EPA, 2004, (6)	CSed x SA x SSAF x DABS x CF3 x EF x
				SSAF	Soil to Skin Adherence Factor	0.6	mg/cm^2-day	EPA, 2004, (7)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF3	Conversion Factor 3	0.000001	kg/mg	- -	
				EF	Exposure Frequency	10	days/year	Prof Judgment (3)	
				ED	Exposure Duration	1	years	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	365	days	EPA, 1989	
	Industrial Worker	Adult	Sediment	CSed	Chemical Concentration in Soil	See Table 3.5.RME	mg/kg	See Table 3.5.RME	CDI (mg/kg-day) =
				SA	Skin Surface Area Available for Contact	3,300	cm^2	EPA, 2004	CSed x SA x SSAF x DABS x CF x EF x
				SSAF	Soil to Skin Adherence Factor	0.3	mg/cm^2-day	EPA, 2004 (5)	ED x 1/BW x 1/AT
				DABS	Dermal Absorption Factor Solids	chem specific	--	EPA, 2004	
				CF	Conversion Factor	0.000001	kg/mg	- -	
				EF	Exposure Frequency	10	days/year	Prof Judgment (4)	
				ED	Exposure Duration	25	days/year	EPA, 1991	
				BW	Body Weight	70	kg	EPA, 1991	
				AT-C	Averaging Time (Cancer)	25,550	days	EPA, 1989	
				AT-N	Averaging Time (Non-Cancer)	9,125	days	EPA, 1989	

TABLE 4.10.RME
VALUES USED FOR DAILY INTAKE CALCULATIONS
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Medium: Sediment
Exposure Medium: Sediment

Exposure Route	Receptor Population	Receptor Age	Exposure Point	Parameter Code	Parameter Definition	Value	Units	Rationale/ Reference	Intake Equation/ Model Name

(1) Professional Judgement assuming 1/2 the default value for the residential, construction worker, and industruil worker soil scenarios.
(2) Professional Judgement assuming 1 day a week.
(3) Professional judgment assuming construction worker in contact with sediment 10 days (2 weeks) per construction activity.
(4) Assume industrial worker would contact sediment two weeks per year.
(5) RME SSAF is geometric mean soil adherence factor for reed gatherers.
(6) The skin surface area includes hands, forearms, lower legs, and feet.
(7) RME SSAF is geometric mean soil adherence factor for pipe layers (wet soil).

Sources:

EPA, 1989: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual, Part A. OERR. EPA/540/1-89/002.
EPA, 1991: Risk Assessment Guidance for Superfund. Vol.1: Human Health Evaluation Manual - Supplemental Guidance, Standard Default Exposure Factors. Interim Final. OSWER Directive 9285.6-03.
EPA, 1997: Exposure Factors Handbook. EPA/600/P-95/002Fa.
EPA, 2004 . Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment (Final). EPA/540/R/99/005. July 2004.

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ (3)	Dates of RfD: Target Organ (4) (MM/DD/YY)
Benzo(a)anthracene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(a)pyrene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(b)fluoranthene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo(k)fluoranthene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chrysene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenz(a,h)anthracene	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dibenzofuran	Chronic	1.0E-03	mg/kg-day	100%	1.0E-03	mg/kg-day	Organ Weight, Whole Body	10000	PPRTV Appendix	6/11/2007
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	Chronic	4.0E-02	mg/kg-day	100%	4.0E-02	mg/kg-day	Nephropathy, increased liver weights, hematological	3000 / 1	IRIS	2/13/2011
	Subchronic	4.0E-01	mg/kg-day	1.0E+00	4.0E-01	mg/kg-day	Nephropathy, liver weights, hematological changes	300	HEAST	7/1/1997
Indeno(1,2,3-cd)pyrene	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Naphthalene	Chronic	2.0E-02	mg/kg-day	100%	2.0E-02	mg/kg-day	Decreased Body Weight	3000/1	IRIS	2/13/2011
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitroglycerin	Chronic	1.0E-04	mg/kg-day	100%	1.0E-04	mg/kg-day	Acute vasodilation	300	PPRTV	8/22/2006
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	Chronic	3.0E-02	mg/kg-day	100%	3.0E-02	mg/kg-day	Kidney	3000/1	IRIS	2/13/2011
	Subchronic	3.0E-01	mg/kg-day	100%	3.0E-01	mg/kg-day	Kidney	300	HEAST	7/1/1997
4,4'-DDD	Chronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dieldrin	Chronic	5.0E-05	mg/kg-day	100%	5.0E-05	mg/kg-day	Liver	100/1	IRIS	2/13/2011
	Subchronic	5.0E-05	mg/kg-day	100%	5.0E-05	mg/kg-day	Liver	100	HEAST	7/1997
Heptachlor	Chronic	5.0E-04	mg/kg-day	100%	5.0E-04	mg/kg-day	Liver	300/1	IRIS	2/13/2011
	Subchronic	5.0E-04	mg/kg-day	100%	5.0E-04	mg/kg-day	Liver	300	HEAST	7/1/1997
Heptachlor epoxide	Chronic	1.3E-05	mg/kg-day	100%	1.3E-05	mg/kg-day	Liver	1000/1	IRIS	1/19/2011
	Subchronic	1.3E-05	mg/kg-day	100%	1.3E-05	mg/kg-day	Liver	1000	HEAST	7/1/1997
2,3,7,8-TCDD TEQ (5)	Chronic	1.0E-09	mg/kg-day	Generally > 50%	1.0E-09	mg/kg-day	Developmental	90	ATSDR (RSL)	11/11/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ (3)	Dates of RfD: Target Organ (4) (MM/DD/YY)
Aluminum	Chronic	1.0E+00	mg/kg-day	100%	1.0E+00	mg/kg-day	Neurological	100	PPRTV	10/23/2006
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Arsenic	Chronic	3.0E-04	mg/kg-day	95%	3.0E-04	mg/kg-day	Skin, Vascular	3/1	IRIS	11/23/2010
	Subchronic	3.0E-04	mg/kg-day	95%	3.0E-04	mg/kg-day	Skin	3	HEAST	7/1997
Chromium (III)	Chronic	1.5E+00	mg/kg-day	1.3%	2.0E-02	mg/kg-day	No Observed Effect	100/10	IRIS	2/13/2011
	Subchronic	1.0E+00	mg/kg-day	1.3%	1.3E-02	mg/kg-day	No Observed Effect	1000	HEAST	7/1/1997
Chromium (VI)	Chronic	3.0E-03	mg/kg-day	2.5%	7.5E-05	mg/kg-day	No Observed Effect	300/3	IRIS	2/13/2011
	Subchronic	2.0E-02	mg/kg-day	2.5%	5.0E-04	mg/kg-day	No Observed Effect	100	HEAST	7/1997
Cobalt	Chronic	3.0E-04	mg/kg-day	100%	3.0E-04	mg/kg-day	Thyroid	1000	PPRTV	8/25/2008
	Subchronic	3.0E-03	mg/kg-day	100%	3.0E-04	mg/kg-day	Thyroid	300	PPRTV	8/25/2008
Iron	Chronic	7.0E-01	mg/kg-day	100%	7.0E-01	mg/kg/day	Gastrointestinal	1.5	PPRTV	9/11/2006
	Subchronic	7.0E-01	mg/kg-day	100%	7.0E-01	mg/kg/day	Gastrointestinal	1.5	PPRTV	9/11/2006
Lead	Chronic/Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese (diet)	Chronic	1.4E-01	mg/kg-day	100%	1.4E-01	mg/kg-day	CNS	1/1	IRIS	2/13/2011
	Subchronic	1.4E-01	mg/kg-day	100%	1.4E-01	mg/kg-day	CNS	1	HEAST	7/1/1997
Manganese (water)	Chronic	2.4E-02	mg/kg-day	4%	9.6E-04	mg/kg-day	CNS	1/1	RSL	11/11/2010
	Subchronic	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	Chronic	3.0E-04	mg/kg-day	7%	2.1E-05	mg/kg-day	Auto-immune effects	1000 / 1	IRIS	2/18/2011
	Subchronic	3.0E-03	mg/kg-day	7%	2.1E-04	mg/kg-day	Auto-immune effects	100	HEAST	7/1997
Vanadium	Chronic	5.0E-03	mg/kg-day	2.6%	1.3E-04	mg/kg-day	Hair Cystine	100/1	RSL	11/11/2010
	Subchronic	7.0E-03	mg/kg-day	2.6%	1.8E-04	mg/kg-day	--	1.0E+02	HEAST	7/1/1997

NA = Not Applicable or Not Available.

(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment (Final).
Section 4.2 and Exhibit 4-1. USEPA recommends that the oral RfD should not be adjusted to estimate the absorbed dose for compounds when the absorption efficiency is greater than 50%.
Constituents with oral absorption efficiencies greater than 50%, or without reported oral absorption efficiencies, are shown with an oral absorption efficiency of 100%.

(2) Adjusted Dermal RfD = RfD (oral) x Oral to Dermal Adjustment Factor

(3) ATSDR = Agency for Toxic Substances and Disease Registry
HEAST = Health Effects Summary Tables
IRIS = Integrated Risk Information System
PPRTV = Provisional Peer Reviewed Toxicity Value, Superfund Health Technical Support Center
RSL = Regional Screening Level Table

TABLE 5.1

NON-CANCER TOXICITY DATA -- ORAL/DERMAL

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal RfD (2)	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfD: Target Organ (3)	Dates of RfD: Target Organ (4) (MM/DD/YY)

(4) For ATSDR values, the date of the ATSDR toxicity profile

For HEAST values, date of HEAST document.

For IRIS values, the date IRIS was searched.

For PPRTV values, date of the PPRTV document.

For RSL values, date of RSL Table.

(5) 2,3,7,8-TCDD toxicity values used for the dioxin-like PCB congeners.

TABLE 5.2

NON-CANCER TOXICITY DATA -- INHALATION

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Chronic/ Subchronic	Value Inhalation RfC	Units	Primary Target Organ	Combined Uncertainty/Modifying Factors	Sources of RfC:RfD: Target Organ (1)	Dates (2) (MM/DD/YY)
Naphthalene	Chronic Subchronic	3.0E-03 NA	mg/m^3 NA	Nasal, Respiratory NA	3000/1 NA	IRIS NA	2/13/2011 NA
Chromium (VI) (4)	Chronic Subchronic	1.0E-04 NA	mg/m^3 NA	Respiratory System NA	300/1 NA	IRIS NA	2/13/2011 NA

NA = Not Applicable or Not Available

(1) HEAST = Health Effects Summary Tables

IRIS = Integrated Risk Information System

(2) For HEAST values, date of HEAST document.

For IRIS values, the date IRIS was searched.

(4) Chromium Particulates

TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (2)	Units	EPA Carcinogen Group (3)	Source (4)	Date (5) (MM/DD/YY)
Benzo(a)anthracene (6)	7.3E-01	58-89%	7.3E-01	(mg/kg-day) $^{-1}$	B2	ECA (RSL)	11/11/2010
Benzo(a)pyrene (6)	7.3E+00	58-89%	7.3E+00	(mg/kg-day) $^{-1}$	B2	IRIS	1/19/2011
Benzo(b)fluoranthene (6)	7.3E-01	58-89%	7.3E-01	(mg/kg-day) $^{-1}$	B2	ECA (RSL)	11/11/2010
Benzo(k)fluoranthene (6)	7.3E-02	58-89%	7.3E-02	(mg/kg-day) $^{-1}$	B2	ECA (RSL)	11/11/2010
Chrysene (6)	7.3E-03	100%	7.3E-03	(mg/kg-day) $^{-1}$	B2	NCEA	7/1993
Dibenz(a,h)anthracene (6)	7.3E+00	58-89%	7.3E+00	(mg/kg-day) $^{-1}$	B2	ECA (RSL)	11/11/2010
Dibenzofuran	NA	NA	NA	NA	NA	NA	NA
Fluoranthene	NA	NA	NA	NA	D	IRIS	2/18/2011
Indeno(1,2,3-cd)pyrene (6)	7.3E-01	58-89%	7.3E-01	(mg/kg-day) $^{-1}$	B2	ECA (RSL)	11/11/2010
Naphthalene	NA	NA	NA	NA	C	IRIS	2/18/2011
Nitroglycerin	1.7E-02	100%	1.7E-02	(mg/kg-day) $^{-1}$	NA	PPRTV	9/13/2005
Pyrene	NA	NA	NA	NA	D	IRIS	2/18/2011
4,4'-DDD	2.4E-01	Generally > 50%	3.4E-01	(mg/kg-day) $^{-1}$	B2	IRIS	2/1/2011
Dieldrin	1.6E+01	100%	1.6E+01	(mg/kg-day) $^{-1}$	B2	IRIS	1/12/2011
Heptachlor	4.5E+00	100%	4.5E+00	(mg/kg-day) $^{-1}$	B2	IRIS	2/13/2011
Heptachlor epoxide	9.1E+00	100%	9.1E+00	(mg/kg-day) $^{-1}$	B2	IRIS	2/13/2011
2,3,7,8-TCDD TEQ (7)	1.3E+05	> 50%	1.3E+05	(mg/kg-day) $^{-1}$	B2	CalEPA (RSL)	11/11/2010
Aluminum	NA	NA	NA	NA	NA	NA	NA
Arsenic	1.5E+00	95%	1.5E+00	(mg/kg-day) $^{-1}$	A	IRIS	11/23/2010
Chromium (III)	NA	NA	NA	NA	D	IRIS	11/23/2010
Chromium (VI) (6)	5.0E-01	2.5%	2.0E+01	(mg/kg-day) $^{-1}$	D	NJ	11/23/2010
Cobalt	NA	NA	NA	NA	NA	NA	NA
Iron	NA	NA	NA	NA	NA	NA	NA
Lead	NA	NA	NA	NA	B2	IRIS	2/18/2011
Manganese	NA	NA	NA	NA	D	IRIS	11/23/2010
Mercury	NA	NA	NA	NA	C	IRIS	2/18/2011
Vanadium	NA	NA	NA	NA	NA	NA	NA

TABLE 6.1

CANCER TOXICITY DATA -- ORAL/DERMAL

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Oral Cancer Slope Factor	Oral to Dermal Adjustment Factor (1)	Adjusted Dermal Cancer Slope Factor (2)	Units	EPA Carcinogen Group (3)	Source (4)	Date (5) (MM/DD/YY)

N/A-Not available

(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual, Part E, Supplemental Guidance for Dermal Risk Assessment (Final).
Section 4.2 and Exhibit 4-1. USEPA recommends that the oral RfD should not be adjusted to estimate the absorbed dose for compounds when the absorption efficiency is greater than 50%.
Constituents with oral absorption efficiencies greater than 50%, or without reported oral absorption efficiencies, are shown with an oral absorption efficiency of 100%.

(2) Adjusted Dermal CSF = CSF (oral) / Oral to Dermal Adjustment Factor

(3) EPA Carcinogen Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

IARC Carcinogen Group:

2A: The agent is probably carcinogenic to humans

2B: The agent is possibly carcinogenic to humans

(4) CalEPA = California EPA
IRIS = Integrated Risk Information System
NCEA = National Center for Environmental Assessment
NJ = New Jersey DEP

(5) For CalEPA values, the date CalEPA toxicity database was searched.
For IRIS values, the date IRIS was searched.
For NCEA values, the date of the NCEA document.
For New Jersey values, the date New Jersey DEP toxicity database was searched.

(6) This chemical operates with a mutagenic mode of action (USEPA 2005).
Chemical-specific data are not available, thus, USEPA (2005) default age-dependant adjustment factors (ADAF) will be applied to the slope factor as follows:

AGE	AGE ADAF
0<2	2
2>6	4
6>16	10
16<30	14

(7) 2,3,7,8-TCDD toxicity values used for the dioxin-like PCB congeners.

TABLE 6.2

CANCER TOXICITY DATA -- INHALATION

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Unit Risk	Units	Weight of Evidence/ Cancer Guidance Description (1)	Source (2)	Date (3) (MM/DD/YY)
Naphthalene	3.4E-05	$(ug/m^3)^{-1}$	2B	CalEPA	2/13/2011
Chromium (VI) (4)	8.4E-02	$(ug/m^3)^{-1}$	A	IRIS (RSL) (5)	2/13/2011

(1) EPA Group:

A - Human carcinogen

B1 - Probable human carcinogen - indicates that limited human data are available

B2 - Probable human carcinogen - indicates sufficient evidence in animals and inadequate or no evidence in humans

C - Possible human carcinogen

D - Not classifiable as a human carcinogen

E - Evidence of noncarcinogenicity

IARC Carcinogen Group:

2A: The agent is probably carcinogenic to humans

2B: The agent is possibly carcinogenic to humans

(2) CalEPA = California EPA

IRIS = Integrated Risk Information System

(3) For CalEPA values, the date CalEPA toxicity database was searched.

For IRIS values, the date IRIS was searched.

(4) This chemical operates with a mutagenic mode of action (USEPA 2005).

Chemical-specific data are not available, thus, USEPA (2005) default age-dependant adjustment factors (ADAF) will be applied to the slope factor as follows:

AGE	AGE ADAF
0<2	2
2>6	4
6>16	10
16<30	14

(5) Value represents the interpretation of the Mancuso study. The IRIS IUR is multiplied by 7.

TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	Surface Soil	Ingestion													
				Benzo(a)anthracene	5.0E+01	mg/kg	3.5E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.5E-06	1.0E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	5.3E+01	mg/kg	3.7E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.7E-05	1.1E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	5.3E+01	mg/kg	3.7E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.7E-06	1.1E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	4.4E+01	mg/kg	3.1E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	2.2E-07	9.0E-06	mg/kg/day	NA	NA	NA
				Chrysene	5.3E+01	mg/kg	3.7E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	2.7E-08	1.1E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.3E+01	mg/kg	9.0E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	6.6E-06	2.6E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	3.9E+00	mg/kg	2.7E-07	mg/kg/day	NA	NA	NA	7.9E-07	mg/kg/day	1.0E-03	mg/kg/day	7.9E-04
				Fluoranthene	1.0E+02	mg/kg	7.1E-06	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	4.0E-02	mg/kg/day	5.2E-04
				Indeno(1,2,3-cd)pyrene	3.5E+01	mg/kg	2.5E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.8E-06	7.2E-06	mg/kg/day	NA	NA	NA
				Naphthalene	5.4E-01	mg/kg	3.8E-08	mg/kg/day	NA	NA	NA	1.1E-07	mg/kg/day	2.0E-02	mg/kg/day	5.5E-06
				Pyrene	8.2E+01	mg/kg	5.7E-06	mg/kg/day	NA	NA	NA	1.7E-05	mg/kg/day	3.0E-02	mg/kg/day	5.5E-04
				Dieldrin	8.1E-03	mg/kg	5.7E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	9.1E-09	1.7E-09	mg/kg/day	5.0E-05	mg/kg/day	3.3E-05
				2,3,7,8-TCDD TEQ	3.0E-06	mg/kg	2.1E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	2.7E-08	6.1E-13	mg/kg/day	1.0E-09	mg/kg/day	6.1E-04
				Nitroglycerin	1.9E+00	mg/kg	1.3E-07	mg/kg/day	NA	NA	NA	3.9E-07	mg/kg/day	1.0E-04	mg/kg/day	3.9E-03
				Aluminum	9.7E+03	mg/kg	6.7E-04	mg/kg/day	NA	NA	NA	2.0E-03	mg/kg/day	1.0E+00	mg/kg/day	2.0E-03
				Arsenic	2.7E+01	mg/kg	1.9E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.9E-06	5.6E-06	mg/kg/day	3.0E-04	mg/kg/day	1.9E-02
				Chromium	1.6E+01	mg/kg	1.1E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	5.5E-07	3.2E-06	mg/kg/day	3.0E-03	mg/kg/day	1.1E-03
				Cobalt	7.4E+00	mg/kg	5.2E-07	mg/kg/day	NA	NA	NA	1.5E-06	mg/kg/day	3.0E-04	mg/kg/day	5.0E-03
				Iron	1.7E+04	mg/kg	1.2E-03	mg/kg/day	NA	NA	NA	3.4E-03	mg/kg/day	7.0E-01	mg/kg/day	4.8E-03
				Manganese	2.5E+02	mg/kg	1.7E-05	mg/kg/day	NA	NA	NA	5.0E-05	mg/kg/day	1.4E-01	mg/kg/day	3.6E-04
				Mercury	6.6E+00	mg/kg	4.6E-07	mg/kg/day	NA	NA	NA	1.3E-06	mg/kg/day	3.0E-04	mg/kg/day	4.5E-03
				Vanadium	3.9E+01	mg/kg	2.7E-06	mg/kg/day	NA	NA	NA	7.9E-06	mg/kg/day	5.0E-03	mg/kg/day	1.6E-03
			Exp. Route Total								4.4E-05					4.4E-02

TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	5.0E+01	mg/kg	1.8E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.3E-06	5.2E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.4E-05	5.6E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.4E-06	5.6E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	4.4E+01	mg/kg	1.6E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	1.2E-07	4.7E-06	mg/kg/day	NA	NA	NA
				Chrysene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	1.4E-08	5.5E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.3E+01	mg/kg	4.7E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.4E-06	1.4E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	3.9E+00	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	3.1E-07	mg/kg/day	1.0E-03	mg/kg/day	3.1E-04
				Fluoranthene	1.0E+02	mg/kg	3.7E-06	mg/kg/day	NA	NA	NA	1.1E-05	mg/kg/day	4.0E-02	mg/kg/day	2.7E-04
				Indeno(1,2,3-cd)pyrene	3.5E+01	mg/kg	1.3E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	9.3E-07	3.7E-06	mg/kg/day	NA	NA	NA
				Naphthalene	5.4E-01	mg/kg	2.0E-08	mg/kg/day	NA	NA	NA	5.7E-08	mg/kg/day	2.0E-02	mg/kg/day	2.9E-06
				Pyrene	8.2E+01	mg/kg	3.0E-06	mg/kg/day	NA	NA	NA	8.6E-06	mg/kg/day	3.0E-02	mg/kg/day	2.9E-04
				Dieldrin	8.1E-03	mg/kg	2.3E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	3.6E-09	6.6E-10	mg/kg/day	5.0E-05	mg/kg/day	1.3E-05
				2,3,7,8-TCDD TEQ	3.0E-06	mg/kg	2.5E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	3.2E-09	7.3E-14	mg/kg/day	1.0E-09	mg/kg/day	7.3E-05
				Nitroglycerin	1.9E+00	mg/kg	5.3E-08	mg/kg/day	NA	NA	NA	1.5E-07	mg/kg/day	1.0E-04	mg/kg/day	1.5E-03
				Aluminum	9.7E+03	mg/kg	2.7E-05	mg/kg/day	NA	NA	NA	7.9E-05	mg/kg/day	1.0E+00	mg/kg/day	7.9E-05
				Arsenic	2.7E+01	mg/kg	2.3E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	3.4E-07	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
				Chromium	1.6E+01	mg/kg	4.4E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	8.7E-07	1.3E-07	mg/kg/day	7.5E-05	mg/kg/day	1.7E-03
				Cobalt	7.4E+00	mg/kg	2.1E-08	mg/kg/day	NA	NA	NA	6.0E-08	mg/kg/day	3.0E-04	mg/kg/day	2.0E-04
				Iron	1.7E+04	mg/kg	4.6E-05	mg/kg/day	NA	NA	NA	1.3E-04	mg/kg/day	7.0E-01	mg/kg/day	1.9E-04
				Manganese	2.5E+02	mg/kg	6.8E-07	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	1.4E-01	mg/kg/day	1.4E-05
				Mercury	6.6E+00	mg/kg	1.8E-08	mg/kg/day	NA	NA	NA	5.3E-08	mg/kg/day	2.1E-05	mg/kg/day	2.5E-03
				Vanadium	3.9E+01	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	3.2E-07	mg/kg/day	1.3E-04	mg/kg/day	2.4E-03
			Exp. Route Total								2.2E-05					1.2E-02
		Exposure Point Total									6.7E-05					5.6E-02
	Exposure Medium Total										6.7E-05					5.6E-02

TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Air	Emissions from Surface Soil	Inhalation	Naphthalene	8.5E-06	mg/m^3	6.9E-08	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	2.4E-09	2.0E-07	mg/m^3	3.0E-03	mg/m^3	6.7E-05
				Chromium	1.1E-08	mg/m^3	9.4E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	7.9E-09	2.7E-10	mg/m^3	1.0E-04	mg/m^3	2.7E-06
			Exp. Route Total								1.0E-08					7.0E-05
		Exposure Point Total									1.0E-08					7.0E-05
	Exposure Medium Total										6.7E-05					5.6E-02
Surface Soil Total											6.7E-05					5.6E-02
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	6.9E-04	mg/kg/day	NA	NA	NA	2.0E-03	mg/kg/day	1.0E+00	mg/kg/day	2.0E-03
				Arsenic	9.5E+01	mg/kg	6.6E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	9.9E-06	1.9E-05	mg/kg/day	3.0E-04	mg/kg/day	6.4E-02
				Chromium	2.4E+01	mg/kg	1.7E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	8.4E-07	4.9E-06	mg/kg/day	3.0E-03	mg/kg/day	1.6E-03
				Cobalt	1.6E+01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	3.2E-06	mg/kg/day	3.0E-04	mg/kg/day	1.1E-02
				Iron	4.6E+04	mg/kg	3.2E-03	mg/kg/day	NA	NA	NA	9.4E-03	mg/kg/day	7.0E-01	mg/kg/day	1.3E-02
				Manganese	3.6E+02	mg/kg	2.5E-05	mg/kg/day	NA	NA	NA	7.3E-05	mg/kg/day	1.4E-01	mg/kg/day	5.2E-04
				Vanadium	1.2E+02	mg/kg	8.1E-06	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	5.0E-03	mg/kg/day	4.7E-03
			Exp. Route Total								1.1E-05					9.7E-02
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	2.7E-05	mg/kg/day	NA	NA	NA	8.0E-05	mg/kg/day	1.0E+00	mg/kg/day	8.0E-05
				Arsenic	9.5E+01	mg/kg	7.9E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.2E-06	2.3E-06	mg/kg/day	3.0E-04	mg/kg/day	7.7E-03
				Chromium	2.4E+01	mg/kg	6.7E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.3E-06	2.0E-07	mg/kg/day	7.5E-05	mg/kg/day	2.6E-03
				Cobalt	1.6E+01	mg/kg	4.3E-08	mg/kg/day	NA	NA	NA	1.3E-07	mg/kg/day	3.0E-04	mg/kg/day	4.2E-04
				Iron	4.6E+04	mg/kg	1.3E-04	mg/kg/day	NA	NA	NA	3.8E-04	mg/kg/day	7.0E-01	mg/kg/day	5.4E-04
				Manganese	3.6E+02	mg/kg	1.0E-06	mg/kg/day	NA	NA	NA	2.9E-06	mg/kg/day	1.4E-01	mg/kg/day	2.1E-05
				Vanadium	1.2E+02	mg/kg	3.2E-07	mg/kg/day	NA	NA	NA	9.4E-07	mg/kg/day	1.3E-04	mg/kg/day	7.2E-03
			Exp. Route Total								2.5E-06					1.9E-02
		Exposure Point Total									1.3E-05					1.2E-01
	Exposure Medium Total										1.3E-05					1.2E-01

TABLE 7.1.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	1.4E-10	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	1.2E-08	4.2E-10	mg/m^3	1.0E-04	mg/m^3	4.2E-06
			Exp. Route Total								1.2E-08					4.2E-06
		Exposure Point Total									1.2E-08					4.2E-06
	Exposure Medium Total										1.3E-05					1.2E-01
Ash Total											1.3E-05					1.2E-01
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	1.5E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.1E-07	4.5E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	4.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.0E-08	1.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	2.6E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.0E-07	7.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	5.8E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.9E-07	1.7E-06	mg/kg/day	3.0E-03	mg/kg/day	5.7E-04
				Cobalt	1.9E+01	mg/kg	6.7E-07	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.6E-03
			Exp. Route Total								8.3E-07					9.7E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	6.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.0E-07	2.0E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.3E-07	5.3E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	2.7E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.1E-07	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	2.0E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.0E-06	5.8E-07	mg/kg/day	7.5E-05	mg/kg/day	7.7E-03
				Cobalt	1.9E+01	mg/kg	2.3E-07	mg/kg/day	NA	NA	NA	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
			Exp. Route Total								5.0E-06					1.3E-02
		Exposure Point Total									5.8E-06					2.2E-02
	Exposure Medium Total										5.8E-06					2.2E-02
Sediment Total											5.8E-06					2.2E-02
Total of Receptor Risks Across All Media											8.6E-05	Total of Receptor Hazards Across All Media				1.9E-01
Total of Receptor Risks Across All Media (Ash)											1.9E-05	Total of Receptor Hazards Across All Media (Ash)				1.4E-01
Total of Receptor Risks Across All Media (Soil)											7.2E-05	Total of Receptor Hazards Across All Media (Soil)				7.9E-02

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Surface Soil	Surface Soil	Surface Soil	Ingestion													
				Benzo(a)anthracene	5.0E+01	mg/kg	1.8E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.3E-06	1.4E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.4E-05	1.5E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.4E-06	1.5E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	4.4E+01	mg/kg	1.6E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	1.2E-07	1.2E-05	mg/kg/day	NA	NA	NA
				Chrysene	5.3E+01	mg/kg	1.9E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	1.4E-08	1.5E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.3E+01	mg/kg	4.6E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.4E-06	3.6E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	3.9E+00	mg/kg	1.4E-07	mg/kg/day	NA	NA	NA	1.1E-06	mg/kg/day	1.0E-03	mg/kg/day	1.1E-03
				Fluoranthene	1.0E+02	mg/kg	3.7E-06	mg/kg/day	NA	NA	NA	2.9E-05	mg/kg/day	4.0E-02	mg/kg/day	7.1E-04
				Indeno(1,2,3-cd)pyrene	3.5E+01	mg/kg	1.3E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	9.2E-07	9.8E-06	mg/kg/day	NA	NA	NA
				Naphthalene	5.4E-01	mg/kg	2.0E-08	mg/kg/day	NA	NA	NA	1.5E-07	mg/kg/day	2.0E-02	mg/kg/day	7.6E-06
				Pyrene	8.2E+01	mg/kg	2.9E-06	mg/kg/day	NA	NA	NA	2.3E-05	mg/kg/day	3.0E-02	mg/kg/day	7.6E-04
				Dieldrin	8.1E-03	mg/kg	2.9E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	4.7E-09	2.3E-09	mg/kg/day	5.0E-05	mg/kg/day	4.6E-05
				2,3,7,8-TCDD TEQ	3.0E-06	mg/kg	1.1E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.4E-08	8.3E-13	mg/kg/day	1.0E-09	mg/kg/day	8.3E-04
				Nitroglycerin	1.9E+00	mg/kg	6.8E-08	mg/kg/day	NA	NA	NA	5.3E-07	mg/kg/day	1.0E-04	mg/kg/day	5.3E-03
				Aluminum	9.7E+03	mg/kg	3.5E-04	mg/kg/day	NA	NA	NA	2.7E-03	mg/kg/day	1.0E+00	mg/kg/day	2.7E-03
				Arsenic	2.7E+01	mg/kg	9.9E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.5E-06	7.7E-06	mg/kg/day	3.0E-04	mg/kg/day	2.6E-02
				Chromium	1.6E+01	mg/kg	5.6E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.8E-07	4.4E-06	mg/kg/day	3.0E-03	mg/kg/day	1.5E-03
				Cobalt	7.4E+00	mg/kg	2.7E-07	mg/kg/day	NA	NA	NA	2.1E-06	mg/kg/day	3.0E-04	mg/kg/day	6.9E-03
				Iron	1.7E+04	mg/kg	6.0E-04	mg/kg/day	NA	NA	NA	4.6E-03	mg/kg/day	7.0E-01	mg/kg/day	6.6E-03
				Manganese	2.5E+02	mg/kg	8.8E-06	mg/kg/day	NA	NA	NA	6.9E-05	mg/kg/day	1.4E-01	mg/kg/day	4.9E-04
				Mercury	6.6E+00	mg/kg	2.4E-07	mg/kg/day	NA	NA	NA	1.8E-06	mg/kg/day	3.0E-04	mg/kg/day	6.1E-03
				Vanadium	3.9E+01	mg/kg	1.4E-06	mg/kg/day	NA	NA	NA	1.1E-05	mg/kg/day	5.0E-03	mg/kg/day	2.2E-03
			Exp. Route Total								2.3E-05					6.1E-02

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	5.0E+01	mg/kg	2.7E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.0E-06	2.1E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	5.3E+01	mg/kg	2.9E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.1E-05	2.2E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	5.3E+01	mg/kg	2.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.1E-06	2.2E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	4.4E+01	mg/kg	2.4E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	1.8E-07	1.9E-05	mg/kg/day	NA	NA	NA
				Chrysene	5.3E+01	mg/kg	2.9E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	2.1E-08	2.2E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.3E+01	mg/kg	7.1E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.2E-06	5.5E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	3.9E+00	mg/kg	1.6E-07	mg/kg/day	NA	NA	NA	1.3E-06	mg/kg/day	1.0E-03	mg/kg/day	1.3E-03
				Fluoranthene	1.0E+02	mg/kg	5.6E-06	mg/kg/day	NA	NA	NA	4.3E-05	mg/kg/day	4.0E-02	mg/kg/day	1.1E-03
				Indeno(1,2,3-cd)pyrene	3.5E+01	mg/kg	1.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.4E-06	1.5E-05	mg/kg/day	NA	NA	NA
				Naphthalene	5.4E-01	mg/kg	3.0E-08	mg/kg/day	NA	NA	NA	2.3E-07	mg/kg/day	2.0E-02	mg/kg/day	1.2E-05
				Pyrene	8.2E+01	mg/kg	4.5E-06	mg/kg/day	NA	NA	NA	3.5E-05	mg/kg/day	3.0E-02	mg/kg/day	1.2E-03
				Dieldrin	8.1E-03	mg/kg	3.4E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	5.5E-09	2.7E-09	mg/kg/day	5.0E-05	mg/kg/day	5.3E-05
				2,3,7,8-TCDD TEQ	3.0E-06	mg/kg	3.8E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	4.9E-09	2.9E-13	mg/kg/day	1.0E-09	mg/kg/day	2.9E-04
				Nitroglycerin	1.9E+00	mg/kg	8.0E-08	mg/kg/day	NA	NA	NA	6.2E-07	mg/kg/day	1.0E-04	mg/kg/day	6.2E-03
				Aluminum	9.7E+03	mg/kg	4.1E-05	mg/kg/day	NA	NA	NA	3.2E-04	mg/kg/day	1.0E+00	mg/kg/day	3.2E-04
				Arsenic	2.7E+01	mg/kg	3.5E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.2E-07	2.7E-06	mg/kg/day	3.0E-04	mg/kg/day	9.0E-03
				Chromium	1.6E+01	mg/kg	6.6E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.3E-06	5.1E-07	mg/kg/day	7.5E-05	mg/kg/day	6.8E-03
				Cobalt	7.4E+00	mg/kg	3.1E-08	mg/kg/day	NA	NA	NA	2.4E-07	mg/kg/day	3.0E-04	mg/kg/day	8.1E-04
				Iron	1.7E+04	mg/kg	7.0E-05	mg/kg/day	NA	NA	NA	5.4E-04	mg/kg/day	7.0E-01	mg/kg/day	7.8E-04
				Manganese	2.5E+02	mg/kg	1.0E-06	mg/kg/day	NA	NA	NA	8.0E-06	mg/kg/day	1.4E-01	mg/kg/day	5.7E-05
				Mercury	6.6E+00	mg/kg	2.8E-08	mg/kg/day	NA	NA	NA	2.2E-07	mg/kg/day	2.1E-05	mg/kg/day	1.0E-02
				Vanadium	3.9E+01	mg/kg	1.6E-07	mg/kg/day	NA	NA	NA	1.3E-06	mg/kg/day	1.3E-04	mg/kg/day	9.8E-03
			Exp. Route Total								3.4E-05					4.8E-02
		Exposure Point Total									5.6E-05					1.1E-01
	Exposure Medium Total										5.6E-05					1.1E-01
Surface Soil	Air	Emissions from Surface Soil	Inhalation	Naphthalene	8.5E-06	mg/m^3	2.6E-08	mg/m^3	3.4E-05	(ug/m^3)$^{-1}$	8.8E-10	2.0E-07	mg/m^3	3.0E-03	mg/m^3	6.7E-05
				Chromium	1.1E-08	mg/m^3	3.5E-11	mg/m^3	8.4E-02	(ug/m^3)$^{-1}$	2.9E-09	2.7E-10	mg/m^3	1.0E-04	mg/m^3	2.7E-06
			Exp. Route Total								3.8E-09					7.0E-05
		Exposure Point Total									3.8E-09					7.0E-05
	Exposure Medium Total										5.6E-05					1.1E-01
Surface Soil Total											5.6E-05					1.1E-01

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	3.5E-04	mg/kg/day	NA	NA	NA	2.7E-03	mg/kg/day	1.0E+00	mg/kg/day	2.7E-03
				Arsenic	9.5E+01	mg/kg	3.4E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.1E-06	2.6E-05	mg/kg/day	3.0E-04	mg/kg/day	8.8E-02
				Chromium	2.4E+01	mg/kg	8.7E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	4.3E-07	6.7E-06	mg/kg/day	3.0E-03	mg/kg/day	2.2E-03
				Cobalt	1.6E+01	mg/kg	5.6E-07	mg/kg/day	NA	NA	NA	4.3E-06	mg/kg/day	3.0E-04	mg/kg/day	1.4E-02
				Iron	4.6E+04	mg/kg	1.7E-03	mg/kg/day	NA	NA	NA	1.3E-02	mg/kg/day	7.0E-01	mg/kg/day	1.8E-02
				Manganese	3.6E+02	mg/kg	1.3E-05	mg/kg/day	NA	NA	NA	1.0E-04	mg/kg/day	1.4E-01	mg/kg/day	7.2E-04
				Vanadium	1.2E+02	mg/kg	4.2E-06	mg/kg/day	NA	NA	NA	3.2E-05	mg/kg/day	5.0E-03	mg/kg/day	6.5E-03
			Exp. Route Total								5.5E-06					1.3E-01
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	4.1E-05	mg/kg/day	NA	NA	NA	3.2E-04	mg/kg/day	1.0E+00	mg/kg/day	3.2E-04
				Arsenic	9.5E+01	mg/kg	1.2E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.8E-06	9.3E-06	mg/kg/day	3.0E-04	mg/kg/day	3.1E-02
				Chromium	2.4E+01	mg/kg	1.0E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	2.0E-06	7.9E-07	mg/kg/day	7.5E-05	mg/kg/day	1.1E-02
				Cobalt	1.6E+01	mg/kg	6.5E-08	mg/kg/day	NA	NA	NA	5.1E-07	mg/kg/day	3.0E-04	mg/kg/day	1.7E-03
				Iron	4.6E+04	mg/kg	1.9E-04	mg/kg/day	NA	NA	NA	1.5E-03	mg/kg/day	7.0E-01	mg/kg/day	2.2E-03
				Manganese	3.6E+02	mg/kg	1.5E-06	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	1.4E-01	mg/kg/day	8.4E-05
				Vanadium	1.2E+02	mg/kg	4.9E-07	mg/kg/day	NA	NA	NA	3.8E-06	mg/kg/day	1.3E-04	mg/kg/day	2.9E-02
			Exp. Route Total								3.8E-06					7.5E-02
		Exposure Point Total									9.3E-06					2.1E-01
	Exposure Medium Total										9.3E-06					2.1E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	5.4E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	4.5E-09	4.2E-10	mg/m^3	1.0E-04	mg/m^3	4.2E-06
			Exp. Route Total								4.5E-09					4.2E-06
		Exposure Point Total									4.5E-09					4.2E-06
	Exposure Medium Total										9.3E-06					2.1E-01
Ash Total											9.3E-06					2.1E-01

TABLE 7.2.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion													
				Benzo(a)pyrene	4.4E-01	mg/kg	7.9E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.7E-08	6.1E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.5E-08	1.6E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.4E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.0E-07	1.1E-06	mg/kg/day	3.0E-04	mg/kg/day	3.5E-03
				Chromium	1.7E+01	mg/kg	3.0E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	1.5E-07	2.3E-06	mg/kg/day	3.0E-03	mg/kg/day	7.8E-04
				Cobalt	1.9E+01	mg/kg	3.5E-07	mg/kg/day	NA	NA	NA	2.7E-06	mg/kg/day	3.0E-04	mg/kg/day	9.0E-03
			Exp. Route Total								4.3E-07					1.3E-02
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	8.0E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.8E-07	2.3E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	8.0E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.8E-08	6.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	3.2E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.8E-07	9.3E-07	mg/kg/day	3.0E-04	mg/kg/day	3.1E-03
				Chromium	1.7E+01	mg/kg	2.3E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.7E-06	6.8E-07	mg/kg/day	7.5E-05	mg/kg/day	9.1E-03
				Cobalt	1.9E+01	mg/kg	2.7E-07	mg/kg/day	NA	NA	NA	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
			Exp. Route Total								5.8E-06					1.5E-02
		Exposure Point Total									6.2E-06					2.8E-02
	Exposure Medium Total										6.2E-06					2.8E-02
Sediment Total											6.2E-06					2.8E-02
											Total of Receptor Risks Across All Media	7.2E-05		Total of Receptor Hazards Across All Media		3.4E-01
											Total of Receptor Risks Across All Media (Ash)	1.6E-05		Total of Receptor Hazards Across All Media (Ash)		2.4E-01
											Total of Receptor Risks Across All Media (Soil)	6.3E-05		Total of Receptor Hazards Across All Media (Soil)		1.4E-01

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	2.1E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	2.2E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	2.2E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	1.9E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	2.2E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	5.4E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	9.6E-07	mg/kg/day	1.0E-03	mg/kg/day	9.6E-04
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	4.3E-05	mg/kg/day	4.0E-02	mg/kg/day	1.1E-03
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	1.5E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	4.2E-07	mg/kg/day	2.0E-02	mg/kg/day	2.1E-05
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.5E-05	mg/kg/day	3.0E-02	mg/kg/day	1.2E-03
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	2.4E-01	1/(mg/kg-day)	NA	1.0E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	7.2E-09	mg/kg/day	5.0E-05	mg/kg/day	1.4E-04
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	2.7E-08	mg/kg/day	1.3E-05	mg/kg/day	2.1E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	3.5E-12	mg/kg/day	1.0E-09	mg/kg/day	3.5E-03
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	2.6E-06	mg/kg/day	1.0E-04	mg/kg/day	2.6E-02
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.4E-05	mg/kg/day	3.0E-04	mg/kg/day	4.7E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	2.4E-05	mg/kg/day	3.0E-03	mg/kg/day	7.9E-03
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	3.0E-04	mg/kg/day	4.0E-02
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	3.0E-02	mg/kg/day	7.0E-01	mg/kg/day	4.2E-02
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.9E-04	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	2.6E-04	mg/kg/day	1.4E-01	mg/kg/day	1.9E-03
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	2.8E-06	mg/kg/day	3.0E-04	mg/kg/day	9.4E-03
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	5.5E-05	mg/kg/day	5.0E-03	mg/kg/day	1.1E-02
			Exp. Route Total								NA					1.9E-01

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	1.1E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	1.2E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	9.8E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	1.2E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	2.8E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.8E-07	mg/kg/day	1.0E-03	mg/kg/day	3.8E-04
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.2E-05	mg/kg/day	4.0E-02	mg/kg/day	5.6E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.8E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.2E-07	mg/kg/day	2.0E-02	mg/kg/day	1.1E-05
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.8E-05	mg/kg/day	3.0E-02	mg/kg/day	6.0E-04
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	3.4E-01	1/(mg/kg-day)	NA	4.0E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	2.9E-09	mg/kg/day	5.0E-05	mg/kg/day	5.8E-05
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	1.1E-08	mg/kg/day	1.3E-05	mg/kg/day	8.3E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	4.2E-13	mg/kg/day	1.0E-09	mg/kg/day	4.2E-04
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	1.0E-06	mg/kg/day	1.0E-04	mg/kg/day	1.0E-02
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.7E-06	mg/kg/day	3.0E-04	mg/kg/day	5.7E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	9.4E-07	mg/kg/day	7.5E-05	mg/kg/day	1.3E-02
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	4.8E-07	mg/kg/day	3.0E-04	mg/kg/day	1.6E-03
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	1.2E-03	mg/kg/day	7.0E-01	mg/kg/day	1.7E-03
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	7.4E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.0E-05	mg/kg/day	1.4E-01	mg/kg/day	7.5E-05
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	1.1E-07	mg/kg/day	2.1E-05	mg/kg/day	5.4E-03
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.2E-06	mg/kg/day	1.3E-04	mg/kg/day	1.7E-02
			Exp. Route Total								NA					5.7E-02
		Exposure Point Total									NA					2.5E-01
	Exposure Medium Total										NA					2.5E-01
Soil*	Air	Emissions from Soil*	Inhalation	Naphthalene	9.5E-05	mg/m^3	NA	mg/m^3	3.4E-05	$(ug/m^3)^{-1}$	NA	9.2E-05	mg/m^3	3.0E-03	mg/m^3	3.1E-02
				Chromium	1.2E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m^3)^{-1}$	NA	1.1E-08	mg/m^3	1.0E-04	mg/m^3	1.1E-04
			Exp. Route Total								NA					3.1E-02
		Exposure Point Total									NA					3.1E-02
	Exposure Medium Total										NA					2.8E-01
Soil* Total											NA					2.8E-01

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	1.3E-02	mg/kg/day	1.0E+00	mg/kg/day	1.3E-02
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.3E-04	mg/kg/day	3.0E-04	mg/kg/day	4.3E-01
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	3.3E-05	mg/kg/day	3.0E-03	mg/kg/day	1.1E-02
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	3.0E-04	mg/kg/day	7.1E-02
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	6.3E-02	mg/kg/day	7.0E-01	mg/kg/day	9.1E-02
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.9E-04	mg/kg/day	1.4E-01	mg/kg/day	3.5E-03
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.6E-04	mg/kg/day	5.0E-03	mg/kg/day	3.2E-02
			Exp. Route Total								NA					6.5E-01
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	5.4E-04	mg/kg/day	1.0E+00	mg/kg/day	5.4E-04
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.6E-05	mg/kg/day	3.0E-04	mg/kg/day	5.2E-02
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	1.3E-06	mg/kg/day	7.5E-05	mg/kg/day	1.8E-02
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	8.5E-07	mg/kg/day	3.0E-04	mg/kg/day	2.8E-03
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	2.5E-03	mg/kg/day	7.0E-01	mg/kg/day	3.6E-03
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	2.0E-05	mg/kg/day	1.4E-01	mg/kg/day	1.4E-04
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	6.3E-06	mg/kg/day	1.3E-04	mg/kg/day	4.9E-02
			Exp. Route Total								NA					1.3E-01
		Exposure Point Total									NA					7.8E-01
	Exposure Medium Total										NA					7.8E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	NA	1.7E-08	mg/m^3	1.0E-04	mg/m^3	1.7E-04
			Exp. Route Total								NA					1.7E-04
		Exposure Point Total									NA					1.7E-04
	Exposure Medium Total										NA					7.8E-01
Ash Total											NA					7.8E-01

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.5E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.7E-06	mg/kg/day	3.0E-03	mg/kg/day	5.7E-04
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.6E-03
			Exp. Route Total								NA					9.7E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	2.0E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	5.3E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	5.8E-07	mg/kg/day	7.5E-05	mg/kg/day	7.7E-03
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
			Exp. Route Total								NA					1.3E-02
		Exposure Point Total									NA					2.2E-02
	Exposure Medium Total										NA					2.2E-02
Sediment Total											NA					2.2E-02
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	4.7E-05	mg/kg/day	2.0E-02	mg/kg/day	2.3E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	5.8E-07	mg/kg/day	5.0E-04	mg/kg/day	1.2E-03
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	3.5E-04	mg/kg/day	3.0E-04	mg/kg/day	1.2E+00
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	1.3E-03	mg/kg/day	3.0E-04	mg/kg/day	4.2E+00
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	5.8E-01	mg/kg/day	7.0E-01	mg/kg/day	8.3E-01
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	2.4E-02	mg/kg/day	1.4E-01	mg/kg/day	1.7E-01
			Exp. Route Total								NA					6.4E+00
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	3.6E-05	mg/kg/day	2.0E-02	mg/kg/day	1.8E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	2.7E-07	mg/kg/day	5.0E-04	mg/kg/day	5.5E-04
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.6E-05	mg/kg/day	3.0E-04	mg/kg/day	5.2E-02
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	6.6E-06	mg/kg/day	3.0E-04	mg/kg/day	2.2E-02
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	6.1E-03	mg/kg/day	7.0E-01	mg/kg/day	8.7E-03
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	1.3E-04	mg/kg/day	1.4E-01	mg/kg/day	8.9E-04
			Exp. Route Total								NA					8.6E-02
		Exposure Point Total									NA					6.5E+00

TABLE 7.3.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
		Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	NA	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	NA	5.5E-05	mg/m^3	3.0E-03	mg/m^3	1.8E-02
			Exp. Route Total								NA					1.8E-02
		Exposure Point Total									NA					1.8E-02
	Exposure Medium Total										NA					6.5E+00
Groundwater Total											NA					6.5E+00
											Total of Receptor Risks Across All Media					NA	Total of Receptor Hazards Across All Media				7.6E+00
											Total of Receptor Risks Across All Media (Ash)					NA	Total of Receptor Hazards Across All Media (Ash)				7.3E+00
											Total of Receptor Risks Across All Media (Soil)					NA	Total of Receptor Hazards Across All Media (Soil)				6.8E+00

*Soil = combined surface and subsurface soil.

Table 7.3.RME Supplement A
Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model
Adult Resident
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
Naphthalene	1.7E+00	1.3E+02	4.4E-04	1.1E+03	1.2E+01	7.5E+00	1.0E+01	1.4E-01	1.1E-01	2.4E-03

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	34.8
Dt = total duration in shower room	min	60
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Table 7.3.RME Supplement B
Calculation of DAevent
Adult Resident, Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Groundwater Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (tevent) (hr)	DAevent (mg/cm^2-event)	Eq
Naphthalene	1.70E+00	4.7E-02	2.0E-01	5.6E-01	1.3E+00	1.0E+00	0.58	1.5E-07	3
Heptachlor	2.10E-02	8.6E-03	1.0E-01	1.3E+01	3.2E+01	8.0E-01	0.58	1.1E-09	2
Arsenic	1.28E+01	8.6E-03	NA	NA	NA	NA	0.58	6.4E-08	1
Cobalt	4.61E+01	1.0E-03	NA	NA	NA	NA	0.58	2.7E-08	1
Iron	2.12E+04	2.0E-03	NA	NA	NA	NA	0.58	2.5E-05	1
Manganese	8.76E+02	1.0E-03	NA	NA	NA	NA	0.58	5.1E-07	1

Inorganics: DAevent (mg/cm2-event) =
Kp x CW x tevent x 0.001 mg/ug x 0.001 l/cm^3 (eq 1)

Organics: DAevent (mg/cm2-event) =

$$\text{If } t_{event} \le t^*, \text{then } DA_{event} = 2 \times FA \times K_p \times C_w \sqrt{\frac{6 \times \tau_{event} \times t_{event}}{\pi}} \qquad \text{(eq 2)}$$

$$\text{If } t_{event} \ge t^*, \text{ then } DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \times \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right] \qquad \text{(eq 3)}$$

Notes:
Permeability constants from EPA 2004, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Interim).* EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.
NA - not applicable.

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	2.0E-04	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	2.1E-04	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	2.1E-04	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	1.8E-04	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	2.1E-04	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	5.1E-05	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	9.0E-06	mg/kg/day	1.0E-03	mg/kg/day	9.0E-03
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	4.0E-04	mg/kg/day	4.0E-02	mg/kg/day	1.0E-02
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	1.4E-04	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.9E-06	mg/kg/day	2.0E-02	mg/kg/day	2.0E-04
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.3E-04	mg/kg/day	3.0E-02	mg/kg/day	1.1E-02
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	2.4E-01	1/(mg/kg-day)	NA	9.4E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	6.7E-08	mg/kg/day	5.0E-05	mg/kg/day	1.3E-03
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	2.5E-07	mg/kg/day	1.3E-05	mg/kg/day	1.9E-02
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	3.3E-11	mg/kg/day	1.0E-09	mg/kg/day	3.3E-02
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	1.0E-04	mg/kg/day	2.4E-01
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.3E-04	mg/kg/day	3.0E-04	mg/kg/day	4.4E-01
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	2.2E-04	mg/kg/day	3.0E-03	mg/kg/day	7.3E-02
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	1.1E-04	mg/kg/day	3.0E-04	mg/kg/day	3.8E-01
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	2.8E-01	mg/kg/day	7.0E-01	mg/kg/day	3.9E-01
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-03	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	2.4E-03	mg/kg/day	1.4E-01	mg/kg/day	1.7E-02
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	2.6E-05	mg/kg/day	3.0E-04	mg/kg/day	8.8E-02
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	5.1E-04	mg/kg/day	5.0E-03	mg/kg/day	1.0E-01
			Exp. Route Total								NA					1.8E+00

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.2E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	7.6E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.6E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	6.4E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	7.6E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.8E-05	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.5E-06	mg/kg/day	1.0E-03	mg/kg/day	2.5E-03
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-04	mg/kg/day	4.0E-02	mg/kg/day	3.7E-03
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	5.1E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.4E-06	mg/kg/day	2.0E-02	mg/kg/day	7.1E-05
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.2E-04	mg/kg/day	3.0E-02	mg/kg/day	3.9E-03
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	3.4E-01	1/(mg/kg-day)	NA	2.6E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	1.9E-08	mg/kg/day	5.0E-05	mg/kg/day	3.8E-04
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	7.0E-08	mg/kg/day	1.3E-05	mg/kg/day	5.4E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	2.8E-12	mg/kg/day	1.0E-09	mg/kg/day	2.8E-03
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	6.8E-06	mg/kg/day	1.0E-04	mg/kg/day	6.8E-02
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.1E-05	mg/kg/day	3.0E-04	mg/kg/day	3.7E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	6.2E-06	mg/kg/day	7.5E-05	mg/kg/day	8.2E-02
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	3.2E-06	mg/kg/day	3.0E-04	mg/kg/day	1.1E-02
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	7.7E-03	mg/kg/day	7.0E-01	mg/kg/day	1.1E-02
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.9E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	6.9E-05	mg/kg/day	1.4E-01	mg/kg/day	4.9E-04
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	7.4E-07	mg/kg/day	2.1E-05	mg/kg/day	3.5E-02
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.4E-05	mg/kg/day	1.3E-04	mg/kg/day	1.1E-01
			Exp. Route Total								NA					3.7E-01
		Exposure Point Total									NA					2.2E+00
	Exposure Medium Total										NA					2.2E+00
Soil*	Air	Particulate and Volatile Emissions from Soil* at Metro Landfill and Waterfront Fill Areas	Inhalation	Naphthalene	9.5E-05	mg/m^3	NA	mg/m^3	3.4E-05	(ug/m3)$^{-1}$	NA	9.2E-05	mg/m^3	3.0E-03	mg/m^3	3.1E-02
				Chromium	1.2E-08	mg/m^3	NA	mg/m^3	8.4E-02	(ug/m3)$^{-1}$	NA	1.1E-08	mg/m^3	1.0E-04	mg/m^3	1.1E-04
			Exp. Route Total								NA					3.1E-02
		Exposure Point Total									NA					3.1E-02
	Exposure Medium Total										NA					2.2E+00
Soil* Total											NA					2.2E+00

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	1.3E-01	mg/kg/day	1.0E+00	mg/kg/day	1.3E-01
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.2E-03	mg/kg/day	3.0E-04	mg/kg/day	4.0E+00
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	3.1E-04	mg/kg/day	3.0E-03	mg/kg/day	1.0E-01
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.0E-04	mg/kg/day	3.0E-04	mg/kg/day	6.6E-01
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	5.9E-01	mg/kg/day	7.0E-01	mg/kg/day	8.5E-01
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.6E-03	mg/kg/day	1.4E-01	mg/kg/day	3.3E-02
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-03	mg/kg/day	5.0E-03	mg/kg/day	3.0E-01
			Exp. Route Total								NA					6.1E+00
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	3.5E-03	mg/kg/day	1.0E+00	mg/kg/day	3.5E-03
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.0E-04	mg/kg/day	3.0E-04	mg/kg/day	3.4E-01
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	8.6E-06	mg/kg/day	7.5E-05	mg/kg/day	1.2E-01
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	5.5E-06	mg/kg/day	3.0E-04	mg/kg/day	1.8E-02
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-02	mg/kg/day	7.0E-01	mg/kg/day	2.4E-02
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.3E-04	mg/kg/day	1.4E-01	mg/kg/day	9.2E-04
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.1E-05	mg/kg/day	1.3E-04	mg/kg/day	3.2E-01
			Exp. Route Total								NA					8.2E-01
		Exposure Point Total									NA					6.9E+00
	Exposure Medium Total										NA					6.9E+00
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	NA	1.7E-08	mg/m^3	1.0E-04	mg/m^3	1.7E-04
			Exp. Route Total								NA					1.7E-04
		Exposure Point Total									NA					1.7E-04
	Exposure Medium Total										NA					6.9E+00
Ash Total											NA					6.9E+00

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.2E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.1E-07	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.2E-06	mg/kg/day	3.0E-04	mg/kg/day	2.4E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.6E-05	mg/kg/day	3.0E-03	mg/kg/day	5.3E-03
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.8E-05	mg/kg/day	3.0E-04	mg/kg/day	6.1E-02
			Exp. Route Total								NA					9.0E-02
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.5E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-07	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.8E-06	mg/kg/day	3.0E-04	mg/kg/day	6.0E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	1.3E-06	mg/kg/day	7.5E-05	mg/kg/day	1.8E-02
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-06	mg/kg/day	3.0E-04	mg/kg/day	5.1E-03
			Exp. Route Total								NA					2.9E-02
		Exposure Point Total									NA					1.2E-01
	Exposure Medium Total										NA					1.2E-01
Sediment Total											NA					1.2E-01
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	1.1E-04	mg/kg/day	2.0E-02	mg/kg/day	5.4E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	1.3E-06	mg/kg/day	5.0E-04	mg/kg/day	2.7E-03
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	8.2E-04	mg/kg/day	3.0E-04	mg/kg/day	2.7E+00
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	2.9E-03	mg/kg/day	3.0E-04	mg/kg/day	9.8E+00
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	1.4E+00	mg/kg/day	7.0E-01	mg/kg/day	1.9E+00
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	5.6E-02	mg/kg/day	1.4E-01	mg/kg/day	4.0E-01
			Exp. Route Total								NA					1.5E+01
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	7.3E-05	mg/kg/day	2.0E-02	mg/kg/day	3.7E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	6.1E-07	mg/kg/day	5.0E-04	mg/kg/day	1.2E-03
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	4.6E-05	mg/kg/day	3.0E-04	mg/kg/day	1.5E-01
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	1.9E-05	mg/kg/day	3.0E-04	mg/kg/day	6.5E-02
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	1.8E-02	mg/kg/day	7.0E-01	mg/kg/day	2.6E-02
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	3.7E-04	mg/kg/day	1.4E-01	mg/kg/day	2.6E-03
			Exp. Route Total								NA					2.5E-01
		Exposure Point Total									NA					1.5E+01
	Exposure Medium Total										NA					1.5E+01

TABLE 7.4.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
		Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	NA	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	NA	1.4E-04	mg/m^3	3.0E-03	mg/m^3	4.6E-02
			Exp. Route Total								NA					4.6E-02
		Exposure Point Total									NA					4.6E-02
	Exposure Medium Total										NA					1.5E+01
Groundwater Total											NA					1.5E+01
											NA	Total of Receptor Hazards Across All Media				2.4E+01
											NA	Total of Receptor Hazards Across All Media (Ash)				2.2E+01
											NA	Total of Receptor Hazards Across All Media (Soil)				1.8E+01
											Total of Receptor Risks Across All Media					
											Total of Receptor Risks Across All Media (Ash)					
											Total of Receptor Risks Across All Media (Soil)					

*Soil = combined surface and subsurface soil.

Table 7.4.RME Supplement A
Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model
Child Resident
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
Naphthalene	1.7E+00	1.3E+02	4.4E-04	1.1E+03	1.2E+01	7.5E+00	1.0E+01	1.4E-01	1.1E-01	3.4E-03

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	60
Dt = total duration in shower room	min	80
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Table 7.4.RME Supplement B
Calculation of DAevent
Child Resident, Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Groundwater Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (tevent) (hr)	DAevent (mg/cm^2-event)	Eq
Naphthalene	1.70E+00	4.7E-02	2.0E-01	5.6E-01	1.3E+00	1.0E+00	1	1.7E-07	3
Heptachlor	2.10E-02	8.6E-03	1.0E-01	1.3E+01	3.2E+01	8.0E-01	1	1.5E-09	2
Arsenic	1.28E+01	8.6E-03	NA	NA	NA	NA	1	1.1E-07	1
Cobalt	4.61E+01	1.0E-03	NA	NA	NA	NA	1	4.6E-08	1
Iron	2.12E+04	2.0E-03	NA	NA	NA	NA	1	4.2E-05	1
Manganese	8.76E+02	1.0E-03	NA	NA	NA	NA	1	8.8E-07	1

Inorganics: DAevent (mg/cm2-event) =
Kp x CW x tevent x 0.001 mg/ug x 0.001 l/cm^3 (eq 1)

Organics: DAevent (mg/cm2-event) =

$$\text{If } t_{event} \le t^*, \text{then } DA_{event} = 2 \times FA \times K_p \times C_w \sqrt{\frac{6 \times \tau_{event} \times t_{event}}{\pi}} \qquad \text{(eq 2)}$$

$$\text{If } t_{event} \ge t^*, \text{ then } DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \times \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right] \qquad \text{(eq 3)}$$

Notes:
Permeability constants from EPA 2004, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Interim).* EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.
NA - not applicable.

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil* -	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	2.4E-05	mg/kg/day	7.3E-01	1/(mg/kg-day)	7.6E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	2.6E-05	mg/kg/day	7.3E+00	1/(mg/kg-day)	8.0E-04	NA	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	2.6E-05	mg/kg/day	7.3E-01	1/(mg/kg-day)	8.0E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	2.1E-05	mg/kg/day	7.3E-02	1/(mg/kg-day)	6.7E-06	NA	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	2.6E-05	mg/kg/day	7.3E-03	1/(mg/kg-day)	8.0E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	6.2E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.9E-04	NA	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-03	mg/kg/day	NA
				Fluoranthene	3.2E+01	mg/kg	4.9E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	4.0E-02	mg/kg/day	NA
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	1.7E-05	mg/kg/day	7.3E-01	1/(mg/kg-day)	5.4E-05	NA	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	4.8E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Pyrene	2.5E+01	mg/kg	4.0E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-02	mg/kg/day	NA
				4,4'-DDD	7.3E+00	mg/kg	1.1E-05	mg/kg/day	2.4E-01	1/(mg/kg-day)	2.7E-06	NA	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	8.2E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	1.3E-07	NA	mg/kg/day	5.0E-05	mg/kg/day	NA
				Heptachlor epoxide	2.0E-02	mg/kg	3.1E-08	mg/kg/day	9.1E+00	1/(mg/kg-day)	2.8E-07	NA	mg/kg/day	1.3E-05	mg/kg/day	NA
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	4.0E-12	mg/kg/day	1.3E+05	1/(mg/kg-day)	5.2E-07	NA	mg/kg/day	1.0E-09	mg/kg/day	NA
				Nitroglycerin	1.9E+00	mg/kg	3.0E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-04	mg/kg/day	NA
				Arsenic	1.0E+01	mg/kg	1.6E-05	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.4E-05	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	2.7E-05	mg/kg/day	5.0E-01	1/(mg/kg-day)	5.8E-05	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	8.8E+00	mg/kg	1.4E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.2E+04	mg/kg	3.4E-02	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Lead	1.4E+02	mg/kg	2.1E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	3.0E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Mercury	2.1E+00	mg/kg	3.2E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Vanadium	4.0E+01	mg/kg	6.2E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	5.0E-03	mg/kg/day	NA
			Exp. Route Total								1.3E-03					NA

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	9.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.9E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	1.1E-05	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.1E-04	NA	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	1.1E-05	mg/kg/day	7.3E-01	1/(mg/kg-day)	3.1E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	8.8E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	2.6E-06	NA	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	1.1E-05	mg/kg/day	7.3E-03	1/(mg/kg-day)	3.1E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	2.6E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	7.5E-05	NA	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	3.5E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-03	mg/kg/day	NA
				Fluoranthene	3.2E+01	mg/kg	2.0E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	4.0E-02	mg/kg/day	NA
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	7.1E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.1E-05	NA	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	2.0E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Pyrene	2.5E+01	mg/kg	1.6E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-02	mg/kg/day	NA
				4,4'-DDD	7.3E+00	mg/kg	3.6E-06	mg/kg/day	3.4E-01	1/(mg/kg-day)	1.2E-06	NA	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	2.6E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	4.2E-08	NA	mg/kg/day	5.0E-05	mg/kg/day	NA
				Heptachlor epoxide	2.0E-02	mg/kg	9.7E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	8.8E-08	NA	mg/kg/day	1.3E-05	mg/kg/day	NA
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	3.8E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	5.0E-08	NA	mg/kg/day	1.0E-09	mg/kg/day	NA
				Nitroglycerin	1.9E+00	mg/kg	9.4E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-04	mg/kg/day	NA
				Arsenic	1.0E+01	mg/kg	1.5E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.3E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	8.5E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	6.8E-05	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	8.8E+00	mg/kg	4.4E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.2E+04	mg/kg	1.1E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Lead	1.4E+02	mg/kg	6.7E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	9.5E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Mercury	2.1E+00	mg/kg	1.0E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.1E-05	mg/kg/day	NA
				Vanadium	4.0E+01	mg/kg	2.0E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.3E-04	mg/kg/day	NA
			Exp. Route Total								5.4E-04					NA
		Exposure Point Total									1.8E-03					NA
	Exposure Medium Total										1.8E-03					NA
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	3.9E-05	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	1.3E-06	NA	mg/m^3	3.0E-03	mg/m^3	NA
				Chromium	1.2E-08	mg/m^3	4.9E-09	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	1.0E-06	NA	mg/m^3	1.0E-04	mg/m^3	NA
			Exp. Route Total								2.4E-06					NA
		Exposure Point Total									2.4E-06					NA
	Exposure Medium Total										1.8E-03					NA
Soil* Total											1.8E-03					NA

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion	Aluminum	9.8E+03	mg/kg	1.5E-02	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E+00	mg/kg/day	NA
				Arsenic	9.5E+01	mg/kg	1.5E-04	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.2E-04	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	2.4E+01	mg/kg	3.8E-05	mg/kg/day	5.0E-01	1/(mg/kg-day)	8.1E-05	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	1.6E+01	mg/kg	2.4E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	4.6E+04	mg/kg	7.2E-02	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	3.6E+02	mg/kg	5.6E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Vanadium	1.2E+02	mg/kg	1.8E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	5.0E-03	mg/kg/day	NA
			Exp. Route Total								3.0E-04					NA
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	4.9E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E+00	mg/kg/day	NA
				Arsenic	9.5E+01	mg/kg	1.4E-05	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.1E-05	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	2.4E+01	mg/kg	1.2E-06	mg/kg/day	2.0E+01	1/(mg/kg-day)	9.5E-05	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	1.6E+01	mg/kg	7.7E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	4.6E+04	mg/kg	2.3E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	3.6E+02	mg/kg	1.8E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Vanadium	1.2E+02	mg/kg	5.7E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.3E-04	mg/kg/day	NA
			Exp. Route Total								1.2E-04					NA
		Exposure Point Total									4.2E-04					NA
	Exposure Medium Total										4.2E-04					NA
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	7.3E-09	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	1.5E-06	NA	mg/m^3	1.0E-04	mg/m^3	NA
			Exp. Route Total								1.5E-06					NA
		Exposure Point Total									1.5E-06					NA
	Exposure Medium Total										4.2E-04					NA
Ash Total											4.2E-04					NA

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	5.1E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.7E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.4E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	9.9E-08	NA	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	8.8E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.3E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	1.9E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	9.7E-07	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	1.9E+01	mg/kg	2.2E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
			Exp. Route Total								2.8E-06					NA
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	1.1E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	7.8E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.1E-07	NA	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	4.3E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	6.4E-07	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	3.1E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	6.3E-06	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	1.9E+01	mg/kg	3.6E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
			Exp. Route Total								7.9E-06					NA
		Exposure Point Total									1.1E-05					NA
	Exposure Medium Total										1.1E-05					NA
Sediment Total											1.1E-05					NA
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	2.5E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Heptachlor	2.1E-02	ug/L	3.1E-07	mg/kg/day	4.5E+00	1/(mg/kg-day)	1.4E-06	NA	mg/kg/day	5.0E-04	mg/kg/day	NA
				Arsenic	1.3E+01	ug/L	1.9E-04	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.9E-04	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Cobalt	4.6E+01	ug/L	6.9E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.1E+04	ug/L	3.2E-01	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	8.8E+02	ug/L	1.3E-02	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
			Exp. Route Total								2.9E-04					NA
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	1.9E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Heptachlor	2.1E-02	ug/L	1.5E-07	mg/kg/day	4.5E+00	1/(mg/kg-day)	6.6E-07	NA	mg/kg/day	5.0E-04	mg/kg/day	NA
				Arsenic	1.3E+01	ug/L	9.4E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.4E-05	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Cobalt	4.6E+01	ug/L	3.9E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.1E+04	ug/L	3.6E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	8.8E+02	ug/L	7.5E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
			Exp. Route Total								1.5E-05					NA
		Exposure Point Total									3.0E-04					NA

TABLE 7.5.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Air	Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	3.1E-05	ug/m^3	3.4E-05	1/(mg/kg-day)	1.0E-06	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
			Exp. Route Total								1.0E-06					NA
		Exposure Point Total									1.0E-06					NA
Groundwater Total											3.0E-04					NA
Total of Receptor Risks Across All Media											2.6E-03	Total of Receptor Hazards Across All Media				NA
Total of Receptor Risks Across All Media (Ash)											7.3E-04	Total of Receptor Hazards Across All Media (Ash)				NA
Total of Receptor Risks Across All Media (Soil)											2.2E-03	Total of Receptor Hazards Across All Media (Soil)				NA

*Soil = combined surface and subsurface soil.

1. See Table 7.5.RME Supplement A for calculation of intake and cancer risk following MMOA method.

TABLE 7.5.RME Supplement A

CALCULATION OF CHEMICAL CANCER RISKS FOR COPC WITH MUTAGENIC MODE OF ACTION

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations										
							Intake					CSF/Unit Risk					Cancer Risk
							Value				Units	Value				Units	
					Value	Units	0-2 yrs	2-6 yrs	6-16 years	16-30 yrs		0-2 yrs (ADAF=10)	2-6 yrs (ADAF=3)	6-16 yrs (ADAF=3)	16-30 yrs (ADAF=1)		
Soil*	Soil*	Soil* -	Ingestion	Benzo(a)anthracene	1.5E+01	mg/kg	5.6E-06	1.1E-05	3.0E-06	4.2E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	7.6E-05
				Benzo(a)pyrene	1.6E+01	mg/kg	6.0E-06	1.2E-05	3.2E-06	4.5E-06	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	8.0E-04
				Benzo(b)fluoranthene	1.6E+01	mg/kg	6.0E-06	1.2E-05	3.2E-06	4.5E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	8.0E-05
				Benzo(k)fluoranthene	1.4E+01	mg/kg	5.0E-06	1.0E-05	2.7E-06	3.8E-06	mg/kg/day	7.3E-01	2.2E-01	2.2E-01	7.3E-02	mg/kg/day	6.7E-06
				Chrysene	1.6E+01	mg/kg	6.0E-06	1.2E-05	3.2E-06	4.5E-06	mg/kg/day	7.3E-02	2.2E-02	2.2E-02	7.3E-03	mg/kg/day	8.0E-07
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.5E-06	2.9E-06	7.8E-07	1.1E-06	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	1.9E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	4.0E-06	8.0E-06	2.2E-06	3.0E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	5.4E-05
				Chromium	1.7E+01	mg/kg	6.3E-06	1.3E-05	3.4E-06	4.7E-06	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	mg/kg/day	5.8E-05
			Dermal	Benzo(a)anthracene	1.5E+01	mg/kg	2.1E-06	4.1E-06	1.6E-06	2.2E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	2.9E-05
				Benzo(a)pyrene	1.6E+01	mg/kg	2.2E-06	4.4E-06	1.7E-06	2.3E-06	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	3.1E-04
				Benzo(b)fluoranthene	1.6E+01	mg/kg	2.2E-06	4.4E-06	1.7E-06	2.3E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	3.1E-05
				Benzo(k)fluoranthene	1.4E+01	mg/kg	1.8E-06	3.7E-06	1.4E-06	2.0E-06	mg/kg/day	7.3E-01	2.2E-01	2.2E-01	7.3E-02	mg/kg/day	2.6E-06
				Chrysene	1.6E+01	mg/kg	2.2E-06	4.3E-06	1.7E-06	2.3E-06	mg/kg/day	7.3E-02	2.2E-02	2.2E-02	7.3E-03	mg/kg/day	3.1E-07
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	5.3E-07	1.1E-06	4.0E-07	5.6E-07	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	7.5E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	1.5E-06	2.9E-06	1.1E-06	1.6E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	2.1E-05
				Chromium	1.7E+01	mg/kg	1.8E-07	3.5E-07	1.3E-07	1.9E-07	mg/kg/day	2.0E+02	6.0E+01	6.0E+01	2.0E+01	mg/kg/day	6.8E-05
	Air	Particulate and Volatile from Soil*	Inhalation	Chromium	1.2E-08	mg/m^3	3.3E-10	6.5E-10	1.6E-09	2.3E-09	mg/m^3	8.4E-01	2.5E-01	2.5E-01	8.4E-02	$(ug/m^3)^{-1}$	1.0E-06
Ash	Ash	Ash	Ingestion	Chromium	2.4E+01	mg/kg	8.8E-06	1.8E-05	4.7E-06	6.6E-06	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	mg/kg/day	8.1E-05
			Dermal	Chromium	2.4E+01	mg/kg	2.5E-07	4.9E-07	1.9E-07	2.6E-07	mg/kg/day	2.0E+02	6.0E+01	6.0E+01	2.0E+01	mg/kg/day	9.5E-05
	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	4.9E-10	9.7E-10	2.4E-09	3.4E-09	mg/m^3	8.4E-01	2.5E-01	2.5E-01	8.4E-02	$(ug/m^3)^{-1}$	1.5E-06

TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	5.2E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	3.8E-07	3.6E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	5.5E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.0E-06	3.8E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	5.5E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.0E-07	3.9E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	4.6E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	3.4E-08	3.2E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	5.5E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	4.0E-09	3.8E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.3E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	9.7E-07	9.3E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	2.4E-08	mg/kg/day	NA	NA	NA	1.7E-06	mg/kg/day	1.0E-03	mg/kg/day	1.7E-03
				Fluoranthene	3.2E+01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	7.4E-05	mg/kg/day	4.0E-01	mg/kg/day	1.9E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	3.7E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.7E-07	2.6E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.0E-08	mg/kg/day	NA	NA	NA	7.2E-07	mg/kg/day	2.0E-02	mg/kg/day	3.6E-05
				Pyrene	2.5E+01	mg/kg	8.5E-07	mg/kg/day	NA	NA	NA	6.0E-05	mg/kg/day	3.0E-01	mg/kg/day	2.0E-04
				4,4'-DDD	7.3E+00	mg/kg	2.5E-07	mg/kg/day	2.4E-01	1/(mg/kg-day)	5.9E-08	1.7E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.8E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	2.8E-09	1.2E-08	mg/kg/day	5.0E-05	mg/kg/day	2.5E-04
				Heptachlor epoxide	2.0E-02	mg/kg	6.6E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	6.0E-09	4.6E-08	mg/kg/day	1.3E-05	mg/kg/day	3.5E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	8.6E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.1E-08	6.0E-12	mg/kg/day	1.0E-09	mg/kg/day	6.0E-03
				Nitroglycerin	1.9E+00	mg/kg	6.4E-08	mg/kg/day	NA	NA	NA	4.5E-06	mg/kg/day	1.0E-04	mg/kg/day	4.5E-02
				Arsenic	1.0E+01	mg/kg	3.5E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.2E-07	2.4E-05	mg/kg/day	3.0E-04	mg/kg/day	8.1E-02
				Chromium	1.7E+01	mg/kg	5.8E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.9E-07	4.0E-05	mg/kg/day	2.0E-02	mg/kg/day	2.0E-03
				Cobalt	8.8E+00	mg/kg	3.0E-07	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	3.0E-03	mg/kg/day	6.9E-03
				Iron	2.2E+04	mg/kg	7.2E-04	mg/kg/day	NA	NA	NA	5.1E-02	mg/kg/day	7.0E-01	mg/kg/day	7.2E-02
				Lead	1.4E+02	mg/kg	4.5E-06	mg/kg/day	NA	NA	NA	3.2E-04	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	6.4E-06	mg/kg/day	NA	NA	NA	4.5E-04	mg/kg/day	1.4E-01	mg/kg/day	3.2E-03
				Mercury	2.1E+00	mg/kg	6.9E-08	mg/kg/day	NA	NA	NA	4.8E-06	mg/kg/day	3.0E-03	mg/kg/day	1.6E-03
				Vanadium	4.0E+01	mg/kg	1.3E-06	mg/kg/day	NA	NA	NA	9.4E-05	mg/kg/day	7.0E-03	mg/kg/day	1.3E-02
			Exp. Route Total								7.0E-06					2.4E-01

TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	1.4E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.0E-07	9.7E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	1.5E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.1E-06	1.0E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	1.5E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.1E-07	1.0E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	1.2E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	9.0E-09	8.7E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	1.5E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	1.1E-09	1.0E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	3.6E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.6E-07	2.5E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	4.9E-09	mg/kg/day	NA	NA	NA	3.4E-07	mg/kg/day	1.0E-03	mg/kg/day	3.4E-04
				Fluoranthene	3.2E+01	mg/kg	2.8E-07	mg/kg/day	NA	NA	NA	2.0E-05	mg/kg/day	4.0E-01	mg/kg/day	5.0E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	9.9E-08	mg/kg/day	7.3E-01	1/(mg/kg-day)	7.2E-08	6.9E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	2.7E-09	mg/kg/day	NA	NA	NA	1.9E-07	mg/kg/day	2.0E-02	mg/kg/day	9.6E-06
				Pyrene	2.5E+01	mg/kg	2.3E-07	mg/kg/day	NA	NA	NA	1.6E-05	mg/kg/day	3.0E-01	mg/kg/day	5.3E-05
				4,4'-DDD	7.3E+00	mg/kg	5.1E-08	mg/kg/day	3.4E-01	1/(mg/kg-day)	1.7E-08	3.5E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	3.6E-11	mg/kg/day	1.6E+01	1/(mg/kg-day)	5.8E-10	2.6E-09	mg/kg/day	5.0E-05	mg/kg/day	5.1E-05
				Heptachlor epoxide	2.0E-02	mg/kg	1.4E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	1.2E-09	9.5E-09	mg/kg/day	1.3E-05	mg/kg/day	7.3E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	5.3E-15	mg/kg/day	1.3E+05	1/(mg/kg-day)	6.9E-10	3.7E-13	mg/kg/day	1.0E-09	mg/kg/day	3.7E-04
				Nitroglycerin	1.9E+00	mg/kg	1.3E-08	mg/kg/day	NA	NA	NA	9.2E-07	mg/kg/day	1.0E-04	mg/kg/day	9.2E-03
				Arsenic	1.0E+01	mg/kg	2.2E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	3.2E-08	1.5E-06	mg/kg/day	3.0E-04	mg/kg/day	5.0E-03
				Chromium	1.7E+01	mg/kg	1.2E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	2.4E-07	8.4E-07	mg/kg/day	5.0E-04	mg/kg/day	1.7E-03
				Cobalt	8.8E+00	mg/kg	6.1E-09	mg/kg/day	NA	NA	NA	4.3E-07	mg/kg/day	3.0E-04	mg/kg/day	1.4E-03
				Iron	2.2E+04	mg/kg	1.5E-05	mg/kg/day	NA	NA	NA	1.0E-03	mg/kg/day	7.0E-01	mg/kg/day	1.5E-03
				Lead	1.4E+02	mg/kg	9.4E-08	mg/kg/day	NA	NA	NA	6.6E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	1.3E-07	mg/kg/day	NA	NA	NA	9.3E-06	mg/kg/day	1.4E-01	mg/kg/day	6.6E-05
				Mercury	2.1E+00	mg/kg	1.4E-09	mg/kg/day	NA	NA	NA	1.0E-07	mg/kg/day	2.1E-04	mg/kg/day	4.8E-04
				Vanadium	4.0E+01	mg/kg	2.8E-08	mg/kg/day	NA	NA	NA	1.9E-06	mg/kg/day	1.8E-04	mg/kg/day	1.1E-02
			Exp. Route Total								1.9E-06					3.2E-02
		Exposure Point Total									8.9E-06					2.7E-01
	Exposure Medium Total										8.9E-06					2.7E-01
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	1.6E-07	mg/m^3	3.4E-05	$(ug/m^3)^{-1}$	5.3E-09	1.1E-05	mg/m^3	3.0E-03	mg/m^3	3.6E-03
				Chromium	1.2E-08	mg/m^3	1.9E-11	mg/m^3	8.4E-02	$(ug/m^3)^{-1}$	1.6E-09	1.4E-09	mg/m^3	1.0E-04	mg/m^3	1.4E-05
			Exp. Route Total								6.9E-09					3.6E-03
		Exposure Point Total									6.9E-09					3.6E-03
	Exposure Medium Total										8.9E-06					2.7E-01
Soil* Total											8.9E-06					2.7E-01

TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	3.3E-04	mg/kg/day	NA	NA	NA	2.3E-02	mg/kg/day	1.0E+00	mg/kg/day	2.3E-02
				Arsenic	9.5E+01	mg/kg	3.2E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.8E-06	2.2E-04	mg/kg/day	3.0E-04	mg/kg/day	7.4E-01
				Chromium	2.4E+01	mg/kg	8.1E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	4.0E-07	5.7E-05	mg/kg/day	2.0E-02	mg/kg/day	2.8E-03
				Cobalt	1.6E+01	mg/kg	5.2E-07	mg/kg/day	NA	NA	NA	3.6E-05	mg/kg/day	3.0E-03	mg/kg/day	1.2E-02
				Iron	4.6E+04	mg/kg	1.6E-03	mg/kg/day	NA	NA	NA	1.1E-01	mg/kg/day	7.0E-01	mg/kg/day	1.6E-01
				Manganese	3.6E+02	mg/kg	1.2E-05	mg/kg/day	NA	NA	NA	8.5E-04	mg/kg/day	1.4E-01	mg/kg/day	6.0E-03
				Vanadium	1.2E+02	mg/kg	3.9E-06	mg/kg/day	NA	NA	NA	2.7E-04	mg/kg/day	7.0E-03	mg/kg/day	3.9E-02
			Exp. Route Total								5.2E-06					9.8E-01
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	6.8E-06	mg/kg/day	NA	NA	NA	4.8E-04	mg/kg/day	1.0E+00	mg/kg/day	4.8E-04
				Arsenic	9.5E+01	mg/kg	2.0E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.9E-07	1.4E-05	mg/kg/day	3.0E-04	mg/kg/day	4.6E-02
				Chromium	2.4E+01	mg/kg	1.7E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	3.3E-07	1.2E-06	mg/kg/day	5.0E-04	mg/kg/day	2.3E-03
				Cobalt	1.6E+01	mg/kg	1.1E-08	mg/kg/day	NA	NA	NA	7.5E-07	mg/kg/day	3.0E-04	mg/kg/day	2.5E-03
				Iron	4.6E+04	mg/kg	3.2E-05	mg/kg/day	NA	NA	NA	2.2E-03	mg/kg/day	7.0E-01	mg/kg/day	3.2E-03
				Manganese	3.6E+02	mg/kg	2.5E-07	mg/kg/day	NA	NA	NA	1.7E-05	mg/kg/day	1.4E-01	mg/kg/day	1.2E-04
				Vanadium	1.2E+02	mg/kg	8.0E-08	mg/kg/day	NA	NA	NA	5.6E-06	mg/kg/day	1.8E-04	mg/kg/day	3.1E-02
			Exp. Route Total								6.3E-07					8.5E-02
		Exposure Point Total									5.8E-06					1.1E+00
	Exposure Medium Total										5.8E-06					1.1E+00
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	2.9E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	2.4E-09	2.0E-09	mg/m^3	1.0E-04	mg/m^3	2.0E-05
			Exp. Route Total								2.4E-09					2.0E-05
		Exposure Point Total									2.4E-09					2.0E-05
	Exposure Medium Total										5.8E-06					1.1E+00
Ash Total											5.8E-06					1.1E+00

TABLE 7.6.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	5.9E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.3E-09	4.1E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.6E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.1E-09	1.1E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.0E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.5E-08	7.1E-07	mg/kg/day	3.0E-04	mg/kg/day	2.4E-03
				Chromium	1.7E+01	mg/kg	2.2E-08	mg/kg/day	5.0E-01	1/(mg/kg-day)	1.1E-08	1.6E-06	mg/kg/day	3.0E-03	mg/kg/day	5.2E-04
				Cobalt	1.9E+01	mg/kg	2.6E-08	mg/kg/day	NA	NA	NA	1.8E-06	mg/kg/day	3.0E-04	mg/kg/day	6.1E-03
			Exp. Route Total								3.2E-08					8.9E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	6.3E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.6E-09	4.4E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.7E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.2E-09	1.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.1E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.6E-08	7.6E-07	mg/kg/day	3.0E-04	mg/kg/day	2.5E-03
				Chromium	1.7E+01	mg/kg	2.4E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.8E-07	1.7E-06	mg/kg/day	7.5E-05	mg/kg/day	2.2E-02
				Cobalt	1.9E+01	mg/kg	2.8E-08	mg/kg/day	NA	NA	NA	1.9E-06	mg/kg/day	3.0E-04	mg/kg/day	6.5E-03
			Exp. Route Total								5.0E-07					3.1E-02
		Exposure Point Total									5.3E-07					4.0E-02
	Exposure Medium Total										5.3E-07					4.0E-02
Sediment Total											5.3E-07					4.0E-02
Groundwater	Groundwater	Shallow Groundwater- Water in Excavation Pit	Dermal Absorption	Naphthalene	1.7E+00	ug/L	2.5E-07	mg/kg/day	NA	NA	NA	1.8E-05	mg/kg/day	2.0E-02	mg/kg/day	8.9E-04
				Heptachlor	2.1E-02	ug/L	1.6E-09	mg/kg/day	4.5E+00	1/(mg/kg-day)	7.4E-09	1.1E-07	mg/kg/day	5.0E-04	mg/kg/day	2.3E-04
				Arsenic	1.3E+01	ug/L	3.5E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.3E-07	2.5E-05	mg/kg/day	3.0E-04	mg/kg/day	8.2E-02
				Cobalt	4.6E+01	ug/L	1.5E-07	mg/kg/day	NA	NA	NA	1.0E-05	mg/kg/day	3.0E-04	mg/kg/day	3.4E-02
				Iron	2.1E+04	ug/L	1.4E-04	mg/kg/day	NA	NA	NA	9.5E-03	mg/kg/day	7.0E-01	mg/kg/day	1.4E-02
				Manganese	8.8E+02	ug/L	2.8E-06	mg/kg/day	NA	NA	NA	2.0E-04	mg/kg/day	1.4E-01	mg/kg/day	1.4E-03
			Exp. Route Total								5.3E-07					1.3E-01
		Exposure Point Total									5.3E-07					1.3E-01
		Shallow Groundwater- Volatilization from Water in Excavation Pit	Inhalation	Naphthalene	1.7E+00	ug/L	1.6E-08	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	5.5E-10	1.1E-06	mg/m^3	3.0E-03	mg/m^3	3.7E-04
			Exp. Route Total								5.5E-10					3.7E-04
		Exposure Point Total									5.5E-10					3.7E-04
	Exposure Medium Total										5.3E-07					1.3E-01
Groundwater Total											5.3E-07					1.3E-01
Total of Receptor Risks Across All Media											1.6E-05	Total of Receptor Hazards Across All Media				1.5E+00
Total of Receptor Risks Across All Media (Ash)											6.9E-06	Total of Receptor Hazards Across All Media (Ash)				1.2E+00
Total of Receptor Risks Across All Media (Soil)											1.0E-05	Total of Receptor Hazards Across All Media (Soil)				4.5E-01

*Soil = combined surface and subsurface soil.

Table 7.6.RME Supplement A
Calculation of DAevent
Construction Worker, Groundwater
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical of Potential Concern	Groundwater Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (tevent) (hr)	DAevent (mg/cm^2-event)	Eq
Naphthalene	1.70E+00	4.7E-02	2.0E-01	5.6E-01	1.3E+00	1.0E+00	8	6.4E-07	3
Heptachlor	2.10E-02	8.6E-03	1.0E-01	1.3E+01	3.2E+01	8.0E-01	8	4.1E-09	2
Arsenic	1.28E+01	8.6E-03	NA	NA	NA	NA	8	8.8E-07	1
Cobalt	4.61E+01	1.0E-03	NA	NA	NA	NA	8	3.7E-07	1
Iron	2.12E+04	2.0E-03	NA	NA	NA	NA	8	3.4E-04	1
Manganese	8.76E+02	1.0E-03	NA	NA	NA	NA	8	7.0E-06	1

Inorganics: DAevent (mg/cm2-event) =
Kp x CW x tevent x 0.001 mg/ug x 0.001 l/cm^3 (eq 1)

Organics: DAevent (mg/cm2-event) =

$$\text{If } t_{event} \le t^*, \text{then } DA_{event} = 2 \times FA \times K_p \times C_w \sqrt{\frac{6 \times \tau_{event} \times t_{event}}{\pi}} \qquad \text{(eq 2)}$$

$$\text{If } t_{event} \ge t^*, \text{ then } DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \times \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right] \qquad \text{(eq 3)}$$

Notes:
Permeability constants from EPA 2004, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Interim).* EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.
NA - not applicable.

Table 7.6.RME Supplement B
Inhalation of Volatiles from Groundwater During Construction
Inhalation Exposure Concentrations Calculated Using a Two-Film Volatilization Model
Future Construction Worker Senario
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Chemical	Cw (μg/L)	MW (mol/gram)	K_H (unitless)	k_l (cm/hr)	k_g (cm/hr)	K_v (cm/hr)	ER (mg/hr)	ERa (g/sec-m^2)	Ca (mg/m^3)
Naphthalene	1.74E+00	1.28E+02	2.73E-03	3.11E+00	1.89E+03	1.94E+00	3.37E+00	3.46E-10	9.84E-06

Equations

Equation 1 $Kv = 1/(1/k_l + 1/K_H*K_g)$

Equation 2 $k_g = 700(18/MW)^{1/4}V$

Equation 3 $k_l = (32/MW)^{1/4}Ka'$

Equation 4 $ER = Kv * Cw * L/1000\ cm^3 * mg/1000\ \mu g$

Equation 5 $ERa = ER * g/1000\ mg * hr/60\ min * min/60\ sec * 1/A$

Variables	Units	Exposure Assumptions
Cw = groundwater concentration	(μg/L)	chem-specific
MW = molecular weight	(mol/gram)	chem-specific
K_H - Henry's Law Constant	(unitless)	chem-specific
Kv = volatilization rate	(cm/hr)	Solved by Eq 1
k_g = gas phase transfer coefficient	(cm/hr)	Solved by Eq 2
k_l = liquid phase transfer coefficient	(cm/hr)	Solved by Eq 3
V = wind speed	(m/s)	4.4
Ka' = aeration rate	(cm/hr)	0.0633
ER = emission rate	(mg/hr)	Solved by Eq 4
A = area of excavation (utility ditch)	(m^2)	2,700
Era = area emission rate	(g/sec-m^2)	Solved by Eq 5
Ca = air concentration	(mg/m^3)	Solved using SCREEN3 model

Note: aeration rate based on aeration rate for small pond (0.1/day) multiplied by depth of water in excavation (1/2 ft)

TABLE 7.7.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	5.4E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	3.9E-06	1.5E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	5.7E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.2E-05	1.6E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	5.7E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.2E-06	1.6E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	4.8E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	3.5E-07	1.3E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	5.7E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	4.2E-08	1.6E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.4E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.0E-05	3.9E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	2.5E-07	mg/kg/day	NA	NA	NA	6.9E-07	mg/kg/day	1.0E-03	mg/kg/day	6.9E-04
				Fluoranthene	3.2E+01	mg/kg	1.1E-05	mg/kg/day	NA	NA	NA	3.1E-05	mg/kg/day	4.0E-02	mg/kg/day	7.7E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	3.8E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.8E-06	1.1E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	3.0E-07	mg/kg/day	2.0E-02	mg/kg/day	1.5E-05
				Pyrene	2.5E+01	mg/kg	8.9E-06	mg/kg/day	NA	NA	NA	2.5E-05	mg/kg/day	3.0E-02	mg/kg/day	8.3E-04
				4,4'-DDD	7.3E+00	mg/kg	2.6E-06	mg/kg/day	2.4E-01	1/(mg/kg-day)	6.1E-07	7.2E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.8E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	2.9E-08	5.2E-09	mg/kg/day	5.0E-05	mg/kg/day	1.0E-04
				Heptachlor epoxide	2.0E-02	mg/kg	6.9E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	6.2E-08	1.9E-08	mg/kg/day	1.3E-05	mg/kg/day	1.5E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	9.0E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.2E-07	2.5E-12	mg/kg/day	1.0E-09	mg/kg/day	2.5E-03
				Nitroglycerin	1.9E+00	mg/kg	6.6E-07	mg/kg/day	NA	NA	NA	1.9E-06	mg/kg/day	1.0E-04	mg/kg/day	1.9E-02
				Arsenic	1.0E+01	mg/kg	3.6E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.4E-06	1.0E-05	mg/kg/day	3.0E-04	mg/kg/day	3.4E-02
				Chromium	1.7E+01	mg/kg	6.0E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	3.0E-06	1.7E-05	mg/kg/day	3.0E-03	mg/kg/day	5.6E-03
				Cobalt	8.8E+00	mg/kg	3.1E-06	mg/kg/day	NA	NA	NA	8.6E-06	mg/kg/day	3.0E-04	mg/kg/day	2.9E-02
				Iron	2.2E+04	mg/kg	7.5E-03	mg/kg/day	NA	NA	NA	2.1E-02	mg/kg/day	7.0E-01	mg/kg/day	3.0E-02
				Lead	1.4E+02	mg/kg	4.7E-05	mg/kg/day	NA	NA	NA	1.3E-04	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	6.7E-05	mg/kg/day	NA	NA	NA	1.9E-04	mg/kg/day	1.4E-01	mg/kg/day	1.3E-03
				Mercury	2.1E+00	mg/kg	7.2E-07	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.7E-03
				Vanadium	4.0E+01	mg/kg	1.4E-05	mg/kg/day	NA	NA	NA	3.9E-05	mg/kg/day	5.0E-03	mg/kg/day	7.8E-03
			Exp. Route Total								7.3E-05					1.4E-01

TABLE 7.7.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	4.6E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	3.4E-06	1.3E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	4.9E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.6E-05	1.4E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	4.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	3.6E-06	1.4E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	4.1E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	3.0E-07	1.2E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	4.9E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	3.6E-08	1.4E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.2E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	8.7E-06	3.3E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	1.6E-07	mg/kg/day	NA	NA	NA	4.5E-07	mg/kg/day	1.0E-03	mg/kg/day	4.5E-04
				Fluoranthene	3.2E+01	mg/kg	9.5E-06	mg/kg/day	NA	NA	NA	2.7E-05	mg/kg/day	4.0E-02	mg/kg/day	6.6E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	3.3E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.4E-06	9.2E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	9.2E-08	mg/kg/day	NA	NA	NA	2.6E-07	mg/kg/day	2.0E-02	mg/kg/day	1.3E-05
				Pyrene	2.5E+01	mg/kg	7.6E-06	mg/kg/day	NA	NA	NA	2.1E-05	mg/kg/day	3.0E-02	mg/kg/day	7.1E-04
				4,4'-DDD	7.3E+00	mg/kg	1.7E-06	mg/kg/day	3.4E-01	1/(mg/kg-day)	5.7E-07	4.7E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.2E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	1.9E-08	3.4E-09	mg/kg/day	5.0E-05	mg/kg/day	6.8E-05
				Heptachlor epoxide	2.0E-02	mg/kg	4.5E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	4.1E-08	1.3E-08	mg/kg/day	1.3E-05	mg/kg/day	9.8E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	1.8E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	2.3E-08	5.0E-13	mg/kg/day	1.0E-09	mg/kg/day	5.0E-04
				Nitroglycerin	1.9E+00	mg/kg	4.4E-07	mg/kg/day	NA	NA	NA	1.2E-06	mg/kg/day	1.0E-04	mg/kg/day	1.2E-02
				Arsenic	1.0E+01	mg/kg	7.2E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.1E-06	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.7E-03
				Chromium	1.7E+01	mg/kg	4.0E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	8.0E-06	1.1E-06	mg/kg/day	7.5E-05	mg/kg/day	1.5E-02
				Cobalt	8.8E+00	mg/kg	2.0E-07	mg/kg/day	NA	NA	NA	5.7E-07	mg/kg/day	3.0E-04	mg/kg/day	1.9E-03
				Iron	2.2E+04	mg/kg	5.0E-04	mg/kg/day	NA	NA	NA	1.4E-03	mg/kg/day	7.0E-01	mg/kg/day	2.0E-03
				Lead	1.4E+02	mg/kg	3.1E-06	mg/kg/day	NA	NA	NA	8.8E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	4.4E-06	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	1.4E-01	mg/kg/day	8.8E-05
				Mercury	2.1E+00	mg/kg	4.8E-08	mg/kg/day	NA	NA	NA	1.3E-07	mg/kg/day	2.1E-05	mg/kg/day	6.3E-03
				Vanadium	4.0E+01	mg/kg	9.2E-07	mg/kg/day	NA	NA	NA	2.6E-06	mg/kg/day	1.3E-04	mg/kg/day	2.0E-02
			Exp. Route Total								6.4E-05					6.7E-02
		Exposure Point Total									1.4E-04					2.1E-01
	Exposure Medium Total										1.4E-04					2.1E-01
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	7.8E-06	mg/m^3	3.4E-05	$(ug/m^3)^{-1}$	2.6E-07	2.2E-05	mg/m^3	3.0E-03	mg/m^3	7.3E-03
				Chromium	1.2E-08	mg/m^3	9.7E-10	mg/m^3	8.4E-02	$(ug/m^3)^{-1}$	8.1E-08	2.7E-09	mg/m^3	1.0E-04	mg/m^3	2.7E-05
			Exp. Route Total								3.5E-07					7.3E-03
		Exposure Point Total									3.5E-07					7.3E-03
	Exposure Medium Total										3.5E-07					7.3E-03
Soil* Total											1.4E-04					2.1E-01
Ash	Ash	Ash	Ingestion	Aluminum	9.8E+03	mg/kg	3.4E-03	mg/kg/day	NA	NA	NA	9.6E-03	mg/kg/day	1.0E+00	mg/kg/day	9.6E-03

TABLE 7.7.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
				Arsenic	9.5E+01	mg/kg	3.3E-05	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.0E-05	9.3E-05	mg/kg/day	3.0E-04	mg/kg/day	3.1E-01
				Chromium	2.4E+01	mg/kg	8.4E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	4.2E-06	2.4E-05	mg/kg/day	3.0E-03	mg/kg/day	7.9E-03
				Cobalt	1.6E+01	mg/kg	5.4E-06	mg/kg/day	NA	NA	NA	1.5E-05	mg/kg/day	3.0E-04	mg/kg/day	5.1E-02
				Iron	4.6E+04	mg/kg	1.6E-02	mg/kg/day	NA	NA	NA	4.5E-02	mg/kg/day	7.0E-01	mg/kg/day	6.5E-02
				Manganese	3.6E+02	mg/kg	1.3E-04	mg/kg/day	NA	NA	NA	3.5E-04	mg/kg/day	1.4E-01	mg/kg/day	2.5E-03
				Vanadium	1.2E+02	mg/kg	4.0E-05	mg/kg/day	NA	NA	NA	1.1E-04	mg/kg/day	5.0E-03	mg/kg/day	2.3E-02
			Exp. Route Total								5.4E-05					4.7E-01
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	2.3E-04	mg/kg/day	NA	NA	NA	6.4E-04	mg/kg/day	1.0E+00	mg/kg/day	6.4E-04
				Arsenic	9.5E+01	mg/kg	6.5E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	9.8E-06	1.8E-05	mg/kg/day	3.0E-04	mg/kg/day	6.1E-02
				Chromium	2.4E+01	mg/kg	5.6E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.1E-05	1.6E-06	mg/kg/day	7.5E-05	mg/kg/day	2.1E-02
				Cobalt	1.6E+01	mg/kg	3.6E-07	mg/kg/day	NA	NA	NA	1.0E-06	mg/kg/day	3.0E-04	mg/kg/day	3.3E-03
				Iron	4.6E+04	mg/kg	1.1E-03	mg/kg/day	NA	NA	NA	3.0E-03	mg/kg/day	7.0E-01	mg/kg/day	4.3E-03
				Manganese	3.6E+02	mg/kg	8.3E-06	mg/kg/day	NA	NA	NA	2.3E-05	mg/kg/day	1.4E-01	mg/kg/day	1.7E-04
				Vanadium	1.2E+02	mg/kg	2.7E-06	mg/kg/day	NA	NA	NA	7.5E-06	mg/kg/day	1.3E-04	mg/kg/day	5.7E-02
			Exp. Route Total								2.1E-05					1.5E-01
		Exposure Point Total									7.5E-05					6.1E-01
	Exposure Medium Total										7.5E-05					6.1E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	2.9E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	2.4E-09	2.0E-09	mg/m^3	1.0E-04	mg/m^3	2.0E-05
			Exp. Route Total								2.4E-09					2.0E-05
		Exposure Point Total									2.4E-09					2.0E-05
	Exposure Medium Total										7.5E-05					6.1E-01
Ash Total											7.5E-05					6.1E-01

TABLE 7.7.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion													
				Benzo(a)pyrene	4.4E-01	mg/kg	3.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.2E-08	8.6E-09	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	8.1E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.9E-09	2.3E-09	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	5.3E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	7.9E-08	1.5E-07	mg/kg/day	3.0E-04	mg/kg/day	4.9E-04
				Chromium	1.7E+01	mg/kg	1.2E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	5.8E-08	3.3E-07	mg/kg/day	3.0E-03	mg/kg/day	1.1E-04
				Cobalt	1.9E+01	mg/kg	1.4E-07	mg/kg/day	NA	NA	NA	3.8E-07	mg/kg/day	3.0E-04	mg/kg/day	1.3E-03
			Exp. Route Total								1.7E-07					1.9E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	7.9E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.7E-08	2.2E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.5E-08	5.9E-09	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	3.1E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.7E-08	8.8E-08	mg/kg/day	3.0E-04	mg/kg/day	2.9E-04
				Chromium	1.7E+01	mg/kg	2.3E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.6E-07	6.5E-08	mg/kg/day	7.5E-05	mg/kg/day	8.6E-04
				Cobalt	1.9E+01	mg/kg	2.7E-08	mg/kg/day	NA	NA	NA	7.5E-08	mg/kg/day	3.0E-04	mg/kg/day	2.5E-04
			Exp. Route Total								5.8E-07					1.4E-03
		Exposure Point Total									7.5E-07					3.3E-03
	Exposure Medium Total										7.5E-07					3.3E-03
Sediment Total											7.5E-07					3.3E-03
									Total of Receptor Risks Across All Media		2.1E-04	Total of Receptor Hazards Across All Media				8.3E-01
									Total of Receptor Risks Across All Media (Ash)		7.5E-05	Total of Receptor Hazards Across All Media (Ash)				6.2E-01
									Total of Receptor Risks Across All Media (Soil)		1.4E-04	Total of Receptor Hazards Across All Media (Soil)				2.2E-01

*Soil = combined surface and subsurface soil.

TABLE 7.8.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	1.1E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	7.9E-07	3.1E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	1.1E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	8.4E-06	3.3E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	1.1E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	8.4E-07	3.3E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	9.6E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	7.0E-08	2.8E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	1.1E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	8.3E-09	3.3E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	2.8E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.0E-06	8.1E-07	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	4.9E-08	mg/kg/day	NA	NA	NA	1.4E-07	mg/kg/day	1.0E-03	mg/kg/day	1.4E-04
				Fluoranthene	3.2E+01	mg/kg	2.2E-06	mg/kg/day	NA	NA	NA	6.4E-06	mg/kg/day	4.0E-02	mg/kg/day	1.6E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	7.7E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	5.6E-07	2.2E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	2.1E-08	mg/kg/day	NA	NA	NA	6.2E-08	mg/kg/day	2.0E-02	mg/kg/day	3.1E-06
				Pyrene	2.5E+01	mg/kg	1.8E-06	mg/kg/day	NA	NA	NA	5.2E-06	mg/kg/day	3.0E-02	mg/kg/day	1.7E-04
				4,4'-DDD	7.3E+00	mg/kg	5.1E-07	mg/kg/day	2.4E-01	1/(mg/kg-day)	1.2E-07	1.5E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	3.7E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	5.9E-09	1.1E-09	mg/kg/day	5.0E-05	mg/kg/day	2.1E-05
				Heptachlor epoxide	2.0E-02	mg/kg	1.4E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	1.2E-08	4.0E-09	mg/kg/day	1.3E-05	mg/kg/day	3.1E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	1.8E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	2.3E-08	5.2E-13	mg/kg/day	1.0E-09	mg/kg/day	5.2E-04
				Nitroglycerin	1.9E+00	mg/kg	1.3E-07	mg/kg/day	NA	NA	NA	3.9E-07	mg/kg/day	1.0E-04	mg/kg/day	3.9E-03
				Arsenic	1.0E+01	mg/kg	7.2E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.1E-06	2.1E-06	mg/kg/day	3.0E-04	mg/kg/day	7.0E-03
				Chromium	1.7E+01	mg/kg	1.2E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	6.0E-07	3.5E-06	mg/kg/day	3.0E-03	mg/kg/day	1.2E-03
				Cobalt	8.8E+00	mg/kg	6.2E-07	mg/kg/day	NA	NA	NA	1.8E-06	mg/kg/day	3.0E-04	mg/kg/day	6.0E-03
				Iron	2.2E+04	mg/kg	1.5E-03	mg/kg/day	NA	NA	NA	4.4E-03	mg/kg/day	7.0E-01	mg/kg/day	6.3E-03
				Lead	1.4E+02	mg/kg	9.5E-06	mg/kg/day	NA	NA	NA	2.8E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	1.3E-05	mg/kg/day	NA	NA	NA	3.9E-05	mg/kg/day	1.4E-01	mg/kg/day	2.8E-04
				Mercury	2.1E+00	mg/kg	1.4E-07	mg/kg/day	NA	NA	NA	4.2E-07	mg/kg/day	3.0E-04	mg/kg/day	1.4E-03
				Vanadium	4.0E+01	mg/kg	2.8E-06	mg/kg/day	NA	NA	NA	8.1E-06	mg/kg/day	5.0E-03	mg/kg/day	1.6E-03
			Exp. Route Total								1.4E-05					2.9E-02

TABLE 7.8.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	5.6E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.1E-07	1.6E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.3E-06	1.7E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.3E-07	1.7E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	5.0E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	3.6E-08	1.5E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	4.3E-09	1.7E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.4E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.0E-06	4.2E-07	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	2.0E-08	mg/kg/day	NA	NA	NA	5.7E-08	mg/kg/day	1.0E-03	mg/kg/day	5.7E-05
				Fluoranthene	3.2E+01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	3.3E-06	mg/kg/day	4.0E-02	mg/kg/day	8.3E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	4.0E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.9E-07	1.2E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.1E-08	mg/kg/day	NA	NA	NA	3.2E-08	mg/kg/day	2.0E-02	mg/kg/day	1.6E-06
				Pyrene	2.5E+01	mg/kg	9.2E-07	mg/kg/day	NA	NA	NA	2.7E-06	mg/kg/day	3.0E-02	mg/kg/day	9.0E-05
				4,4'-DDD	7.3E+00	mg/kg	2.0E-07	mg/kg/day	3.4E-01	1/(mg/kg-day)	6.9E-08	5.9E-07	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.5E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	2.3E-09	4.3E-10	mg/kg/day	5.0E-05	mg/kg/day	8.6E-06
				Heptachlor epoxide	2.0E-02	mg/kg	5.5E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	5.0E-09	1.6E-09	mg/kg/day	1.3E-05	mg/kg/day	1.2E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	2.1E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	2.8E-09	6.3E-14	mg/kg/day	1.0E-09	mg/kg/day	6.3E-05
				Nitroglycerin	1.9E+00	mg/kg	5.3E-08	mg/kg/day	NA	NA	NA	1.5E-07	mg/kg/day	1.0E-04	mg/kg/day	1.5E-03
				Arsenic	1.0E+01	mg/kg	8.7E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.3E-07	2.5E-07	mg/kg/day	3.0E-04	mg/kg/day	8.4E-04
				Chromium	1.7E+01	mg/kg	4.8E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	9.6E-07	1.4E-07	mg/kg/day	7.5E-05	mg/kg/day	1.9E-03
				Cobalt	8.8E+00	mg/kg	2.5E-08	mg/kg/day	NA	NA	NA	7.2E-08	mg/kg/day	3.0E-04	mg/kg/day	2.4E-04
				Iron	2.2E+04	mg/kg	6.0E-05	mg/kg/day	NA	NA	NA	1.8E-04	mg/kg/day	7.0E-01	mg/kg/day	2.5E-04
				Lead	1.4E+02	mg/kg	3.8E-07	mg/kg/day	NA	NA	NA	1.1E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	5.3E-07	mg/kg/day	NA	NA	NA	1.6E-06	mg/kg/day	1.4E-01	mg/kg/day	1.1E-05
				Mercury	2.1E+00	mg/kg	5.7E-09	mg/kg/day	NA	NA	NA	1.7E-08	mg/kg/day	2.1E-05	mg/kg/day	8.0E-04
				Vanadium	4.0E+01	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	3.2E-07	mg/kg/day	1.3E-04	mg/kg/day	2.5E-03
			Exp. Route Total								7.7E-06					8.5E-03
		Exposure Point Total									2.2E-05					3.7E-02
	Exposure Medium Total										2.2E-05					3.7E-02
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	7.8E-07	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	2.6E-08	2.3E-06	mg/m^3	3.0E-03	mg/m^3	7.6E-04
				Chromium	1.2E-08	mg/m^3	9.7E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	8.1E-09	2.8E-10	mg/m^3	1.0E-04	mg/m^3	2.8E-06
			Exp. Route Total								3.5E-08					7.6E-04
		Exposure Point Total									3.5E-08					7.6E-04
	Exposure Medium Total										2.2E-05					3.8E-02
Surface Soil Total											2.2E-05					3.8E-02

TABLE 7.8.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	6.9E-04	mg/kg/day	NA	NA	NA	2.0E-03	mg/kg/day	1.0E+00	mg/kg/day	2.0E-03
				Arsenic	9.5E+01	mg/kg	6.6E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	9.9E-06	1.9E-05	mg/kg/day	3.0E-04	mg/kg/day	6.4E-02
				Chromium	2.4E+01	mg/kg	1.7E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	8.4E-07	4.9E-06	mg/kg/day	3.0E-03	mg/kg/day	1.6E-03
				Cobalt	1.6E+01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	3.2E-06	mg/kg/day	3.0E-04	mg/kg/day	1.1E-02
				Iron	4.6E+04	mg/kg	3.2E-03	mg/kg/day	NA	NA	NA	9.4E-03	mg/kg/day	7.0E-01	mg/kg/day	1.3E-02
				Manganese	3.6E+02	mg/kg	2.5E-05	mg/kg/day	NA	NA	NA	7.3E-05	mg/kg/day	1.4E-01	mg/kg/day	5.2E-04
				Vanadium	1.2E+02	mg/kg	8.1E-06	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	5.0E-03	mg/kg/day	4.7E-03
			Exp. Route Total								1.1E-05					9.7E-02
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	2.7E-05	mg/kg/day	NA	NA	NA	8.0E-05	mg/kg/day	1.0E+00	mg/kg/day	8.0E-05
				Arsenic	9.5E+01	mg/kg	7.9E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.2E-06	2.3E-06	mg/kg/day	3.0E-04	mg/kg/day	7.7E-03
				Chromium	2.4E+01	mg/kg	6.7E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.3E-06	2.0E-07	mg/kg/day	7.5E-05	mg/kg/day	2.6E-03
				Cobalt	1.6E+01	mg/kg	4.3E-08	mg/kg/day	NA	NA	NA	1.3E-07	mg/kg/day	3.0E-04	mg/kg/day	4.2E-04
				Iron	4.6E+04	mg/kg	1.3E-04	mg/kg/day	NA	NA	NA	3.8E-04	mg/kg/day	7.0E-01	mg/kg/day	5.4E-04
				Manganese	3.6E+02	mg/kg	1.0E-06	mg/kg/day	NA	NA	NA	2.9E-06	mg/kg/day	1.4E-01	mg/kg/day	2.1E-05
				Vanadium	1.2E+02	mg/kg	3.2E-07	mg/kg/day	NA	NA	NA	9.4E-07	mg/kg/day	1.3E-04	mg/kg/day	7.2E-03
			Exp. Route Total								2.5E-06					1.9E-02
		Exposure Point Total									1.3E-05					1.2E-01
	Exposure Medium Total										1.3E-05					1.2E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	1.4E-10	mg/m^3	8.4E-02	(ug/m3)$^{-1}$	1.2E-08	4.2E-10	mg/m^3	1.0E-04	mg/m^3	4.2E-06
			Exp. Route Total								1.2E-08					4.2E-06
		Exposure Point Total									1.2E-08					4.2E-06
	Exposure Medium Total										1.3E-05					1.2E-01
Ash Total											1.3E-05					1.2E-01

TABLE 7.8.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion													
				Benzo(a)pyrene	4.4E-01	mg/kg	1.5E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.1E-07	4.5E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	4.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.0E-08	1.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	2.6E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.0E-07	7.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	5.8E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.9E-07	1.7E-06	mg/kg/day	3.0E-03	mg/kg/day	5.7E-04
				Cobalt	1.9E+01	mg/kg	6.7E-07	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.6E-03
			Exp. Route Total								8.3E-07					9.7E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	6.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.0E-07	2.0E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.3E-07	5.3E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	2.7E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.1E-07	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	2.0E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.0E-06	5.8E-07	mg/kg/day	7.5E-05	mg/kg/day	7.7E-03
				Cobalt	1.9E+01	mg/kg	2.3E-07	mg/kg/day	NA	NA	NA	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
			Exp. Route Total								5.0E-06					1.3E-02
		Exposure Point Total									5.8E-06					2.2E-02
	Exposure Medium Total										5.8E-06					2.2E-02
Sediment Total											5.8E-06					2.2E-02
											Total of Receptor Risks Across All Media	4.1E-05		Total of Receptor Hazards Across All Media		1.8E-01
											Total of Receptor Risks Across All Media (Ash)	1.9E-05		Total of Receptor Hazards Across All Media (Ash)		1.4E-01
											Total of Receptor Risks Across All Media (Soil)	2.8E-05		Total of Receptor Hazards Across All Media (Soil)		6.0E-02

TABLE 7.9.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	5.6E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.1E-07	4.3E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.3E-06	4.6E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.3E-07	4.6E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	4.9E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	3.6E-08	3.8E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	5.9E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	4.3E-09	4.6E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.4E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.0E-06	1.1E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	2.5E-08	mg/kg/day	NA	NA	NA	2.0E-07	mg/kg/day	1.0E-03	mg/kg/day	2.0E-04
				Fluoranthene	3.2E+01	mg/kg	1.1E-06	mg/kg/day	NA	NA	NA	8.8E-06	mg/kg/day	4.0E-02	mg/kg/day	2.2E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	3.9E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.9E-07	3.1E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.1E-08	mg/kg/day	NA	NA	NA	8.5E-08	mg/kg/day	2.0E-02	mg/kg/day	4.3E-06
				Pyrene	2.5E+01	mg/kg	9.1E-07	mg/kg/day	NA	NA	NA	7.1E-06	mg/kg/day	3.0E-02	mg/kg/day	2.4E-04
				4,4'-DDD	7.3E+00	mg/kg	2.6E-07	mg/kg/day	2.4E-01	1/(mg/kg-day)	6.3E-08	2.0E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.9E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	3.0E-09	1.5E-09	mg/kg/day	5.0E-05	mg/kg/day	2.9E-05
				Heptachlor epoxide	2.0E-02	mg/kg	7.1E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	6.4E-09	5.5E-09	mg/kg/day	1.3E-05	mg/kg/day	4.2E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	9.2E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.2E-08	7.2E-13	mg/kg/day	1.0E-09	mg/kg/day	7.2E-04
				Nitroglycerin	1.9E+00	mg/kg	6.8E-08	mg/kg/day	NA	NA	NA	5.3E-07	mg/kg/day	1.0E-04	mg/kg/day	5.3E-03
				Arsenic	1.0E+01	mg/kg	3.7E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.6E-07	2.9E-06	mg/kg/day	3.0E-04	mg/kg/day	9.6E-03
				Chromium	1.7E+01	mg/kg	6.2E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	3.1E-07	4.8E-06	mg/kg/day	3.0E-03	mg/kg/day	1.6E-03
				Cobalt	8.8E+00	mg/kg	3.2E-07	mg/kg/day	NA	NA	NA	2.5E-06	mg/kg/day	3.0E-04	mg/kg/day	8.2E-03
				Iron	2.2E+04	mg/kg	7.8E-04	mg/kg/day	NA	NA	NA	6.0E-03	mg/kg/day	7.0E-01	mg/kg/day	8.6E-03
				Lead	1.4E+02	mg/kg	4.9E-06	mg/kg/day	NA	NA	NA	3.8E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	6.9E-06	mg/kg/day	NA	NA	NA	5.4E-05	mg/kg/day	1.4E-01	mg/kg/day	3.8E-04
				Mercury	2.1E+00	mg/kg	7.4E-08	mg/kg/day	NA	NA	NA	5.8E-07	mg/kg/day	3.0E-04	mg/kg/day	1.9E-03
				Vanadium	4.0E+01	mg/kg	1.4E-06	mg/kg/day	NA	NA	NA	1.1E-05	mg/kg/day	5.0E-03	mg/kg/day	2.2E-03
			Exp. Route Total								7.5E-06					4.0E-02

TABLE 7.9.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	8.4E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	6.2E-07	6.6E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	9.0E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	6.5E-06	7.0E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	9.0E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	6.5E-07	7.0E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	7.5E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	5.5E-08	5.8E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	8.9E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	6.5E-09	6.9E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	2.2E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.6E-06	1.7E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	3.0E-08	mg/kg/day	NA	NA	NA	2.3E-07	mg/kg/day	1.0E-03	mg/kg/day	2.3E-04
				Fluoranthene	3.2E+01	mg/kg	1.7E-06	mg/kg/day	NA	NA	NA	1.3E-05	mg/kg/day	4.0E-02	mg/kg/day	3.4E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	6.0E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.4E-07	4.7E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.7E-08	mg/kg/day	NA	NA	NA	1.3E-07	mg/kg/day	2.0E-02	mg/kg/day	6.5E-06
				Pyrene	2.5E+01	mg/kg	1.4E-06	mg/kg/day	NA	NA	NA	1.1E-05	mg/kg/day	3.0E-02	mg/kg/day	3.6E-04
				4,4'-DDD	7.3E+00	mg/kg	3.1E-07	mg/kg/day	3.4E-01	1/(mg/kg-day)	1.0E-07	2.4E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	2.2E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	3.5E-09	1.7E-09	mg/kg/day	5.0E-05	mg/kg/day	3.4E-05
				Heptachlor epoxide	2.0E-02	mg/kg	8.3E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	7.5E-09	6.4E-09	mg/kg/day	1.3E-05	mg/kg/day	4.9E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	3.2E-14	mg/kg/day	1.3E+05	1/(mg/kg-day)	4.2E-09	2.5E-13	mg/kg/day	1.0E-09	mg/kg/day	2.5E-04
				Nitroglycerin	1.9E+00	mg/kg	8.0E-08	mg/kg/day	NA	NA	NA	6.2E-07	mg/kg/day	1.0E-04	mg/kg/day	6.2E-03
				Arsenic	1.0E+01	mg/kg	1.3E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.0E-07	1.0E-06	mg/kg/day	3.0E-04	mg/kg/day	3.4E-03
				Chromium	1.7E+01	mg/kg	7.2E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.4E-06	5.6E-07	mg/kg/day	7.5E-05	mg/kg/day	7.5E-03
				Cobalt	8.8E+00	mg/kg	3.7E-08	mg/kg/day	NA	NA	NA	2.9E-07	mg/kg/day	3.0E-04	mg/kg/day	9.6E-04
				Iron	2.2E+04	mg/kg	9.1E-05	mg/kg/day	NA	NA	NA	7.1E-04	mg/kg/day	7.0E-01	mg/kg/day	1.0E-03
				Lead	1.4E+02	mg/kg	5.7E-07	mg/kg/day	NA	NA	NA	4.4E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	8.1E-07	mg/kg/day	NA	NA	NA	6.3E-06	mg/kg/day	1.4E-01	mg/kg/day	4.5E-05
				Mercury	2.1E+00	mg/kg	8.7E-09	mg/kg/day	NA	NA	NA	6.7E-08	mg/kg/day	2.1E-05	mg/kg/day	3.2E-03
				Vanadium	4.0E+01	mg/kg	1.7E-07	mg/kg/day	NA	NA	NA	1.3E-06	mg/kg/day	1.3E-04	mg/kg/day	1.0E-02
			Exp. Route Total								1.2E-05					3.4E-02
		Exposure Point Total									1.9E-05					7.4E-02
	Exposure Medium Total										1.9E-05					7.4E-02
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	2.9E-07	mg/m^3	3.4E-05	(ug/m^3)$^{-1}$	9.9E-09	2.3E-06	mg/m^3	3.0E-03	mg/m^3	7.6E-04
				Chromium	1.2E-08	mg/m^3	3.6E-11	mg/m^3	8.4E-02	(ug/m^3)$^{-1}$	3.0E-09	2.8E-10	mg/m^3	1.0E-04	mg/m^3	2.8E-06
			Exp. Route Total								1.3E-08					7.6E-04
		Exposure Point Total									1.3E-08					7.6E-04
	Exposure Medium Total										1.9E-05					7.5E-02
Surface Soil Total											1.9E-05					7.5E-02

TABLE 7.9.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
							Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
					Value	Units	Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	3.5E-04	mg/kg/day	NA	NA	NA	2.7E-03	mg/kg/day	1.0E+00	mg/kg/day	2.7E-03
				Arsenic	9.5E+01	mg/kg	3.4E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	5.1E-06	2.6E-05	mg/kg/day	3.0E-04	mg/kg/day	8.8E-02
				Chromium	2.4E+01	mg/kg	8.7E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	4.3E-07	6.7E-06	mg/kg/day	3.0E-03	mg/kg/day	2.2E-03
				Cobalt	1.6E+01	mg/kg	5.6E-07	mg/kg/day	NA	NA	NA	4.3E-06	mg/kg/day	3.0E-04	mg/kg/day	1.4E-02
				Iron	4.6E+04	mg/kg	1.7E-03	mg/kg/day	NA	NA	NA	1.3E-02	mg/kg/day	7.0E-01	mg/kg/day	1.8E-02
				Manganese	3.6E+02	mg/kg	1.3E-05	mg/kg/day	NA	NA	NA	1.0E-04	mg/kg/day	1.4E-01	mg/kg/day	7.2E-04
				Vanadium	1.2E+02	mg/kg	4.2E-06	mg/kg/day	NA	NA	NA	3.2E-05	mg/kg/day	5.0E-03	mg/kg/day	6.5E-03
			Exp. Route Total								5.5E-06					1.3E-01
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	4.1E-05	mg/kg/day	NA	NA	NA	3.2E-04	mg/kg/day	1.0E+00	mg/kg/day	3.2E-04
				Arsenic	9.5E+01	mg/kg	1.2E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.8E-06	9.3E-06	mg/kg/day	3.0E-04	mg/kg/day	3.1E-02
				Chromium	2.4E+01	mg/kg	1.0E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	2.0E-06	7.9E-07	mg/kg/day	7.5E-05	mg/kg/day	1.1E-02
				Cobalt	1.6E+01	mg/kg	6.5E-08	mg/kg/day	NA	NA	NA	5.1E-07	mg/kg/day	3.0E-04	mg/kg/day	1.7E-03
				Iron	4.6E+04	mg/kg	1.9E-04	mg/kg/day	NA	NA	NA	1.5E-03	mg/kg/day	7.0E-01	mg/kg/day	2.2E-03
				Manganese	3.6E+02	mg/kg	1.5E-06	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	1.4E-01	mg/kg/day	8.4E-05
				Vanadium	1.2E+02	mg/kg	4.9E-07	mg/kg/day	NA	NA	NA	3.8E-06	mg/kg/day	1.3E-04	mg/kg/day	2.9E-02
			Exp. Route Total								3.8E-06					7.5E-02
		Exposure Point Total									9.3E-06					2.1E-01
	Exposure Medium Total										9.3E-06					2.1E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	5.4E-11	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	4.5E-09	4.2E-10	mg/m^3	1.0E-04	mg/m^3	4.2E-06
			Exp. Route Total								4.5E-09					4.2E-06
		Exposure Point Total									4.5E-09					4.2E-06
	Exposure Medium Total										9.3E-06					2.1E-01
Ash Total											9.3E-06					2.1E-01

TABLE 7.9.RME

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion													
				Benzo(a)pyrene	4.4E-01	mg/kg	7.9E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.7E-08	6.1E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.5E-08	1.6E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.4E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.0E-07	1.1E-06	mg/kg/day	3.0E-04	mg/kg/day	3.5E-03
				Chromium	1.7E+01	mg/kg	3.0E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	1.5E-07	2.3E-06	mg/kg/day	3.0E-03	mg/kg/day	7.8E-04
				Cobalt	1.9E+01	mg/kg	3.5E-07	mg/kg/day	NA	NA	NA	2.7E-06	mg/kg/day	3.0E-04	mg/kg/day	9.0E-03
			Exp. Route Total								4.3E-07					1.3E-02
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	8.0E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.8E-07	2.3E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	8.0E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.8E-08	6.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	3.2E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	4.8E-07	9.3E-07	mg/kg/day	3.0E-04	mg/kg/day	3.1E-03
				Chromium	1.7E+01	mg/kg	2.3E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.7E-06	6.8E-07	mg/kg/day	7.5E-05	mg/kg/day	9.1E-03
				Cobalt	1.9E+01	mg/kg	2.7E-07	mg/kg/day	NA	NA	NA	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
			Exp. Route Total								5.8E-06					1.5E-02
		Exposure Point Total									6.2E-06					2.8E-02
	Exposure Medium Total										6.2E-06					2.8E-02
Sediment Total											6.2E-06					2.8E-02
											Total of Receptor Risks Across All Media					3.5E-05
											Total of Receptor Risks Across All Media (Ash)					1.6E-05
											Total of Receptor Risks Across All Media (Soil)					2.5E-05
												Total of Receptor Hazards Across All Media				3.1E-01
												Total of Receptor Hazards Across All Media (Ash)				2.4E-01
												Total of Receptor Hazards Across All Media (Soil)				1.0E-01

TABLE 7.1.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.1E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	7.5E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.5E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	6.3E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	7.5E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.8E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.2E-07	mg/kg/day	1.0E-03	mg/kg/day	3.2E-04
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.4E-05	mg/kg/day	4.0E-02	mg/kg/day	3.6E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	5.0E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.4E-07	mg/kg/day	2.0E-02	mg/kg/day	7.0E-06
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	3.0E-02	mg/kg/day	3.9E-04
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	2.4E-01	1/(mg/kg-day)	NA	3.4E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	2.4E-09	mg/kg/day	5.0E-05	mg/kg/day	4.8E-05
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	9.0E-09	mg/kg/day	1.3E-05	mg/kg/day	6.9E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	1.2E-12	mg/kg/day	1.0E-09	mg/kg/day	1.2E-03
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	8.7E-07	mg/kg/day	1.0E-04	mg/kg/day	8.7E-03
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	4.7E-06	mg/kg/day	3.0E-04	mg/kg/day	1.6E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	7.9E-06	mg/kg/day	3.0E-03	mg/kg/day	2.6E-03
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	4.0E-06	mg/kg/day	3.0E-04	mg/kg/day	1.3E-02
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	9.9E-03	mg/kg/day	7.0E-01	mg/kg/day	1.4E-02
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	6.2E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	8.8E-05	mg/kg/day	1.4E-01	mg/kg/day	6.3E-04
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	9.5E-07	mg/kg/day	3.0E-04	mg/kg/day	3.2E-03
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.8E-05	mg/kg/day	5.0E-03	mg/kg/day	3.7E-03
			Exp. Route Total								NA					6.5E-02

TABLE 7.1.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.3E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	7.8E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.8E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	6.5E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	7.8E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.9E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.6E-07	mg/kg/day	1.0E-03	mg/kg/day	2.6E-04
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-05	mg/kg/day	4.0E-02	mg/kg/day	3.8E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	5.2E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-07	mg/kg/day	2.0E-02	mg/kg/day	7.3E-06
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.2E-05	mg/kg/day	3.0E-02	mg/kg/day	4.0E-04
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	3.4E-01	1/(mg/kg-day)	NA	2.7E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	1.9E-09	mg/kg/day	5.0E-05	mg/kg/day	3.9E-05
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	7.2E-09	mg/kg/day	1.3E-05	mg/kg/day	5.5E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	2.8E-13	mg/kg/day	1.0E-09	mg/kg/day	2.8E-04
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	6.9E-07	mg/kg/day	1.0E-04	mg/kg/day	6.9E-03
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.1E-06	mg/kg/day	3.0E-04	mg/kg/day	3.8E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	6.3E-07	mg/kg/day	7.5E-05	mg/kg/day	8.4E-03
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	3.2E-07	mg/kg/day	3.0E-04	mg/kg/day	1.1E-03
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	7.9E-04	mg/kg/day	7.0E-01	mg/kg/day	1.1E-03
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	5.0E-06	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	7.0E-06	mg/kg/day	1.4E-01	mg/kg/day	5.0E-05
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	7.5E-08	mg/kg/day	2.1E-05	mg/kg/day	3.6E-03
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-06	mg/kg/day	1.3E-04	mg/kg/day	1.1E-02
			Exp. Route Total								NA					3.8E-02
		Exposure Point Total									NA					1.0E-01
	Exposure Medium Total										NA					1.0E-01
Soil*	Air	Emissions from Soil*	Inhalation	Naphthalene	9.5E-05	mg/m^3	NA	mg/m^3	3.4E-05	(ug/m^3)$^{-1}$	NA	6.1E-05	mg/m^3	3.0E-03	mg/m^3	2.0E-02
				Chromium	1.2E-08	mg/m^3	NA	mg/m^3	8.4E-02	(ug/m^3)$^{-1}$	NA	7.6E-09	mg/m^3	1.0E-04	mg/m^3	7.6E-05
			Exp. Route Total								NA					2.0E-02
		Exposure Point Total									NA					2.0E-02
	Exposure Medium Total										NA					1.2E-01
Soil* Total											NA					1.2E-01

TABLE 7.1.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	4.5E-03	mg/kg/day	1.0E+00	mg/kg/day	4.5E-03
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	4.3E-05	mg/kg/day	3.0E-04	mg/kg/day	1.4E-01
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.1E-05	mg/kg/day	3.0E-03	mg/kg/day	3.7E-03
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	7.1E-06	mg/kg/day	3.0E-04	mg/kg/day	2.4E-02
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	2.1E-02	mg/kg/day	7.0E-01	mg/kg/day	3.0E-02
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-04	mg/kg/day	1.4E-01	mg/kg/day	1.2E-03
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	5.3E-05	mg/kg/day	5.0E-03	mg/kg/day	1.1E-02
			Exp. Route Total								NA					2.2E-01
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	3.6E-04	mg/kg/day	1.0E+00	mg/kg/day	3.6E-04
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.0E-05	mg/kg/day	3.0E-04	mg/kg/day	3.5E-02
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	8.8E-07	mg/kg/day	7.5E-05	mg/kg/day	1.2E-02
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	5.7E-07	mg/kg/day	3.0E-04	mg/kg/day	1.9E-03
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-03	mg/kg/day	7.0E-01	mg/kg/day	2.4E-03
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.3E-05	mg/kg/day	1.4E-01	mg/kg/day	9.4E-05
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.2E-06	mg/kg/day	1.3E-04	mg/kg/day	3.2E-02
			Exp. Route Total								NA					8.4E-02
		Exposure Point Total									NA					3.0E-01
	Exposure Medium Total										NA					3.0E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	NA	1.1E-08	mg/m^3	1.0E-04	mg/m^3	1.1E-04
			Exp. Route Total								NA					1.1E-04
		Exposure Point Total									NA					1.1E-04
	Exposure Medium Total										NA					3.0E-01
Ash Total											NA					3.0E-01

TABLE 7.1.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.5E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.7E-06	mg/kg/day	3.0E-03	mg/kg/day	5.7E-04
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	3.0E-04	mg/kg/day	6.6E-03
			Exp. Route Total								NA					9.7E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	2.0E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	5.3E-08	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.9E-07	mg/kg/day	3.0E-04	mg/kg/day	2.6E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	5.8E-07	mg/kg/day	7.5E-05	mg/kg/day	7.7E-03
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	6.7E-07	mg/kg/day	3.0E-04	mg/kg/day	2.2E-03
			Exp. Route Total								NA					1.3E-02
		Exposure Point Total									NA					2.2E-02
	Exposure Medium Total										NA					2.2E-02
Sediment Total											NA					2.2E-02
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	2.2E-05	mg/kg/day	2.0E-02	mg/kg/day	1.1E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	2.7E-07	mg/kg/day	5.0E-04	mg/kg/day	5.4E-04
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.6E-04	mg/kg/day	3.0E-04	mg/kg/day	5.5E-01
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	5.9E-04	mg/kg/day	3.0E-04	mg/kg/day	2.0E+00
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	2.7E-01	mg/kg/day	7.0E-01	mg/kg/day	3.9E-01
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	1.1E-02	mg/kg/day	1.4E-01	mg/kg/day	8.0E-02
			Exp. Route Total								NA					3.0E+00
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	2.4E-05	mg/kg/day	2.0E-02	mg/kg/day	1.2E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	1.8E-07	mg/kg/day	5.0E-04	mg/kg/day	3.7E-04
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.1E-05	mg/kg/day	3.0E-04	mg/kg/day	3.5E-02
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	4.4E-06	mg/kg/day	3.0E-04	mg/kg/day	1.5E-02
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	4.1E-03	mg/kg/day	7.0E-01	mg/kg/day	5.8E-03
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	8.4E-05	mg/kg/day	1.4E-01	mg/kg/day	6.0E-04
			Exp. Route Total								NA					5.8E-02
		Exposure Point Total									NA					3.0E+00

TABLE 7.1.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
		Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	NA	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	NA	3.7E-05	mg/m^3	3.0E-03	mg/m^3	1.2E-02
			Exp. Route Total								NA					1.2E-02
		Exposure Point Total									NA					1.2E-02
	Exposure Medium Total										NA					3.1E+00
Groundwater Total											NA					3.1E+00
											Total of Receptor Risks Across All Media				NA	Total of Receptor Hazards Across All Media					3.5E+00
											Total of Receptor Risks Across All Media (Ash)				NA	Total of Receptor Hazards Across All Media (Ash)					3.4E+00
											Total of Receptor Risks Across All Media (Soil)				NA	Total of Receptor Hazards Across All Media (Soil)					3.2E+00

*Soil = combined surface and subsurface soil.

Table 7.1.CTE Supplement A
Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model
Adult Resident
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
Naphthalene	1.7E+00	1.3E+02	4.4E-04	1.1E+03	1.2E+01	7.5E+00	1.0E+01	1.4E-01	1.1E-01	2.4E-03

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	34.8
Dt = total duration in shower room	min	60
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Table 7.1.CTE Supplement B
Calculation of DAevent
Adult Resident, Groundwater
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Chemical of Potential Concern	Groundwater Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (tevent) (hr)	DAevent (mg/cm^2-event)	Eq
Naphthalene	1.70E+00	4.7E-02	2.0E-01	5.6E-01	1.3E+00	1.0E+00	0.58	1.5E-07	3
Heptachlor	2.10E-02	8.6E-03	1.0E-01	1.3E+01	3.2E+01	8.0E-01	0.58	1.1E-09	2
Arsenic	1.28E+01	8.6E-03	NA	NA	NA	NA	0.58	6.4E-08	1
Cobalt	4.61E+01	1.0E-03	NA	NA	NA	NA	0.58	2.7E-08	1
Iron	2.12E+04	2.0E-03	NA	NA	NA	NA	0.58	2.5E-05	1
Manganese	8.76E+02	1.0E-03	NA	NA	NA	NA	0.58	5.1E-07	1

Inorganics: DAevent (mg/cm2-event) =
Kp x CW x tevent x 0.001 mg/ug x 0.001 l/cm^3 (eq 1)

Organics: DAevent (mg/cm2-event) =

$$\text{If } t_{event} \le t^*, \text{then } DA_{event} = 2 \times FA \times K_p \times C_w \sqrt{\frac{6 \times \tau_{event} \times t_{event}}{\pi}} \qquad \text{(eq 2)}$$

$$\text{If } t_{event} \ge t^*, \text{ then } DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \times \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right] \qquad \text{(eq 3)}$$

Notes:
Permeability constants from EPA 2004, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Interim).* EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.
NA - not applicable.

TABLE 7.2.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	6.6E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	7.0E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	7.0E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	5.9E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	7.0E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.7E-05	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.0E-06	mg/kg/day	1.0E-03	mg/kg/day	3.0E-03
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.4E-04	mg/kg/day	4.0E-02	mg/kg/day	3.4E-03
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	4.7E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.3E-06	mg/kg/day	2.0E-02	mg/kg/day	6.5E-05
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.1E-04	mg/kg/day	3.0E-02	mg/kg/day	3.6E-03
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	2.4E-01	1/(mg/kg-day)	NA	3.1E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	2.3E-08	mg/kg/day	5.0E-05	mg/kg/day	4.5E-04
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	8.4E-08	mg/kg/day	1.3E-05	mg/kg/day	6.5E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	1.1E-11	mg/kg/day	1.0E-09	mg/kg/day	1.1E-02
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	8.1E-06	mg/kg/day	1.0E-04	mg/kg/day	8.1E-02
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	4.4E-05	mg/kg/day	3.0E-04	mg/kg/day	1.5E-01
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	7.4E-05	mg/kg/day	3.0E-03	mg/kg/day	2.5E-02
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	3.8E-05	mg/kg/day	3.0E-04	mg/kg/day	1.3E-01
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	9.2E-02	mg/kg/day	7.0E-01	mg/kg/day	1.3E-01
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	5.8E-04	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	8.2E-04	mg/kg/day	1.4E-01	mg/kg/day	5.8E-03
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	8.8E-06	mg/kg/day	3.0E-04	mg/kg/day	2.9E-02
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-04	mg/kg/day	5.0E-03	mg/kg/day	3.4E-02
			Exp. Route Total								NA					6.1E-01

TABLE 7.2.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	4.8E-05	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	5.1E-05	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	5.1E-05	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	NA	mg/kg/day	7.3E-02	1/(mg/kg-day)	NA	4.3E-05	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	NA	mg/kg/day	7.3E-03	1/(mg/kg-day)	NA	5.1E-05	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-05	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.7E-06	mg/kg/day	1.0E-03	mg/kg/day	1.7E-03
				Fluoranthene	3.2E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	9.8E-05	mg/kg/day	4.0E-02	mg/kg/day	2.5E-03
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	NA	mg/kg/day	7.3E-01	1/(mg/kg-day)	NA	3.4E-05	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	NA	mg/kg/day	NA	NA	NA	9.5E-07	mg/kg/day	2.0E-02	mg/kg/day	4.7E-05
				Pyrene	2.5E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	7.9E-05	mg/kg/day	3.0E-02	mg/kg/day	2.6E-03
				4,4'-DDD	7.3E+00	mg/kg	NA	mg/kg/day	3.4E-01	1/(mg/kg-day)	NA	1.8E-05	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	NA	mg/kg/day	1.6E+01	1/(mg/kg-day)	NA	1.3E-08	mg/kg/day	5.0E-05	mg/kg/day	2.5E-04
				Heptachlor epoxide	2.0E-02	mg/kg	NA	mg/kg/day	9.1E+00	1/(mg/kg-day)	NA	4.7E-08	mg/kg/day	1.3E-05	mg/kg/day	3.6E-03
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	NA	mg/kg/day	1.3E+05	1/(mg/kg-day)	NA	1.8E-12	mg/kg/day	1.0E-09	mg/kg/day	1.8E-03
				Nitroglycerin	1.9E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	4.5E-06	mg/kg/day	1.0E-04	mg/kg/day	4.5E-02
				Arsenic	1.0E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.4E-06	mg/kg/day	3.0E-04	mg/kg/day	2.5E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	4.1E-06	mg/kg/day	7.5E-05	mg/kg/day	5.5E-02
				Cobalt	8.8E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	2.1E-06	mg/kg/day	3.0E-04	mg/kg/day	7.0E-03
				Iron	2.2E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	5.2E-03	mg/kg/day	7.0E-01	mg/kg/day	7.4E-03
				Lead	1.4E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	3.2E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.6E-05	mg/kg/day	1.4E-01	mg/kg/day	3.3E-04
				Mercury	2.1E+00	mg/kg	NA	mg/kg/day	NA	NA	NA	4.9E-07	mg/kg/day	2.1E-05	mg/kg/day	2.4E-02
				Vanadium	4.0E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	9.5E-06	mg/kg/day	1.3E-04	mg/kg/day	7.3E-02
			Exp. Route Total								NA					2.5E-01
		Exposure Point Total									NA					8.6E-01
	Exposure Medium Total										NA					8.6E-01
Soil*	Air	Particulate and Volatile Emissions from Soil* at Metro Landfill and Waterfront Fill Areas	Inhalation	Naphthalene	9.5E-05	mg/m^3	NA	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	NA	6.1E-05	mg/m^3	3.0E-03	mg/m^3	2.0E-02
				Chromium	1.2E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	NA	7.6E-09	mg/m^3	1.0E-04	mg/m^3	7.6E-05
			Exp. Route Total								NA					2.0E-02
		Exposure Point Total									NA					2.0E-02
	Exposure Medium Total										NA					8.8E-01
Soil* Total											NA					8.8E-01

TABLE 7.2.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	4.2E-02	mg/kg/day	1.0E+00	mg/kg/day	4.2E-02
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	4.0E-04	mg/kg/day	3.0E-04	mg/kg/day	1.3E+00
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.0E-04	mg/kg/day	3.0E-03	mg/kg/day	3.4E-02
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	6.6E-05	mg/kg/day	3.0E-04	mg/kg/day	2.2E-01
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	2.0E-01	mg/kg/day	7.0E-01	mg/kg/day	2.8E-01
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-03	mg/kg/day	1.4E-01	mg/kg/day	1.1E-02
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	4.9E-04	mg/kg/day	5.0E-03	mg/kg/day	9.9E-02
			Exp. Route Total								NA					2.0E+00
			Dermal Absorption													
				Aluminum	9.8E+03	mg/kg	NA	mg/kg/day	NA	NA	NA	2.4E-03	mg/kg/day	1.0E+00	mg/kg/day	2.4E-03
				Arsenic	9.5E+01	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	6.8E-05	mg/kg/day	3.0E-04	mg/kg/day	2.3E-01
				Chromium	2.4E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	5.8E-06	mg/kg/day	7.5E-05	mg/kg/day	7.7E-02
				Cobalt	1.6E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	3.7E-06	mg/kg/day	3.0E-04	mg/kg/day	1.2E-02
				Iron	4.6E+04	mg/kg	NA	mg/kg/day	NA	NA	NA	1.1E-02	mg/kg/day	7.0E-01	mg/kg/day	1.6E-02
				Manganese	3.6E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	8.6E-05	mg/kg/day	1.4E-01	mg/kg/day	6.2E-04
				Vanadium	1.2E+02	mg/kg	NA	mg/kg/day	NA	NA	NA	2.8E-05	mg/kg/day	1.3E-04	mg/kg/day	2.1E-01
			Exp. Route Total								NA					5.5E-01
		Exposure Point Total									NA					2.6E+00
	Exposure Medium Total										NA					2.6E+00
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	NA	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	NA	1.1E-08	mg/m^3	1.0E-04	mg/m^3	1.1E-04
			Exp. Route Total								NA					1.1E-04
		Exposure Point Total									NA					1.1E-04
	Exposure Medium Total										NA					2.6E+00
Ash Total											NA					2.6E+00

TABLE 7.2.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.2E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.1E-07	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	7.2E-06	mg/kg/day	3.0E-04	mg/kg/day	2.4E-02
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	5.0E-01	1/(mg/kg-day)	NA	1.6E-05	mg/kg/day	3.0E-03	mg/kg/day	5.3E-03
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.8E-05	mg/kg/day	3.0E-04	mg/kg/day	6.1E-02
			Exp. Route Total								NA					9.0E-02
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	4.5E-07	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	NA	mg/kg/day	7.3E+00	1/(mg/kg-day)	NA	1.2E-07	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	1.8E-06	mg/kg/day	3.0E-04	mg/kg/day	6.0E-03
				Chromium	1.7E+01	mg/kg	NA	mg/kg/day	2.0E+01	1/(mg/kg-day)	NA	1.3E-06	mg/kg/day	7.5E-05	mg/kg/day	1.8E-02
				Cobalt	1.9E+01	mg/kg	NA	mg/kg/day	NA	NA	NA	1.5E-06	mg/kg/day	3.0E-04	mg/kg/day	5.1E-03
			Exp. Route Total								NA					2.9E-02
		Exposure Point Total									NA					1.2E-01
	Exposure Medium Total										NA					1.2E-01
Sediment Total											NA					1.2E-01
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	7.3E-05	mg/kg/day	2.0E-02	mg/kg/day	3.6E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	9.0E-07	mg/kg/day	5.0E-04	mg/kg/day	1.8E-03
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	5.5E-04	mg/kg/day	3.0E-04	mg/kg/day	1.8E+00
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	2.0E-03	mg/kg/day	3.0E-04	mg/kg/day	6.6E+00
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	9.1E-01	mg/kg/day	7.0E-01	mg/kg/day	1.3E+00
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	3.7E-02	mg/kg/day	1.4E-01	mg/kg/day	2.7E-01
			Exp. Route Total								NA					1.0E+01
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	NA	mg/kg/day	NA	NA	NA	4.9E-05	mg/kg/day	2.0E-02	mg/kg/day	2.4E-03
				Heptachlor	2.1E-02	ug/L	NA	mg/kg/day	4.5E+00	1/(mg/kg-day)	NA	4.1E-07	mg/kg/day	5.0E-04	mg/kg/day	8.2E-04
				Arsenic	1.3E+01	ug/L	NA	mg/kg/day	1.5E+00	1/(mg/kg-day)	NA	3.1E-05	mg/kg/day	3.0E-04	mg/kg/day	1.0E-01
				Cobalt	4.6E+01	ug/L	NA	mg/kg/day	NA	NA	NA	1.3E-05	mg/kg/day	3.0E-04	mg/kg/day	4.3E-02
				Iron	2.1E+04	ug/L	NA	mg/kg/day	NA	NA	NA	1.2E-02	mg/kg/day	7.0E-01	mg/kg/day	1.7E-02
				Manganese	8.8E+02	ug/L	NA	mg/kg/day	NA	NA	NA	2.5E-04	mg/kg/day	1.4E-01	mg/kg/day	1.8E-03
			Exp. Route Total								NA					1.7E-01
		Exposure Point Total									NA					1.0E+01
	Exposure Medium Total										NA					1.0E+01

TABLE 7.2.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
		Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	NA	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	NA	9.2E-05	mg/m^3	3.0E-03	mg/m^3	3.1E-02
			Exp. Route Total								NA					3.1E-02
		Exposure Point Total									NA					3.1E-02
	Exposure Medium Total										NA					1.0E+01
Groundwater Total											NA					1.0E+01
											NA	Total of Receptor Hazards Across All Media				1.4E+01
											NA	Total of Receptor Hazards Across All Media (Ash)				1.3E+01
											NA	Total of Receptor Hazards Across All Media (Soil)				1.1E+01

Total of Receptor Risks Across All Media

Total of Receptor Risks Across All Media (Ash)

Total of Receptor Risks Across All Media (Soil)

*Soil = combined surface and subsurface soil.

Table 7.2.CTE Supplement A
Inhalation Exposure Concentrations from Foster and Chrostowski Shower Model
Child Resident
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Chemical of Potential Concern	Exposure Point Concentration Cwo (µg/L)	Molecular weight (MW) (g/mole)	Henry's Law Constant (H) (atm-m^3/mole)	Kg (VOC) (cm/hr)	Kl (VOC) (cm/hr)	KL (cm/hr)	Kal (cm/hr)	Cwd (µg/L)	S (µg/m^3 -min)	Ca (mg/m^3)
Naphthalene	1.7E+00	1.3E+02	4.4E-04	1.1E+03	1.2E+01	7.5E+00	1.0E+01	1.4E-01	1.1E-01	3.4E-03

Variables	Units	Exposure Assumptions
Kg(VOC) = gas-film mass transfer coefficient	cm/hr	Solved by Eq 1
Kl(VOC) = liquid-film mass transfer coefficient	cm/hr	Solved by Eq 2
KL = overall mass transfer coefficient	cm/hr	Solved by Eq 3
Kal = adjusted overall mass transfer coeff.	cm/hr	Solved by Eq 4
Tl = Calibration temp. of water	K (20C +273)	293
Ts = Shower water temperature	k (45C)	318
Us = water viscosity at Ts	centipoise	0.596
Ul = water viscosity at Tl	cp	1.002
Cwd = conc. leaving droplets after time sdt	µg/l	Solved by Eq 5
sdt = shower droplet drop time	sec	0.5
d = shower droplet diameter	mm	1
FR = shower water flow rate	l/min	10
SV = shower room air volume	m^3	12
S = indoor VOC generation rate	µg/m^3-min	Solved by Eq 6
Ds = duration of shower	min	60
Dt = total duration in shower room	min	80
R = air exchange rate	min^{-1}	0.0083
Ca = indoor air concentration of VOCs	µg/m^3	Solved by Eq 7

Equation 1:	Kg(VOC) =	$3000 * (18 / MW)^{0.5}$
Equation 2:	Kl(VOC) =	$20 * (44 / MW)^{0.5}$
Equation 3:	KL =	$((1 / Kl(VOC)) + (0.024 / (Kg (VOC) * H)))^{-1}$
Equation 4:	Kal =	$(KL * (((Tl * Us) / (Ts * Ul))^{-0.5}))$
Equation 5:	Cwd =	(Cwo * (1-EXP((-1 * Kal * sdt)/(60 * d))))
Equation 6:	S =	(Cwd * FR / SV)
Equation 7:	Ca =	If t>Ds [(S / R) * (Ds + (EXP(-R * Dt) / R) -(EXP(R *(Ds - Dt)) / R)] / Dt * 1/1000

Table 7.2.CTE Supplement B
Calculation of DAevent
Child Resident, Groundwater
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Chemical of Potential Concern	Groundwater Concentration (CW) (µg/L)	Permeability Coefficient (Kp) (cm/hr)	B (dimensionless)	Lag Time (τ_{event}) (hr)	t* (hr)	Fraction Absorbed Water (FA) (dimensionless)	Duration of Event (tevent) (hr)	DAevent (mg/cm^2-event)	Eq
Naphthalene	1.70E+00	4.7E-02	2.0E-01	5.6E-01	1.3E+00	1.0E+00	1	1.7E-07	3
Heptachlor	2.10E-02	8.6E-03	1.0E-01	1.3E+01	3.2E+01	8.0E-01	1	1.5E-09	2
Arsenic	1.28E+01	8.6E-03	NA	NA	NA	NA	1	1.1E-07	1
Cobalt	4.61E+01	1.0E-03	NA	NA	NA	NA	1	4.6E-08	1
Iron	2.12E+04	2.0E-03	NA	NA	NA	NA	1	4.2E-05	1
Manganese	8.76E+02	1.0E-03	NA	NA	NA	NA	1	8.8E-07	1

Inorganics: DAevent (mg/cm2-event) =
Kp x CW x tevent x 0.001 mg/ug x 0.001 l/cm^3 (eq 1)

Organics: DAevent (mg/cm2-event) =

$$\text{If } t_{event} \le t^*, \text{then } DA_{event} = 2 \times FA \times K_p \times C_w \sqrt{\frac{6 \times \tau_{event} \times t_{event}}{\pi}} \qquad \text{(eq 2)}$$

$$\text{If } t_{event} \ge t^*, \text{ then } DA_{event} = FA \times K_p \times C_w \left[\frac{t_{event}}{1+B} + 2 \times \tau_{event} \left(\frac{1+3B+3B^2}{(1+B)^2} \right) \right] \qquad \text{(eq 3)}$$

Notes:
Permeability constants from EPA 2004, *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment - Interim).* EPA/540/R/99/005. The default value of 0.001 was assigned to inorganics not listed in this document.
NA - not applicable.

TABLE 7.3.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil* -	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	6.6E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.5E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	7.0E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.6E-04	NA	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	7.0E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.6E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	5.8E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	2.2E-06	NA	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	6.9E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	2.6E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.7E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	6.4E-05	NA	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	3.0E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-03	mg/kg/day	NA
				Fluoranthene	3.2E+01	mg/kg	1.3E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	4.0E-02	mg/kg/day	NA
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	4.7E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.8E-05	NA	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.3E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Pyrene	2.5E+01	mg/kg	1.1E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-02	mg/kg/day	NA
				4,4'-DDD	7.3E+00	mg/kg	3.1E-06	mg/kg/day	2.4E-01	1/(mg/kg-day)	7.5E-07	NA	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	2.2E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	3.6E-08	NA	mg/kg/day	5.0E-05	mg/kg/day	NA
				Heptachlor epoxide	2.0E-02	mg/kg	8.3E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	7.6E-08	NA	mg/kg/day	1.3E-05	mg/kg/day	NA
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	1.1E-12	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.4E-07	NA	mg/kg/day	1.0E-09	mg/kg/day	NA
				Nitroglycerin	1.9E+00	mg/kg	8.1E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-04	mg/kg/day	NA
				Arsenic	1.0E+01	mg/kg	4.4E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	6.6E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	7.3E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	1.9E-05	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	8.8E+00	mg/kg	3.8E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.2E+04	mg/kg	9.2E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Lead	1.4E+02	mg/kg	5.8E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	8.1E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Mercury	2.1E+00	mg/kg	8.8E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Vanadium	4.0E+01	mg/kg	1.7E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	5.0E-03	mg/kg/day	NA
			Exp. Route Total								4.3E-04					NA

TABLE 7.3.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	3.9E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.9E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	4.2E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.0E-04	NA	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	4.2E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	2.0E-05	NA	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	3.5E-06	mg/kg/day	7.3E-02	1/(mg/kg-day)	1.7E-06	NA	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	4.1E-06	mg/kg/day	7.3E-03	1/(mg/kg-day)	2.0E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	1.0E-06	mg/kg/day	7.3E+00	1/(mg/kg-day)	4.9E-05	NA	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	1.4E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-03	mg/kg/day	NA
				Fluoranthene	3.2E+01	mg/kg	8.0E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	4.0E-02	mg/kg/day	NA
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	2.8E-06	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.4E-05	NA	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	7.7E-08	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Pyrene	2.5E+01	mg/kg	6.5E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-02	mg/kg/day	NA
				4,4'-DDD	7.3E+00	mg/kg	1.4E-06	mg/kg/day	3.4E-01	1/(mg/kg-day)	4.9E-07	NA	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	1.0E-09	mg/kg/day	1.6E+01	1/(mg/kg-day)	1.6E-08	NA	mg/kg/day	5.0E-05	mg/kg/day	NA
				Heptachlor epoxide	2.0E-02	mg/kg	3.8E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	3.5E-08	NA	mg/kg/day	1.3E-05	mg/kg/day	NA
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	1.5E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	2.0E-08	NA	mg/kg/day	1.0E-09	mg/kg/day	NA
				Nitroglycerin	1.9E+00	mg/kg	3.7E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E-04	mg/kg/day	NA
				Arsenic	1.0E+01	mg/kg	6.1E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	9.1E-07	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	3.4E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	4.5E-05	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	8.8E+00	mg/kg	1.7E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.2E+04	mg/kg	4.2E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Lead	1.4E+02	mg/kg	2.6E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	3.7E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Mercury	2.1E+00	mg/kg	4.0E-08	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.1E-05	mg/kg/day	NA
				Vanadium	4.0E+01	mg/kg	7.8E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.3E-04	mg/kg/day	NA
			Exp. Route Total								3.5E-04					NA
		Exposure Point Total									7.8E-04					NA
	Exposure Medium Total										7.8E-04					NA
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	2.6E-05	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	8.9E-07	NA	mg/m^3	3.0E-03	mg/m^3	NA
				Chromium	1.2E-08	mg/m^3	3.3E-09	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	6.5E-07	NA	mg/m^3	1.0E-04	mg/m^3	NA
			Exp. Route Total								1.5E-06					NA
		Exposure Point Total									1.5E-06					NA
	Exposure Medium Total										7.8E-04					NA
Soil* Total											7.8E-04					NA

TABLE 7.3.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Ash	Ash	Ash	Ingestion	Aluminum	9.8E+03	mg/kg	4.2E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E+00	mg/kg/day	NA
				Arsenic	9.5E+01	mg/kg	4.0E-05	mg/kg/day	1.5E+00	1/(mg/kg-day)	6.0E-05	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	2.4E+01	mg/kg	1.0E-05	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.7E-05	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	1.6E+01	mg/kg	6.6E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	4.6E+04	mg/kg	2.0E-02	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	3.6E+02	mg/kg	1.5E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Vanadium	1.2E+02	mg/kg	4.9E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	5.0E-03	mg/kg/day	NA
			Exp. Route Total								8.7E-05					NA
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	1.9E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.0E+00	mg/kg/day	NA
				Arsenic	9.5E+01	mg/kg	5.5E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	8.3E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	2.4E+01	mg/kg	4.7E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	6.3E-05	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	1.6E+01	mg/kg	3.0E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	4.6E+04	mg/kg	9.0E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	3.6E+02	mg/kg	7.0E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
				Vanadium	1.2E+02	mg/kg	2.3E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.3E-04	mg/kg/day	NA
			Exp. Route Total								7.1E-05					NA
		Exposure Point Total									1.6E-04					NA
	Exposure Medium Total										1.6E-04					NA
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	4.9E-09	mg/m^3	8.4E-02	$(ug/m3)^{-1}$	9.7E-07	NA	mg/m^3	1.0E-04	mg/m^3	NA
			Exp. Route Total								9.7E-07					NA
		Exposure Point Total									9.7E-07					NA
	Exposure Medium Total										1.6E-04					NA
Ash Total											1.6E-04					NA

TABLE 7.3.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion	Benzo(a)pyrene	4.4E-01	mg/kg	5.1E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	3.7E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	1.4E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	9.9E-08	NA	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	8.8E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.3E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	1.9E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	9.7E-07	NA	mg/kg/day	3.0E-03	mg/kg/day	NA
				Cobalt	1.9E+01	mg/kg	2.2E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
			Exp. Route Total								2.8E-06					NA
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	1.1E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	7.8E-07	NA	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.1E-07	NA	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	4.3E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	6.4E-07	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Chromium	1.7E+01	mg/kg	3.1E-07	mg/kg/day	2.0E+01	1/(mg/kg-day)	6.3E-06	NA	mg/kg/day	7.5E-05	mg/kg/day	NA
				Cobalt	1.9E+01	mg/kg	3.6E-07	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
			Exp. Route Total								7.9E-06					NA
		Exposure Point Total									1.1E-05					NA
	Exposure Medium Total										1.1E-05					NA
Sediment Total											1.1E-05					NA
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Ingestion	Naphthalene	1.7E+00	ug/L	1.7E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Heptachlor	2.1E-02	ug/L	2.1E-07	mg/kg/day	4.5E+00	1/(mg/kg-day)	9.4E-07	NA	mg/kg/day	5.0E-04	mg/kg/day	NA
				Arsenic	1.3E+01	ug/L	1.3E-04	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.9E-04	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Cobalt	4.6E+01	ug/L	4.6E-04	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.1E+04	ug/L	2.1E-01	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	8.8E+02	ug/L	8.7E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
			Exp. Route Total								1.9E-04					NA
			Dermal Absorption	Naphthalene	1.7E+00	ug/L	7.3E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
				Heptachlor	2.1E-02	ug/L	5.9E-08	mg/kg/day	4.5E+00	1/(mg/kg-day)	2.6E-07	NA	mg/kg/day	5.0E-04	mg/kg/day	NA
				Arsenic	1.3E+01	ug/L	4.0E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	6.0E-06	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Cobalt	4.6E+01	ug/L	1.7E-06	mg/kg/day	NA	NA	NA	NA	mg/kg/day	3.0E-04	mg/kg/day	NA
				Iron	2.1E+04	ug/L	1.5E-03	mg/kg/day	NA	NA	NA	NA	mg/kg/day	7.0E-01	mg/kg/day	NA
				Manganese	8.8E+02	ug/L	3.2E-05	mg/kg/day	NA	NA	NA	NA	mg/kg/day	1.4E-01	mg/kg/day	NA
			Exp. Route Total								6.3E-06					NA
		Exposure Point Total									2.0E-04					NA

TABLE 7.3.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Groundwater	Air	Shallow Groundwater- Water Vapors at Showerhead	Inhalation	Naphthalene	1.7E+00	ug/L	1.3E-05	mg/m^3	3.4E-05	$(ug/m3)^{-1}$	4.3E-07	NA	mg/kg/day	2.0E-02	mg/kg/day	NA
			Exp. Route Total								4.3E-07					NA
		Exposure Point Total									4.3E-07					NA
Groundwater Total											2.0E-04					NA
											Total of Receptor Risks Across All Media	1.1E-03		Total of Receptor Hazards Across All Media		NA
											Total of Receptor Risks Across All Media (Ash)	3.7E-04		Total of Receptor Hazards Across All Media (Ash)		NA
											Total of Receptor Risks Across All Media (Soil)	9.9E-04		Total of Receptor Hazards Across All Media (Soil)		NA

*Soil = combined surface and subsurface soil.

1. See Table 7.3.CTE Supplement A for calculation of intake and cancer risk following MMOA method.

TABLE 7.3.CTE Supplement A

CALCULATION OF CHEMICAL CANCER RISKS FOR COPC WITH MUTAGENIC MODE OF ACTION

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult/Child

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations										
							Intake					CSF/Unit Risk					Cancer Risk
					Value	Units	Value				Units	Value				Units	
							0-2 yrs	2-6 yrs	6-16 years	16-30 yrs		0-2 yrs (ADAF=10)	2-6 yrs (ADAF=3)	6-16 yrs (ADAF=3)	16-30 yrs (ADAF=1)		
Soil*	Soil*	Soil* -	Ingestion	Benzo(a)anthracene	1.5E+01	mg/kg	1.9E-06	3.8E-06	1.0E-06	9.1E-07	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	2.5E-05
				Benzo(a)pyrene	1.6E+01	mg/kg	2.0E-06	4.0E-06	1.1E-06	9.7E-07	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	2.6E-04
				Benzo(b)fluoranthene	1.6E+01	mg/kg	2.0E-06	4.0E-06	1.1E-06	9.7E-07	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	2.6E-05
				Benzo(k)fluoranthene	1.4E+01	mg/kg	1.7E-06	3.4E-06	9.0E-07	8.1E-07	mg/kg/day	7.3E-01	2.2E-01	2.2E-01	7.3E-02	mg/kg/day	2.2E-06
				Chrysene	1.6E+01	mg/kg	2.0E-06	4.0E-06	1.1E-06	9.6E-07	mg/kg/day	7.3E-02	2.2E-02	2.2E-02	7.3E-03	mg/kg/day	2.6E-07
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	4.9E-07	9.7E-07	2.6E-07	2.3E-07	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	6.4E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	1.3E-06	2.7E-06	7.2E-07	6.5E-07	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	1.8E-05
				Chromium	1.7E+01	mg/kg	2.1E-06	4.2E-06	1.1E-06	1.0E-06	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	mg/kg/day	1.9E-05
			Dermal	Benzo(a)anthracene	1.5E+01	mg/kg	1.4E-06	2.7E-06	1.0E-06	9.4E-07	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	1.9E-05
				Benzo(a)pyrene	1.6E+01	mg/kg	1.5E-06	2.9E-06	1.1E-06	1.0E-06	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	2.0E-04
				Benzo(b)fluoranthene	1.6E+01	mg/kg	1.5E-06	2.9E-06	1.1E-06	1.0E-06	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	2.0E-05
				Benzo(k)fluoranthene	1.4E+01	mg/kg	1.2E-06	2.4E-06	9.3E-07	8.4E-07	mg/kg/day	7.3E-01	2.2E-01	2.2E-01	7.3E-02	mg/kg/day	1.7E-06
				Chrysene	1.6E+01	mg/kg	1.5E-06	2.9E-06	1.1E-06	1.0E-06	mg/kg/day	7.3E-02	2.2E-02	2.2E-02	7.3E-03	mg/kg/day	2.0E-07
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	3.5E-07	7.1E-07	2.7E-07	2.4E-07	mg/kg/day	7.3E+01	2.2E+01	2.2E+01	7.3E+00	mg/kg/day	4.9E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	9.8E-07	2.0E-06	7.5E-07	6.7E-07	mg/kg/day	7.3E+00	2.2E+00	2.2E+00	7.3E-01	mg/kg/day	1.4E-05
				Chromium	1.7E+01	mg/kg	1.2E-07	2.4E-07	9.0E-08	8.1E-08	mg/kg/day	2.0E+02	6.0E+01	6.0E+01	2.0E+01	mg/kg/day	4.5E-05
	Air	Particulate and Volatile from Soil*	Inhalation	Chromium	1.2E-08	mg/m^3	2.2E-10	4.4E-10	1.1E-09	9.8E-10	mg/m^3	8.4E-01	2.5E-01	2.5E-01	8.4E-02	$(ug/m^3)^{-1}$	6.5E-07
Ash	Ash	Ash	Ingestion	Chromium	2.4E+01	mg/kg	2.9E-06	5.9E-06	1.6E-06	1.4E-06	mg/kg/day	5.0E+00	1.5E+00	1.5E+00	5.0E-01	mg/kg/day	2.7E-05
			Dermal	Chromium	2.4E+01	mg/kg	1.6E-07	3.3E-07	1.3E-07	1.1E-07	mg/kg/day	2.0E+02	6.0E+01	6.0E+01	2.0E+01	mg/kg/day	6.3E-05
	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	3.2E-10	6.5E-10	1.6E-09	1.5E-09	mg/m^3	8.4E-01	2.5E-01	2.5E-01	8.4E-02	$(ug/m^3)^{-1}$	9.7E-07

TABLE 7.4.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Soil*	Soil*	Soil*	Ingestion													
				Benzo(a)anthracene	1.5E+01	mg/kg	8.5E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	6.2E-07	6.6E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	9.0E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	6.6E-06	7.0E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	9.0E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	6.6E-07	7.0E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	7.6E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	5.5E-08	5.9E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	9.0E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	6.6E-09	7.0E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	2.2E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.6E-06	1.7E-06	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	3.9E-08	mg/kg/day	NA	NA	NA	3.0E-07	mg/kg/day	1.0E-03	mg/kg/day	3.0E-04
				Fluoranthene	3.2E+01	mg/kg	1.7E-06	mg/kg/day	NA	NA	NA	1.4E-05	mg/kg/day	4.0E-02	mg/kg/day	3.4E-04
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	6.1E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	4.4E-07	4.7E-06	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	1.7E-08	mg/kg/day	NA	NA	NA	1.3E-07	mg/kg/day	2.0E-02	mg/kg/day	6.5E-06
				Pyrene	2.5E+01	mg/kg	1.4E-06	mg/kg/day	NA	NA	NA	1.1E-05	mg/kg/day	3.0E-02	mg/kg/day	3.6E-04
				4,4'-DDD	7.3E+00	mg/kg	4.0E-07	mg/kg/day	2.4E-01	1/(mg/kg-day)	9.7E-08	3.1E-06	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	2.9E-10	mg/kg/day	1.6E+01	1/(mg/kg-day)	4.6E-09	2.3E-09	mg/kg/day	5.0E-05	mg/kg/day	4.5E-05
				Heptachlor epoxide	2.0E-02	mg/kg	1.1E-09	mg/kg/day	9.1E+00	1/(mg/kg-day)	9.8E-09	8.4E-09	mg/kg/day	1.3E-05	mg/kg/day	6.5E-04
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	1.4E-13	mg/kg/day	1.3E+05	1/(mg/kg-day)	1.8E-08	1.1E-12	mg/kg/day	1.0E-09	mg/kg/day	1.1E-03
				Nitroglycerin	1.9E+00	mg/kg	1.0E-07	mg/kg/day	NA	NA	NA	8.1E-07	mg/kg/day	1.0E-04	mg/kg/day	8.1E-03
				Arsenic	1.0E+01	mg/kg	5.7E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	8.6E-07	4.4E-06	mg/kg/day	3.0E-04	mg/kg/day	1.5E-02
				Chromium	1.7E+01	mg/kg	9.5E-07	mg/kg/day	5.0E-01	1/(mg/kg-day)	4.7E-07	7.4E-06	mg/kg/day	3.0E-03	mg/kg/day	2.5E-03
				Cobalt	8.8E+00	mg/kg	4.9E-07	mg/kg/day	NA	NA	NA	3.8E-06	mg/kg/day	3.0E-04	mg/kg/day	1.3E-02
				Iron	2.2E+04	mg/kg	1.2E-03	mg/kg/day	NA	NA	NA	9.3E-03	mg/kg/day	7.0E-01	mg/kg/day	1.3E-02
				Lead	1.4E+02	mg/kg	7.5E-06	mg/kg/day	NA	NA	NA	5.8E-05	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	1.1E-05	mg/kg/day	NA	NA	NA	8.2E-05	mg/kg/day	1.4E-01	mg/kg/day	5.9E-04
				Mercury	2.1E+00	mg/kg	1.1E-07	mg/kg/day	NA	NA	NA	8.8E-07	mg/kg/day	3.0E-04	mg/kg/day	2.9E-03
				Vanadium	4.0E+01	mg/kg	2.2E-06	mg/kg/day	NA	NA	NA	1.7E-05	mg/kg/day	5.0E-03	mg/kg/day	3.4E-03
			Exp. Route Total								1.1E-05					6.1E-02

TABLE 7.4.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
			Dermal Absorption	Benzo(a)anthracene	1.5E+01	mg/kg	1.5E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.1E-07	1.1E-06	mg/kg/day	NA	NA	NA
				Benzo(a)pyrene	1.6E+01	mg/kg	1.6E-07	mg/kg/day	7.3E+00	1/(mg/kg-day)	1.1E-06	1.2E-06	mg/kg/day	NA	NA	NA
				Benzo(b)fluoranthene	1.6E+01	mg/kg	1.6E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	1.1E-07	1.2E-06	mg/kg/day	NA	NA	NA
				Benzo(k)fluoranthene	1.4E+01	mg/kg	1.3E-07	mg/kg/day	7.3E-02	1/(mg/kg-day)	9.5E-09	1.0E-06	mg/kg/day	NA	NA	NA
				Chrysene	1.6E+01	mg/kg	1.5E-07	mg/kg/day	7.3E-03	1/(mg/kg-day)	1.1E-09	1.2E-06	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	4.0E+00	mg/kg	3.8E-08	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.7E-07	2.9E-07	mg/kg/day	NA	NA	NA
				Dibenzofuran	7.0E-01	mg/kg	5.1E-09	mg/kg/day	NA	NA	NA	4.0E-08	mg/kg/day	1.0E-03	mg/kg/day	4.0E-05
				Fluoranthene	3.2E+01	mg/kg	3.0E-07	mg/kg/day	NA	NA	NA	2.3E-06	mg/kg/day	4.0E-02	mg/kg/day	5.8E-05
				Indeno(1,2,3-cd)pyrene	1.1E+01	mg/kg	1.0E-07	mg/kg/day	7.3E-01	1/(mg/kg-day)	7.6E-08	8.1E-07	mg/kg/day	NA	NA	NA
				Naphthalene	3.1E-01	mg/kg	2.9E-09	mg/kg/day	NA	NA	NA	2.2E-08	mg/kg/day	2.0E-02	mg/kg/day	1.1E-06
				Pyrene	2.5E+01	mg/kg	2.4E-07	mg/kg/day	NA	NA	NA	1.9E-06	mg/kg/day	3.0E-02	mg/kg/day	6.2E-05
				4,4'-DDD	7.3E+00	mg/kg	5.3E-08	mg/kg/day	3.4E-01	1/(mg/kg-day)	1.8E-08	4.1E-07	mg/kg/day	NA	NA	NA
				Dieldrin	5.3E-03	mg/kg	3.8E-11	mg/kg/day	1.6E+01	1/(mg/kg-day)	6.1E-10	3.0E-10	mg/kg/day	5.0E-05	mg/kg/day	6.0E-06
				Heptachlor epoxide	2.0E-02	mg/kg	1.4E-10	mg/kg/day	9.1E+00	1/(mg/kg-day)	1.3E-09	1.1E-09	mg/kg/day	1.3E-05	mg/kg/day	8.5E-05
				2,3,7,8-TCDD TEQ	2.6E-06	mg/kg	5.6E-15	mg/kg/day	1.3E+05	1/(mg/kg-day)	7.3E-10	4.4E-14	mg/kg/day	1.0E-09	mg/kg/day	4.4E-05
				Nitroglycerin	1.9E+00	mg/kg	1.4E-08	mg/kg/day	NA	NA	NA	1.1E-07	mg/kg/day	1.0E-04	mg/kg/day	1.1E-03
				Arsenic	1.0E+01	mg/kg	2.3E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	3.4E-08	1.8E-07	mg/kg/day	3.0E-04	mg/kg/day	5.9E-04
				Chromium	1.7E+01	mg/kg	1.3E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	2.5E-07	9.8E-08	mg/kg/day	7.5E-05	mg/kg/day	1.3E-03
				Cobalt	8.8E+00	mg/kg	6.4E-09	mg/kg/day	NA	NA	NA	5.0E-08	mg/kg/day	3.0E-04	mg/kg/day	1.7E-04
				Iron	2.2E+04	mg/kg	1.6E-05	mg/kg/day	NA	NA	NA	1.2E-04	mg/kg/day	7.0E-01	mg/kg/day	1.7E-04
				Lead	1.4E+02	mg/kg	9.9E-08	mg/kg/day	NA	NA	NA	7.7E-07	mg/kg/day	NA	NA	NA
				Manganese	1.9E+02	mg/kg	1.4E-07	mg/kg/day	NA	NA	NA	1.1E-06	mg/kg/day	1.4E-01	mg/kg/day	7.7E-06
				Mercury	2.1E+00	mg/kg	1.5E-09	mg/kg/day	NA	NA	NA	1.2E-08	mg/kg/day	2.1E-05	mg/kg/day	5.6E-04
				Vanadium	4.0E+01	mg/kg	2.9E-08	mg/kg/day	NA	NA	NA	2.3E-07	mg/kg/day	1.3E-04	mg/kg/day	1.7E-03
			Exp. Route Total								2.0E-06					5.9E-03
		Exposure Point Total									1.3E-05					6.7E-02
	Exposure Medium Total										1.3E-05					6.7E-02
Soil*	Air	Particulate and Volatile Emissions	Inhalation	Naphthalene	9.5E-05	mg/m^3	1.2E-06	mg/m^3	3.4E-05	(ug/m^3)$^{-1}$	4.2E-08	9.5E-06	mg/m^3	3.0E-03	mg/m^3	3.2E-03
				Chromium	1.2E-08	mg/m^3	1.5E-10	mg/m^3	8.4E-02	(ug/m^3)$^{-1}$	1.3E-08	1.2E-09	mg/m^3	1.0E-04	mg/m^3	1.2E-05
			Exp. Route Total								5.5E-08					3.2E-03
		Exposure Point Total									5.5E-08					3.2E-03
	Exposure Medium Total										5.5E-08					3.2E-03
Soil* Total											1.4E-05					7.0E-02
Ash	Ash	Ash	Ingestion	Aluminum	9.8E+03	mg/kg	5.4E-04	mg/kg/day	NA	NA	NA	4.2E-03	mg/kg/day	1.0E+00	mg/kg/day	4.2E-03

TABLE 7.4.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
				Arsenic	9.5E+01	mg/kg	5.2E-06	mg/kg/day	1.5E+00	1/(mg/kg-day)	7.8E-06	4.1E-05	mg/kg/day	3.0E-04	mg/kg/day	1.4E-01
				Chromium	2.4E+01	mg/kg	1.3E-06	mg/kg/day	5.0E-01	1/(mg/kg-day)	6.6E-07	1.0E-05	mg/kg/day	3.0E-03	mg/kg/day	3.4E-03
				Cobalt	1.6E+01	mg/kg	8.5E-07	mg/kg/day	NA	NA	NA	6.6E-06	mg/kg/day	3.0E-04	mg/kg/day	2.2E-02
				Iron	4.6E+04	mg/kg	2.6E-03	mg/kg/day	NA	NA	NA	2.0E-02	mg/kg/day	7.0E-01	mg/kg/day	2.8E-02
				Manganese	3.6E+02	mg/kg	2.0E-05	mg/kg/day	NA	NA	NA	1.5E-04	mg/kg/day	1.4E-01	mg/kg/day	1.1E-03
				Vanadium	1.2E+02	mg/kg	6.4E-06	mg/kg/day	NA	NA	NA	5.0E-05	mg/kg/day	5.0E-03	mg/kg/day	9.9E-03
			Exp. Route Total								8.5E-06					2.0E-01
			Dermal Absorption	Aluminum	9.8E+03	mg/kg	7.2E-06	mg/kg/day	NA	NA	NA	5.6E-05	mg/kg/day	1.0E+00	mg/kg/day	5.6E-05
				Arsenic	9.5E+01	mg/kg	2.1E-07	mg/kg/day	1.5E+00	1/(mg/kg-day)	3.1E-07	1.6E-06	mg/kg/day	3.0E-04	mg/kg/day	5.4E-03
				Chromium	2.4E+01	mg/kg	1.8E-08	mg/kg/day	2.0E+01	1/(mg/kg-day)	3.5E-07	1.4E-07	mg/kg/day	7.5E-05	mg/kg/day	1.8E-03
				Cobalt	1.6E+01	mg/kg	1.1E-08	mg/kg/day	NA	NA	NA	8.8E-08	mg/kg/day	3.0E-04	mg/kg/day	2.9E-04
				Iron	4.6E+04	mg/kg	3.4E-05	mg/kg/day	NA	NA	NA	2.6E-04	mg/kg/day	7.0E-01	mg/kg/day	3.7E-04
				Manganese	3.6E+02	mg/kg	2.6E-07	mg/kg/day	NA	NA	NA	2.0E-06	mg/kg/day	1.4E-01	mg/kg/day	1.5E-05
				Vanadium	1.2E+02	mg/kg	8.4E-08	mg/kg/day	NA	NA	NA	6.5E-07	mg/kg/day	1.3E-04	mg/kg/day	5.0E-03
			Exp. Route Total								6.6E-07					1.3E-02
		Exposure Point Total									9.1E-06					2.2E-01
	Exposure Medium Total										9.1E-06					2.2E-01
Ash	Air	Emissions from Ash	Inhalation	Chromium	1.8E-08	mg/m^3	1.5E-11	mg/m^3	8.4E-02	(ug/m3)$^{-1}$	1.2E-09	1.0E-09	mg/m^3	1.0E-04	mg/m^3	1.0E-05
			Exp. Route Total								1.2E-09					1.0E-05
		Exposure Point Total									1.2E-09					1.0E-05
	Exposure Medium Total										9.1E-06					2.2E-01
Ash Total											9.1E-06					2.2E-01

TABLE 7.4.CTE

CALCULATION OF CHEMICAL CANCER RISKS AND NON-CANCER HAZARDS

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Exposure Route	Chemical of Potential Concern	EPC		Cancer Risk Calculations					Non-Cancer Hazard Calculations				
					Value	Units	Intake/Exposure Concentration		CSF/Unit Risk		Cancer Risk	Intake/Exposure Concentration		RfD/RfC		Hazard Quotient
							Value	Units	Value	Units		Value	Units	Value	Units	
Sediment	Sediment	Sediment	Ingestion													
				Benzo(a)pyrene	4.4E-01	mg/kg	1.1E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	8.0E-09	8.6E-09	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	2.9E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.1E-09	2.3E-09	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.9E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	2.9E-08	1.5E-07	mg/kg/day	3.0E-04	mg/kg/day	4.9E-04
				Chromium	1.7E+01	mg/kg	4.2E-08	mg/kg/day	5.0E-01	1/(mg/kg-day)	2.1E-08	3.3E-07	mg/kg/day	3.0E-03	mg/kg/day	1.1E-04
				Cobalt	1.9E+01	mg/kg	4.9E-08	mg/kg/day	NA	NA	NA	3.8E-07	mg/kg/day	3.0E-04	mg/kg/day	1.3E-03
			Exp. Route Total								6.0E-08					1.9E-03
			Dermal Absorption	Benzo(a)pyrene	4.4E-01	mg/kg	2.8E-09	mg/kg/day	7.3E+00	1/(mg/kg-day)	2.1E-08	2.2E-08	mg/kg/day	NA	NA	NA
				Dibenz(a,h)anthracene	1.2E-01	mg/kg	7.6E-10	mg/kg/day	7.3E+00	1/(mg/kg-day)	5.5E-09	5.9E-09	mg/kg/day	NA	NA	NA
				Arsenic	7.6E+00	mg/kg	1.1E-08	mg/kg/day	1.5E+00	1/(mg/kg-day)	1.7E-08	8.8E-08	mg/kg/day	3.0E-04	mg/kg/day	2.9E-04
				Chromium	1.7E+01	mg/kg	8.3E-09	mg/kg/day	2.0E+01	1/(mg/kg-day)	1.7E-07	6.5E-08	mg/kg/day	7.5E-05	mg/kg/day	8.6E-04
				Cobalt	1.9E+01	mg/kg	9.6E-09	mg/kg/day	NA	NA	NA	7.5E-08	mg/kg/day	3.0E-04	mg/kg/day	2.5E-04
			Exp. Route Total								2.1E-07					1.4E-03
		Exposure Point Total									2.7E-07					3.3E-03
	Exposure Medium Total										2.7E-07					3.3E-03
Sediment Total											2.7E-07					3.3E-03
									Total of Receptor Risks Across All Media		2.3E-05	Total of Receptor Hazards Across All Media				2.9E-01
									Total of Receptor Risks Across All Media (Ash)		9.4E-06	Total of Receptor Hazards Across All Media (Ash)				2.2E-01
									Total of Receptor Risks Across All Media (Soil)		1.4E-05	Total of Receptor Hazards Across All Media (Soil)				7.3E-02

*Soil = combined surface and subsurface soil.

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Benzo(a)anthracene	2.5E-06	NA	1.3E-06	3.8E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	2.7E-05	NA	1.4E-05	4.1E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	2.7E-06	NA	1.4E-06	4.1E-06	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	2.2E-07	NA	1.2E-07	3.4E-07	NA	NA	NA	NA	NA
			Chrysene	2.7E-08	NA	1.4E-08	4.1E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	6.6E-06	NA	3.4E-06	1.0E-05	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	7.9E-04	NA	3.1E-04	1.1E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	5.2E-04	NA	2.7E-04	7.9E-04
			Indeno(1,2,3-cd)pyrene	1.8E-06	NA	9.3E-07	2.7E-06	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	5.5E-06	NA	2.9E-06	8.4E-06
			Pyrene	NA	NA	NA	NA	Kidney	5.5E-04	NA	2.9E-04	8.4E-04
			Dieldrin	9.1E-09	NA	3.6E-09	1.3E-08	Liver	3.3E-05	NA	1.3E-05	4.6E-05
			2,3,7,8-TCDD TEQ	2.7E-08	NA	3.2E-09	3.0E-08	Development	6.1E-04	NA	7.3E-05	6.8E-04
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	3.9E-03	NA	1.5E-03	5.4E-03
			Aluminum	NA	NA	NA	NA	CNS	2.0E-03	NA	7.9E-05	2.0E-03
			Arsenic	2.9E-06	NA	3.4E-07	3.2E-06	Skin, Vascular	1.9E-02	NA	2.2E-03	2.1E-02
			Chromium	5.5E-07	NA	8.7E-07	1.4E-06	NOE	1.1E-03	NA	1.7E-03	2.8E-03
			Cobalt	NA	NA	NA	NA	Thyroid	5.0E-03	NA	2.0E-04	5.2E-03
			Iron	NA	NA	NA	NA	Gastrointestinal	4.8E-03	NA	1.9E-04	5.0E-03
			Manganese	NA	NA	NA	NA	CNS	3.6E-04	NA	1.4E-05	3.7E-04
			Mercury	NA	NA	NA	NA	Immune	4.5E-03	NA	2.5E-03	7.0E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.6E-03	NA	2.4E-03	4.0E-03
			Chemical Total	4.4E-05	NA	2.2E-05	6.7E-05		4.4E-02	NA	1.2E-02	5.6E-02
		Exposure Point Total					6.7E-05					5.6E-02
	Exposure Medium Total						6.7E-05					5.6E-02
Medium Total							6.7E-05					5.6E-02
Surface Soil	Air	Emissions from Surface Soil	Naphthalene	NA	2.4E-09	NA	2.4E-09	Nasal, Respiratory	NA	6.7E-05	NA	6.7E-05
			Chromium	NA	7.9E-09	NA	7.9E-09	Respiratory	NA	2.7E-06	NA	2.7E-06
			Chemical Total	NA	1.0E-08	NA	1.0E-08		NA	7.0E-05	NA	7.0E-05
		Exposure Point Total					1.0E-08					7.0E-05
	Exposure Medium Total						6.7E-05					5.6E-02
Medium Total							6.7E-05					5.6E-02

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	2.0E-03	NA	8.0E-05	2.1E-03
			Arsenic	9.9E-06	NA	1.2E-06	1.1E-05	Skin, Vascular	6.4E-02	NA	7.7E-03	7.2E-02
			Chromium	8.4E-07	NA	1.3E-06	2.2E-06	NOE	1.6E-03	NA	2.6E-03	4.2E-03
			Cobalt	NA	NA	NA	NA	Thyroid	1.1E-02	NA	4.2E-04	1.1E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E-02	NA	5.4E-04	1.4E-02
			Manganese	NA	NA	NA	NA	CNS	5.2E-04	NA	2.1E-05	5.4E-04
			Vanadium	NA	NA	NA	NA	Hair Cystine	4.7E-03	NA	7.2E-03	1.2E-02
			Chemical Total	1.1E-05	NA	2.5E-06	1.3E-05		9.7E-02	NA	1.9E-02	1.2E-01
		Exposure Point Total					1.3E-05					1.2E-01
	Exposure Medium Total						1.3E-05					1.2E-01
Medium Total							1.3E-05					1.2E-01
Ash	Air	Emissions from Ash	Chromium	NA	1.2E-08	NA	1.2E-08	Respiratory	NA	4.2E-06	NA	4.2E-06
			Chemical Total	NA	1.2E-08	NA	1.2E-08		NA	4.2E-06	NA	4.2E-06
		Exposure Point Total					1.2E-08					4.2E-06
	Exposure Medium Total						1.3E-05					1.2E-01
Medium Total							1.3E-05					1.2E-01
Sediment	Sediment	Sediment	Benzo(a)pyrene	1.1E-07	NA	5.0E-07	6.1E-07	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	3.0E-08	NA	1.3E-07	1.6E-07	NA	NA	NA	NA	NA
			Arsenic	4.0E-07	NA	4.1E-07	8.0E-07	Skin, Vascular	2.6E-03	NA	2.6E-03	5.2E-03
			Chromium	2.9E-07	NA	4.0E-06	4.3E-06	NOE	5.7E-04	NA	7.7E-03	8.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-03	NA	2.2E-03	8.8E-03
			Chemical Total	8.3E-07	NA	5.0E-06	5.8E-06		9.7E-03	NA	1.3E-02	2.2E-02
		Exposure Point Total					5.8E-06					2.2E-02
	Exposure Medium Total						5.8E-06					2.2E-02
Medium Total							5.8E-06					2.2E-02
Receptor Total			Total Receptor Risks				8.6E-05	Receptor HI Total				1.9E-01
Receptor Total			Total Receptor Risks (Ash)				1.9E-05	Receptor HI Total (Ash)				1.4E-01
Receptor Total			Total Receptor Risks (Soil)				7.2E-05	Receptor HI Total (Soil)				7.9E-02

TABLE 9.1.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

CNS - Central Nervous System

Total Vascular HI Across Media =	1E-01
Total Skin HI Across Media =	1E-01
Total development HI Across Media =	7E-04
Total CNS HI Across Media =	5E-03
Total NOE HI Across Media =	2E-02
Total Thyroid HI Across Media =	2E-02
Total Gastrointestinal HI Across Media =	2E-02
Total Hair Cystine HI Across Media =	2E-02
Total Liver HI Across Media =	8E-04
Total Kidney HI Across Media =	2E-03
Total Blood Pressure HI Across Media =	5E-03
Total Respiratory HI Across Media =	7E-05
Total Whole Body HI Across Media =	1E-03
Total Blood HI Across Media =	6E-03
Total Nasal HI Across Media =	7E-05

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Benzo(a)anthracene	1.3E-06	NA	2.0E-06	3.3E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	1.4E-05	NA	2.1E-05	3.5E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	1.4E-06	NA	2.1E-06	3.5E-06	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	1.2E-07	NA	1.8E-07	2.9E-07	NA	NA	NA	NA	NA
			Chrysene	1.4E-08	NA	2.1E-08	3.5E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	3.4E-06	NA	5.2E-06	8.5E-06	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	1.1E-03	NA	1.3E-03	2.3E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	7.1E-04	NA	1.1E-03	1.8E-03
			Indeno(1,2,3-cd)pyrene	9.2E-07	NA	1.4E-06	2.3E-06	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	7.6E-06	NA	1.2E-05	1.9E-05
			Pyrene	NA	NA	NA	NA	Kidney	7.6E-04	NA	1.2E-03	1.9E-03
			Dieldrin	4.7E-09	NA	5.5E-09	1.0E-08	Liver	4.6E-05	NA	5.3E-05	9.9E-05
			2,3,7,8-TCDD TEQ	1.4E-08	NA	4.9E-09	1.9E-08	Development	8.3E-04	NA	2.9E-04	1.1E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	5.3E-03	NA	6.2E-03	1.2E-02
			Aluminum	NA	NA	NA	NA	CNS	2.7E-03	NA	3.2E-04	3.0E-03
			Arsenic	1.5E-06	NA	5.2E-07	2.0E-06	Skin, Vascular	2.6E-02	NA	9.0E-03	3.5E-02
			Chromium	2.8E-07	NA	1.3E-06	1.6E-06	NOE	1.5E-03	NA	6.8E-03	8.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.9E-03	NA	8.1E-04	7.7E-03
			Iron	NA	NA	NA	NA	Gastrointestinal	6.6E-03	NA	7.8E-04	7.4E-03
			Manganese	NA	NA	NA	NA	CNS	4.9E-04	NA	5.7E-05	5.5E-04
			Mercury	NA	NA	NA	NA	Immune	6.1E-03	NA	1.0E-02	1.6E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	2.2E-03	NA	9.8E-03	1.2E-02
			Chemical Total	2.3E-05	NA	3.4E-05	5.6E-05		6.1E-02	NA	4.8E-02	1.1E-01
		Exposure Point Total					5.6E-05					1.1E-01
	Exposure Medium Total						5.6E-05					1.1E-01
Medium Total							5.6E-05					1.1E-01
Surface Soil	Air	Emissions from Surface Soil	Naphthalene	NA	8.8E-10	NA	8.8E-10	Nasal, Respiratory	NA	6.7E-05	NA	6.7E-05
			Chromium	NA	2.9E-09	NA	2.9E-09	Respiratory	NA	2.7E-06	NA	2.7E-06
			Chemical Total	NA	3.8E-09	NA	3.8E-09		NA	7.0E-05	NA	7.0E-05
		Exposure Point Total					3.8E-09					7.0E-05
	Exposure Medium Total						5.6E-05					1.1E-01
Medium Total							5.6E-05					1.1E-01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	2.7E-03	NA	3.2E-04	3.1E-03
			Arsenic	5.1E-06	NA	1.8E-06	6.9E-06	Skin, Vascular	8.8E-02	NA	3.1E-02	1.2E-01
			Chromium	4.3E-07	NA	2.0E-06	2.5E-06	NOE	2.2E-03	NA	1.1E-02	1.3E-02
			Cobalt	NA	NA	NA	NA	Thyroid	1.4E-02	NA	1.7E-03	1.6E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.8E-02	NA	2.2E-03	2.1E-02
			Manganese	NA	NA	NA	NA	CNS	7.2E-04	NA	8.4E-05	8.0E-04
			Vanadium	NA	NA	NA	NA	Hair Cystine	6.5E-03	NA	2.9E-02	3.6E-02
			Chemical Total	5.5E-06	NA	3.8E-06	9.3E-06		1.3E-01	NA	7.5E-02	2.1E-01
		Exposure Point Total					9.3E-06					2.1E-01
	Exposure Medium Total						9.3E-06					2.1E-01
Medium Total							9.3E-06					2.1E-01
Ash	Air	Emissions from Ash	Chromium	NA	4.5E-09	NA	4.5E-09	Respiratory	NA	4.2E-06	NA	4.2E-06
			Chemical Total	NA	4.5E-09	NA	4.5E-09		NA	4.2E-06	NA	4.2E-06
		Exposure Point Total					4.5E-09					4.2E-06
	Exposure Medium Total						9.3E-06					2.1E-01
Medium Total							9.3E-06					2.1E-01
Sediment	Sediment	Sediment	Benzo(a)pyrene	5.7E-08	NA	5.8E-07	6.4E-07	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.5E-08	NA	5.8E-08	7.4E-08	NA	NA	NA	NA	NA
			Arsenic	2.0E-07	NA	4.8E-07	6.8E-07	Skin, Vascular	3.5E-03	NA	3.1E-03	6.6E-03
			Chromium	1.5E-07	NA	4.7E-06	4.8E-06	NOE	7.8E-04	NA	9.1E-03	9.9E-03
			Cobalt	NA	NA	NA	NA	Thyroid	9.0E-03	NA	2.6E-03	1.2E-02
			Chemical Total	4.3E-07	NA	5.8E-06	6.2E-06		1.3E-02	NA	1.5E-02	2.8E-02
		Exposure Point Total					6.2E-06					2.8E-02
	Exposure Medium Total						6.2E-06					2.8E-02
Medium Total							6.2E-06					2.8E-02
Receptor Total			Total Receptor Risks				7.2E-05	Receptor HI Total				3.4E-01
Receptor Total			Total Receptor Risks (Ash)				1.6E-05	Receptor HI Total (Ash)				2.4E-01
Receptor Total			Total Receptor Risks (Soil)				6.3E-05	Receptor HI Total (Soil)				1.4E-01

TABLE 9.2.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Current/Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

CNS - Central Nervous System

Total Vascular HI Across Media =	2E-01
Total Skin HI Across Media =	2E-01
Total development HI Across Media =	1E-03
Total CNS HI Across Media =	7E-03
Total NOE HI Across Media =	3E-02
Total Thyroid HI Across Media =	4E-02
Total Gastrointestinal HI Across Media =	3E-02
Total Hair Cystine HI Across Media =	5E-02
Total Liver HI Across Media =	2E-03
Total Kidney HI Across Media =	4E-03
Total Blood Pressure HI Across Media =	1E-02
Total Respiratory HI Across Media =	7E-05
Total Whole Body HI Across Media =	2E-03
Total Blood HI Across Media =	1E-02
Total Nasal HI Across Media =	7E-05

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	9.6E-04	NA	3.8E-04	1.3E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	1.1E-03	NA	5.6E-04	1.6E-03
			Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	2.1E-05	NA	1.1E-05	3.2E-05
			Pyrene	NA	NA	NA	NA	Kidney	1.2E-03	NA	6.0E-04	1.8E-03
			4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dieldrin	NA	NA	NA	NA	Liver	1.4E-04	NA	5.8E-05	2.0E-04
			Heptachlor epoxide	NA	NA	NA	NA	Liver	2.1E-03	NA	8.3E-04	2.9E-03
			2,3,7,8-TCDD TEQ	NA	NA	NA	NA	Development	3.5E-03	NA	4.2E-04	3.9E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	2.6E-02	NA	1.0E-02	3.6E-02
			Arsenic	NA	NA	NA	NA	Skin, Vascular	4.7E-02	NA	5.7E-03	5.3E-02
			Chromium	NA	NA	NA	NA	NOE	7.9E-03	NA	1.3E-02	2.0E-02
			Cobalt	NA	NA	NA	NA	Thyroid	4.0E-02	NA	1.6E-03	4.2E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	4.2E-02	NA	1.7E-03	4.4E-02
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	1.9E-03	NA	7.5E-05	1.9E-03
			Mercury	NA	NA	NA	NA	Immune	9.4E-03	NA	5.4E-03	1.5E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.1E-02	NA	1.7E-02	2.8E-02
			Chemical Total	NA	NA	NA	NA		1.9E-01	NA	5.7E-02	2.5E-01
		Exposure Point Total					NA					2.5E-01
	Exposure Medium Total						NA					2.5E-01
Medium Total							NA					2.5E-01

TABLE 9.3.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	3.1E-02	NA	3.1E-02
			Chromium	NA	NA	NA	NA	Respiratory	NA	1.1E-04	NA	1.1E-04
			Chemical Total	NA	NA	NA	NA		NA	3.1E-02	NA	3.1E-02
		Exposure Point Total					NA					3.1E-02
	Exposure Medium Total						NA					2.8E-01
Medium Total							NA					2.8E-01
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	1.3E-02	NA	5.4E-04	1.4E-02
			Arsenic	NA	NA	NA	NA	Skin, Vascular	4.3E-01	NA	5.2E-02	4.8E-01
			Chromium	NA	NA	NA	NA	NOE	1.1E-02	NA	1.8E-02	2.9E-02
			Cobalt	NA	NA	NA	NA	Thyroid	7.1E-02	NA	2.8E-03	7.4E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	9.1E-02	NA	3.6E-03	9.4E-02
			Manganese	NA	NA	NA	NA	CNS	3.5E-03	NA	1.4E-04	3.7E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.2E-02	NA	4.9E-02	8.0E-02
			Chemical Total	NA	NA	NA	NA		6.5E-01	NA	1.3E-01	7.8E-01
		Exposure Point Total					NA					7.8E-01
	Exposure Medium Total						NA					7.8E-01
Medium Total							NA					7.8E-01
Ash	Air	Emissions from Ash	Chromium	NA	NA	NA	NA	Respiratory	NA	1.7E-04	NA	1.7E-04
			Chemical Total	NA	NA	NA	NA		NA	1.7E-04	NA	1.7E-04
		Exposure Point Total					NA					1.7E-04
	Exposure Medium Total						NA					7.8E-01
Medium Total							NA					7.8E-01

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Arsenic	NA	NA	NA	NA	Skin, Vascular	2.6E-03	NA	2.6E-03	5.2E-03
			Chromium	NA	NA	NA	NA	NOE	5.7E-04	NA	7.7E-03	8.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-03	NA	2.2E-03	8.8E-03
			Chemical Total	NA	NA	NA	NA		9.7E-03	NA	1.3E-02	2.2E-02
		Exposure Point Total					NA					2.2E-02
	Exposure Medium Total						NA					2.2E-02
Medium Total							NA					2.2E-02
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	2.3E-03	NA	1.8E-03	4.1E-03
			Heptachlor	NA	NA	NA	NA	Liver	1.2E-03	NA	5.5E-04	1.7E-03
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.2E+00	NA	5.2E-02	1.2E+00
			Cobalt	NA	NA	NA	NA	Thyroid	4.2E+00	NA	2.2E-02	4.2E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	8.3E-01	NA	8.7E-03	8.4E-01
			Manganese	NA	NA	NA	NA	CNS	1.7E-01	NA	8.9E-04	1.7E-01
			Chemical Total	NA	NA	NA	NA		6.4E+00	NA	8.6E-02	6.5E+00
		Exposure Point Total					NA					6.5E+00
	Exposure Medium Total						NA					6.5E+00
Medium Total							NA					6.5E+00
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	1.8E-02	NA	1.8E-02
			Chemical Total	NA	NA	NA	NA		NA	1.8E-02	NA	1.8E-02
		Exposure Point Total					NA					1.8E-02
	Exposure Medium Total						NA					1.8E-02
Medium Total							NA					6.5E+00
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				7.6E+00
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				7.3E+00
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				6.8E+00

TABLE 9.3.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

CNS - Central Nervous System

Total Vascular HI Across Media =	**2E+00**
Total Skin HI Across Media =	**2E+00**
Total Development HI Across Media =	4E-03
Total CNS HI Across Media =	2E-01
Total NOE HI Across Media =	6E-02
Total Thyroid HI Across Media =	**4E+00**
Total Gastrointestinal HI Across Media =	1E+00
Total Hair Cystine HI Across Media =	1E-01
Total Liver HI Across Media =	6E-03
Total Kidney HI Across Media =	3E-03
Total Blood Pressure HI Across Media =	4E-02
Total Respiratory HI Across Media =	5E-02
Total Whole Body HI Across Media =	6E-03
Total Blood HI Across Media =	4E-02
Total Nasal HI Across Media =	5E-02

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	9.0E-03	NA	2.5E-03	1.2E-02
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	1.0E-02	NA	3.7E-03	1.4E-02
			Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	2.0E-04	NA	7.1E-05	2.7E-04
			Pyrene	NA	NA	NA	NA	Kidney	1.1E-02	NA	3.9E-03	1.5E-02
			4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dieldrin	NA	NA	NA	NA	Liver	1.3E-03	NA	3.8E-04	1.7E-03
			Heptachlor epoxide	NA	NA	NA	NA	Liver	1.9E-02	NA	5.4E-03	2.5E-02
			2,3,7,8-TCDD TEQ	NA	NA	NA	NA	Development	3.3E-02	NA	2.8E-03	3.6E-02
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	2.4E-01	NA	6.8E-02	3.1E-01
			Arsenic	NA	NA	NA	NA	Skin, Vascular	4.4E-01	NA	3.7E-02	4.8E-01
			Chromium	NA	NA	NA	NA	NOE	7.3E-02	NA	8.2E-02	1.6E-01
			Cobalt	NA	NA	NA	NA	Thyroid	3.8E-01	NA	1.1E-02	3.9E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	3.9E-01	NA	1.1E-02	4.1E-01
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	1.7E-02	NA	4.9E-04	1.8E-02
			Mercury	NA	NA	NA	NA	Immune	8.8E-02	NA	3.5E-02	1.2E-01
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.0E-01	NA	1.1E-01	2.1E-01
			Chemical Total	NA	NA	NA	NA		1.8E+00	NA	3.7E-01	2.2E+00
		Exposure Point Total					NA					2.2E+00
	Exposure Medium Total						NA					2.2E+00
Medium Total							NA					2.2E+00

TABLE 9.4.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	3.1E-02	NA	3.1E-02
			Chromium	NA	NA	NA	NA	Respiratory	NA	1.1E-04	NA	1.1E-04
			Chemical Total	NA	NA	NA	NA		NA	3.1E-02	NA	3.1E-02
		Exposure Point Total					NA					3.1E-02
	Exposure Medium Total						NA					2.2E+00
Medium Total							NA					2.2E+00
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	1.3E-01	NA	3.5E-03	1.3E-01
			Arsenic	NA	NA	NA	NA	Skin, Vascular	4.0E+00	NA	3.4E-01	4.4E+00
			Chromium	NA	NA	NA	NA	NOE	1.0E-01	NA	1.2E-01	2.2E-01
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-01	NA	1.8E-02	6.8E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	8.5E-01	NA	2.4E-02	8.7E-01
			Manganese	NA	NA	NA	NA	CNS	3.3E-02	NA	9.2E-04	3.4E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.0E-01	NA	3.2E-01	6.1E-01
			Chemical Total	NA	NA	NA	NA		6.1E+00	NA	8.2E-01	6.9E+00
		Exposure Point Total					NA					6.9E+00
	Exposure Medium Total						NA					6.9E+00
Medium Total							NA					6.9E+00
Ash	Air	Emissions from Ash	Chromium	NA	NA	NA	NA	Respiratory	NA	1.7E-04	NA	1.7E-04
			Chemical Total	NA	NA	NA	NA		NA	1.7E-04	NA	1.7E-04
		Exposure Point Total					NA					1.7E-04
	Exposure Medium Total						NA					6.9E+00
Medium Total							NA					6.9E+00

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Arsenic	NA	NA	NA	NA	Skin, Vascular	2.4E-02	NA	6.0E-03	3.0E-02
			Chromium	NA	NA	NA	NA	NOE	5.3E-03	NA	1.8E-02	2.3E-02
			Cobalt	NA	NA	NA	NA	Thyroid	6.1E-02	NA	5.1E-03	6.6E-02
			Chemical Total	NA	NA	NA	NA		9.0E-02	NA	2.9E-02	1.2E-01
		Exposure Point Total					NA					1.2E-01
	Exposure Medium Total						NA					1.2E-01
Medium Total							NA					1.2E-01
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	5.4E-03	NA	3.7E-03	9.1E-03
			Heptachlor	NA	NA	NA	NA	Liver	2.7E-03	NA	1.2E-03	3.9E-03
			Arsenic	NA	NA	NA	NA	Skin, Vascular	2.7E+00	NA	1.5E-01	2.9E+00
			Cobalt	NA	NA	NA	NA	Thyroid	9.8E+00	NA	6.5E-02	9.9E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	1.9E+00	NA	2.6E-02	2.0E+00
			Manganese	NA	NA	NA	NA	CNS	4.0E-01	NA	2.6E-03	4.0E-01
			Chemical Total	NA	NA	NA	NA		1.5E+01	NA	2.5E-01	1.5E+01
		Exposure Point Total					NA					1.5E+01
	Exposure Medium Total						NA					1.5E+01
Medium Total							NA					1.5E+01
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	4.6E-02	NA	4.6E-02
			Chemical Total	NA	NA	NA	NA		NA	4.6E-02	NA	4.6E-02
		Exposure Point Total					NA					4.6E-02
	Exposure Medium Total						NA					1.5E+01
Medium Total							NA					1.5E+01
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				2.4E+01
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				2.2E+01
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				1.8E+01

TABLE 9.4.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

CNS - Central Nervous System

Total Vascular HI Across Media =	**8E+00**
Total Skin HI Across Media =	**8E+00**
Total Development HI Across Media =	4E-02
Total CNS HI Across Media =	6E-01
Total NOE HI Across Media =	4E-01
Total Thyroid HI Across Media =	**1E+01**
Total Gastrointestinal HI Across Media =	**3E+00**
Total Hair Cystine HI Across Media =	8E-01
Total Liver HI Across Media =	4E-02
Total Kidney HI Across Media =	3E-02
Total Blood Pressure HI Across Media =	3E-01
Total Respiratory HI Across Media =	8E-02
Total Whole Body HI Across Media =	2E-02
Total Blood HI Across Media =	3E-01
Total Nasal HI Across Media =	8E-02

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	7.6E-05	NA	2.9E-05	1.0E-04	NA	NA	NA	NA	NA
			Benzo(a)pyrene	8.0E-04	NA	3.1E-04	1.1E-03	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	8.0E-05	NA	3.1E-05	1.1E-04	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	6.7E-06	NA	2.6E-06	9.3E-06	NA	NA	NA	NA	NA
			Chrysene	8.0E-07	NA	3.1E-07	1.1E-06	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.9E-04	NA	7.5E-05	2.7E-04	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	5.4E-05	NA	2.1E-05	7.4E-05	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Pyrene	NA	NA	NA	NA	Kidney	NA	NA	NA	NA
			4,4'-DDD	2.7E-06	NA	1.2E-06	4.0E-06	NA	NA	NA	NA	NA
			Dieldrin	1.3E-07	NA	4.2E-08	1.7E-07	Liver	NA	NA	NA	NA
			Heptachlor epoxide	2.8E-07	NA	8.8E-08	3.7E-07	Liver	NA	NA	NA	NA
			2,3,7,8-TCDD TEQ	5.2E-07	NA	5.0E-08	5.7E-07	Development	NA	NA	NA	NA
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	NA	NA	NA	NA
			Arsenic	2.4E-05	NA	2.3E-06	2.7E-05	Skin, Vascular	NA	NA	NA	NA
			Chromium	5.8E-05	NA	6.8E-05	1.3E-04	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Immune	NA	NA	NA	NA
			Vanadium	NA	NA	NA	NA	Hair Cystine	NA	NA	NA	NA
			Chemical Total	1.3E-03	NA	5.4E-04	1.8E-03		NA	NA	NA	NA
		Exposure Point Total					1.8E-03					NA
	Exposure Medium Total						1.8E-03					NA
Medium Total							1.8E-03					NA

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	1.3E-06	NA	1.3E-06	Nasal, Respiratory	NA	NA	NA	NA
			Chromium	NA	1.0E-06	NA	1.0E-06	Respiratory	NA	NA	NA	NA
			Chemical Total	NA	2.4E-06	NA	2.4E-06		NA	NA	NA	NA
		Exposure Point Total					2.4E-06					NA
	Exposure Medium Total						1.8E-03					NA
Medium Total							1.8E-03					NA
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Arsenic	2.2E-04	NA	2.1E-05	2.4E-04	Skin, Vascular	NA	NA	NA	NA
			Chromium	8.1E-05	NA	9.5E-05	1.8E-04	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Vanadium	NA	NA	NA	NA	Hair Cystine	NA	NA	NA	NA
			Chemical Total	3.0E-04	NA	1.2E-04	4.2E-04		NA	NA	NA	NA
		Exposure Point Total					4.2E-04					NA
	Exposure Medium Total						4.2E-04					NA
Ash	Air	Emissions from Ash	Chromium	NA	1.5E-06	NA	1.5E-06	Respiratory	NA	NA	NA	NA
			Chemical Total	NA	1.5E-06	NA	1.5E-06		NA	NA	NA	NA
		Exposure Point Total					1.5E-06					NA
	Exposure Medium Total						1.5E-06					NA
Medium Total							4.2E-04					NA

TABLE 9.5.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	3.7E-07	NA	7.8E-07	1.2E-06	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	9.9E-08	NA	2.1E-07	3.1E-07	NA	NA	NA	NA	NA
			Arsenic	1.3E-06	NA	6.4E-07	2.0E-06	Skin, Vascular	NA	NA	NA	NA
			Chromium	9.7E-07	NA	6.3E-06	7.2E-06	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Chemical Total	2.8E-06	NA	7.9E-06	1.1E-05		NA	NA	NA	NA
		Exposure Point Total					1.1E-05					NA
	Exposure Medium Total						1.1E-05					NA
Medium Total							1.1E-05					NA
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Heptachlor	1.4E-06	NA	6.6E-07	2.1E-06	Liver	NA	NA	NA	NA
			Arsenic	2.9E-04	NA	1.4E-05	3.0E-04	Skin, Vascular	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Chemical Total	2.9E-04	NA	1.5E-05	3.0E-04		NA	NA	NA	NA
		Exposure Point Total					3.0E-04					NA
	Exposure Medium Total						3.0E-04					NA
Medium Total							3.0E-04					NA
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	1.0E-06	NA	1.0E-06	Nasal, Respiratory	NA	NA	NA	NA
			Chemical Total	NA	1.0E-06	NA	1.0E-06		NA	NA	NA	NA
		Exposure Point Total					1.0E-06					NA
	Exposure Medium Total						3.0E-04					NA
Medium Total							3.0E-04					NA
Receptor Total			Total Receptor Risks				2.6E-03	Receptor HI Total				NA
Receptor Total			Total Receptor Risks (Ash)				7.3E-04	Receptor HI Total (Ash)				NA
Receptor Total			Total Receptor Risks (Soil)				2.2E-03	Receptor HI Total (Soil)				NA

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	3.8E-07	NA	1.0E-07	4.8E-07	NA	NA	NA	NA	NA
			Benzo(a)pyrene	4.0E-06	NA	1.1E-06	5.1E-06	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	4.0E-07	NA	1.1E-07	5.1E-07	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	3.4E-08	NA	9.0E-09	4.3E-08	NA	NA	NA	NA	NA
			Chrysene	4.0E-09	NA	1.1E-09	5.1E-09	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	9.7E-07	NA	2.6E-07	1.2E-06	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	1.7E-03	NA	3.4E-04	2.0E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	1.9E-04	NA	5.0E-05	2.4E-04
			Indeno(1,2,3-cd)pyrene	2.7E-07	NA	7.2E-08	3.4E-07	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	3.6E-05	NA	9.6E-06	4.5E-05
			Pyrene	NA	NA	NA	NA	Kidney	2.0E-04	NA	5.3E-05	2.5E-04
			4,4'-DDD	5.9E-08	NA	1.7E-08	7.6E-08	NA	NA	NA	NA	NA
			Dieldrin	2.8E-09	NA	5.8E-10	3.4E-09	Liver	2.5E-04	NA	5.1E-05	3.0E-04
			Heptachlor epoxide	6.0E-09	NA	1.2E-09	7.2E-09	Liver	3.5E-03	NA	7.3E-04	4.3E-03
			2,3,7,8-TCDD TEQ	1.1E-08	NA	6.9E-10	1.2E-08	Development	6.0E-03	NA	3.7E-04	6.4E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	4.5E-02	NA	9.2E-03	5.4E-02
			Arsenic	5.2E-07	NA	3.2E-08	5.5E-07	Skin, Vascular	8.1E-02	NA	5.0E-03	8.6E-02
			Chromium	2.9E-07	NA	2.4E-07	5.3E-07	NOE	2.0E-03	NA	1.7E-03	3.7E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.9E-03	NA	1.4E-03	8.3E-03
			Iron	NA	NA	NA	NA	Gastrointestinal	7.2E-02	NA	1.5E-03	7.4E-02
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	3.2E-03	NA	6.6E-05	3.3E-03
			Mercury	NA	NA	NA	NA	Immune	1.6E-03	NA	4.8E-04	2.1E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.3E-02	NA	1.1E-02	2.4E-02
			Chemical Total	7.0E-06	NA	1.9E-06	8.9E-06		2.4E-01	NA	3.2E-02	2.7E-01
		Exposure Point Total					8.9E-06					2.7E-01
	Exposure Medium Total						8.9E-06					2.7E-01
Medium Total							8.9E-06					2.7E-01

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	5.3E-09	NA	5.3E-09	Nasal, Respiratory	NA	3.6E-03	NA	3.6E-03
			Chromium	NA	1.6E-09	NA	1.6E-09	Respiratory	NA	1.4E-05	NA	1.4E-05
			Chemical Total	NA	6.9E-09	NA	6.9E-09		NA	3.6E-03	NA	3.6E-03
		Exposure Point Total					6.9E-09					3.6E-03
	Exposure Medium Total						8.9E-06					2.7E-01
Medium Total							8.9E-06					2.7E-01
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	2.3E-02	NA	4.8E-04	2.4E-02
			Arsenic	4.8E-06	NA	2.9E-07	5.1E-06	Skin, Vascular	7.4E-01	NA	4.6E-02	7.9E-01
			Chromium	4.0E-07	NA	3.3E-07	7.4E-07	NOE	2.8E-03	NA	2.3E-03	5.2E-03
			Cobalt	NA	NA	NA	NA	Thyroid	1.2E-02	NA	2.5E-03	1.5E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.6E-01	NA	3.2E-03	1.6E-01
			Manganese	NA	NA	NA	NA	CNS	6.0E-03	NA	1.2E-04	6.2E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.9E-02	NA	3.1E-02	7.0E-02
			Chemical Total	5.2E-06	NA	6.3E-07	5.8E-06		9.8E-01	NA	8.5E-02	1.1E+00
		Exposure Point Total					5.8E-06					1.1E+00
	Exposure Medium Total						5.8E-06					1.1E+00
Medium Total							5.8E-06					1.1E+00
Ash	Air	Emissions from Ash	Chromium	NA	2.4E-09	NA	2.4E-09	Respiratory	NA	2.0E-05	NA	2.0E-05
			Chemical Total	NA	2.4E-09	NA	2.4E-09		NA	2.0E-05	NA	2.0E-05
		Exposure Point Total					2.4E-09					2.0E-05
	Exposure Medium Total						5.8E-06					1.1E+00
Medium Total							5.8E-06					1.1E+00

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	4.3E-09	NA	4.6E-09	8.9E-09	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.1E-09	NA	1.2E-09	2.4E-09	NA	NA	NA	NA	NA
			Arsenic	1.5E-08	NA	1.6E-08	3.2E-08	Skin, Vascular	2.4E-03	NA	2.5E-03	4.9E-03
			Chromium	1.1E-08	NA	4.8E-07	4.9E-07	NOE	5.2E-04	NA	2.2E-02	2.3E-02
			Cobalt	NA	NA	NA	NA	Thyroid	6.1E-03	NA	6.5E-03	1.3E-02
			Chemical Total	3.2E-08	NA	5.0E-07	5.3E-07		8.9E-03	NA	3.1E-02	4.0E-02
		Exposure Point Total					5.3E-07					4.0E-02
	Exposure Medium Total						5.3E-07					4.0E-02
Medium Total							5.3E-07					4.0E-02
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	NA	NA	8.9E-04	8.9E-04
			Heptachlor	NA	NA	7.4E-09	7.4E-09	Liver	NA	NA	2.3E-04	2.3E-04
			Arsenic	NA	NA	5.3E-07	5.3E-07	Skin, Vascular	NA	NA	8.2E-02	8.2E-02
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	3.4E-02	3.4E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	1.4E-02	1.4E-02
			Manganese	NA	NA	NA	NA	CNS	NA	NA	1.4E-03	1.4E-03
			Chemical Total	NA	NA	5.3E-07	5.3E-07		NA	NA	1.3E-01	1.3E-01
		Exposure Point Total					5.3E-07					1.3E-01
	Exposure Medium Total						5.3E-07					1.3E-01
Medium Total							5.3E-07					1.3E-01
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	5.5E-10	NA	5.5E-10	Nasal, Respiratory	NA	3.7E-04	NA	3.7E-04
			Chemical Total	NA	5.5E-10	NA	5.5E-10		NA	3.7E-04	NA	3.7E-04
		Exposure Point Total					5.5E-10					3.7E-04
	Exposure Medium Total						5.3E-07					1.3E-01
Medium Total							5.3E-07					1.3E-01
Receptor Total			Total Receptor Risks				1.6E-05	Receptor HI Total				1.5E+00
Receptor Total			Total Receptor Risks (Ash)				6.9E-06	Receptor HI Total (Ash)				1.2E+00
Receptor Total			Total Receptor Risks (Soil)				1.0E-05	Receptor HI Total (Soil)				4.5E-01

TABLE 9.6.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total

CNS - Central Nervous System

Total Vascular HI Across Media =	1E+00
Total Skin HI Across Media =	1E+00
Total Development HI Across Media =	6E-03
Total CNS HI Across Media =	3E-02
Total NOE HI Across Media =	3E-02
Total Thyroid HI Across Media =	7E-02
Total Gastrointestinal HI Across Media =	2E-01
Total Hair Cystine HI Across Media =	9E-02
Total Liver HI Across Media =	5E-03
Total Kidney HI Across Media =	5E-04
Total Blood Pressure HI Across Media =	5E-02
Total Respiratory HI Across Media =	4E-03
Total Whole Body HI Across Media =	3E-03
Total Blood HI Across Media =	5E-02
Total Nasal HI Across Media =	4E-03

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	3.9E-06	NA	3.4E-06	7.3E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	4.2E-05	NA	3.6E-05	7.8E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	4.2E-06	NA	3.6E-06	7.8E-06	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	3.5E-07	NA	3.0E-07	6.5E-07	NA	NA	NA	NA	NA
			Chrysene	4.2E-08	NA	3.6E-08	7.7E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.0E-05	NA	8.7E-06	1.9E-05	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	6.9E-04	NA	4.5E-04	1.1E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	7.7E-04	NA	6.6E-04	1.4E-03
			Indeno(1,2,3-cd)pyrene	2.8E-06	NA	2.4E-06	5.2E-06	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	1.5E-05	NA	1.3E-05	2.8E-05
			Pyrene	NA	NA	NA	NA	Kidney	8.3E-04	NA	7.1E-04	1.5E-03
			4,4'-DDD	6.1E-07	NA	5.7E-07	1.2E-06	NA	NA	NA	NA	NA
			Dieldrin	2.9E-08	NA	1.9E-08	4.9E-08	Liver	1.0E-04	NA	6.8E-05	1.7E-04
			Heptachlor epoxide	6.2E-08	NA	4.1E-08	1.0E-07	Liver	1.5E-03	NA	9.8E-04	2.5E-03
			2,3,7,8-TCDD TEQ	1.2E-07	NA	2.3E-08	1.4E-07	Development	2.5E-03	NA	5.0E-04	3.0E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	1.9E-02	NA	1.2E-02	3.1E-02
			Arsenic	5.4E-06	NA	1.1E-06	6.5E-06	Skin, Vascular	3.4E-02	NA	6.7E-03	4.0E-02
			Chromium	3.0E-06	NA	8.0E-06	1.1E-05	NOE	5.6E-03	NA	1.5E-02	2.0E-02
			Cobalt	NA	NA	NA	NA	Thyroid	2.9E-02	NA	1.9E-03	3.1E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	3.0E-02	NA	2.0E-03	3.2E-02
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	1.3E-03	NA	8.8E-05	1.4E-03
			Mercury	NA	NA	NA	NA	Immune	6.7E-03	NA	6.3E-03	1.3E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	7.8E-03	NA	2.0E-02	2.8E-02
			Chemical Total	7.3E-05	NA	6.4E-05	1.4E-04		1.4E-01	NA	6.7E-02	2.1E-01
		Exposure Point Total					1.4E-04					2.1E-01
	Exposure Medium Total						1.4E-04					2.1E-01
Medium Total							1.4E-04					2.1E-01

TABLE 9.7.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	2.6E-07	NA	2.6E-07	Nasal, Respiratory	NA	7.3E-03	NA	7.3E-03
			Chromium	NA	8.1E-08	NA	8.1E-08	Respiratory	NA	2.7E-05	NA	2.7E-05
			Chemical Total	NA	3.5E-07	NA	3.5E-07		NA	7.3E-03	NA	7.3E-03
		Exposure Point Total					3.5E-07					7.3E-03
	Exposure Medium Total						1.4E-04					2.1E-01
Medium Total							1.4E-04					2.1E-01
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	9.6E-03	NA	6.4E-04	1.0E-02
			Arsenic	5.0E-05	NA	9.8E-06	5.9E-05	Skin, Vascular	3.1E-01	NA	6.1E-02	3.7E-01
			Chromium	4.2E-06	NA	1.1E-05	1.5E-05	NOE	7.9E-03	NA	2.1E-02	2.9E-02
			Cobalt	NA	NA	NA	NA	Thyroid	5.1E-02	NA	3.3E-03	5.4E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	6.5E-02	NA	4.3E-03	6.9E-02
			Manganese	NA	NA	NA	NA	CNS	2.5E-03	NA	1.7E-04	2.7E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	2.3E-02	NA	5.7E-02	8.0E-02
			Chemical Total	5.4E-05	NA	2.1E-05	7.5E-05		4.7E-01	NA	1.5E-01	6.1E-01
		Exposure Point Total					7.5E-05					6.1E-01
	Exposure Medium Total						7.5E-05					6.1E-01
Medium Total							7.5E-05					6.1E-01
Ash	Air	Emissions from Ash	Chromium	NA	2.4E-09	NA	2.4E-09	Respiratory	NA	2.0E-05	NA	2.0E-05
			Chemical Total	NA	2.4E-09	NA	2.4E-09		NA	2.0E-05	NA	2.0E-05
		Exposure Point Total					2.4E-09					2.0E-05
	Exposure Medium Total						7.5E-05					6.1E-01
Medium Total							7.5E-05					6.1E-01

TABLE 9.7.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	2.2E-08	NA	5.7E-08	8.0E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	5.9E-09	NA	1.5E-08	2.1E-08	NA	NA	NA	NA	NA
			Arsenic	7.9E-08	NA	4.7E-08	1.3E-07	Skin, Vascular	4.9E-04	NA	2.9E-04	7.9E-04
			Chromium	5.8E-08	NA	4.6E-07	5.2E-07	NOE	1.1E-04	NA	8.6E-04	9.7E-04
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-03	NA	2.5E-04	1.5E-03
			Chemical Total	1.7E-07	NA	5.8E-07	7.5E-07		1.9E-03	NA	1.4E-03	3.3E-03
		Exposure Point Total					7.5E-07					3.3E-03
	Exposure Medium Total						7.5E-07					3.3E-03
Medium Total							7.5E-07					3.3E-03
Receptor Total			Total Receptor Risks				2.1E-04	Receptor HI Total				8.3E-01
Receptor Total			Total Receptor Risks (Ash)				7.5E-05	Receptor HI Total (Ash)				6.2E-01
Receptor Total			Total Receptor Risks (Soil)				1.4E-04	Receptor HI Total (Soil)				2.2E-01

CNS - Central Nervous System

Total Vascular HI Across Media =	4E-01
Total Skin HI Across Media =	4E-01
Total Development HI Across Media =	3E-03
Total CNS HI Across Media =	1E-02
Total NOE HI Across Media =	5E-02
Total Thyroid HI Across Media =	9E-02
Total Gastrointestinal HI Across Media =	1E-01
Total Hair Cystine HI Across Media =	1E-01
Total Liver HI Across Media =	4E-03
Total Kidney HI Across Media =	3E-03
Total Blood Pressure HI Across Media =	3E-02
Total Respiratory HI Across Media =	7E-03
Total Whole Body HI Across Media =	1E-03
Total Blood HI Across Media =	3E-02
Total Nasal HI Across Media =	7E-03

TABLE 9.8.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	7.9E-07	NA	4.1E-07	1.2E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	8.4E-06	NA	4.3E-06	1.3E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	8.4E-07	NA	4.3E-07	1.3E-06	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	7.0E-08	NA	3.6E-08	1.1E-07	NA	NA	NA	NA	NA
			Chrysene	8.3E-09	NA	4.3E-09	1.3E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	2.0E-06	NA	1.0E-06	3.1E-06	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	1.4E-04	NA	5.7E-05	2.0E-04
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	1.6E-04	NA	8.3E-05	2.4E-04
			Indeno(1,2,3-cd)pyrene	5.6E-07	NA	2.9E-07	8.5E-07	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	3.1E-06	NA	1.6E-06	4.7E-06
			Pyrene	NA	NA	NA	NA	Kidney	1.7E-04	NA	9.0E-05	2.6E-04
			4,4'-DDD	1.2E-07	NA	6.9E-08	1.9E-07	NA	NA	NA	NA	NA
			Dieldrin	5.9E-09	NA	2.3E-09	8.2E-09	Liver	2.1E-05	NA	8.6E-06	3.0E-05
			Heptachlor epoxide	1.2E-08	NA	5.0E-09	1.7E-08	Liver	3.1E-04	NA	1.2E-04	4.3E-04
			2,3,7,8-TCDD TEQ	2.3E-08	NA	2.8E-09	2.6E-08	Development	5.2E-04	NA	6.3E-05	5.9E-04
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	3.9E-03	NA	1.5E-03	5.4E-03
			Arsenic	1.1E-06	NA	1.3E-07	1.2E-06	Skin, Vascular	7.0E-03	NA	8.4E-04	7.9E-03
			Chromium	6.0E-07	NA	9.6E-07	1.6E-06	NOE	1.2E-03	NA	1.9E-03	3.0E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.0E-03	NA	2.4E-04	6.2E-03
			Iron	NA	NA	NA	NA	Gastrointestinal	6.3E-03	NA	2.5E-04	6.5E-03
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	2.8E-04	NA	1.1E-05	2.9E-04
			Mercury	NA	NA	NA	NA	Immune	1.4E-03	NA	8.0E-04	2.2E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.6E-03	NA	2.5E-03	4.1E-03
			Chemical Total	1.4E-05	NA	7.7E-06	2.2E-05		2.9E-02	NA	8.5E-03	3.7E-02
		Exposure Point Total					2.2E-05					3.7E-02
	Exposure Medium Total						2.2E-05					3.7E-02
Medium Total							2.2E-05					3.7E-02

TABLE 9.8.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	2.6E-08	NA	2.6E-08	Nasal, Respiratory	NA	7.6E-04	NA	7.6E-04
			Chromium	NA	8.1E-09	NA	8.1E-09	Respiratory	NA	2.8E-06	NA	2.8E-06
			Chemical Total	NA	3.5E-08	NA	3.5E-08		NA	7.6E-04	NA	7.6E-04
		Exposure Point Total					3.5E-08					7.6E-04
	Exposure Medium Total						2.2E-05					3.8E-02
Medium Total							2.2E-05					3.8E-02
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	2.0E-03	NA	8.0E-05	2.1E-03
			Arsenic	9.9E-06	NA	1.2E-06	1.1E-05	Skin, Vascular	6.4E-02	NA	7.7E-03	7.2E-02
			Chromium	8.4E-07	NA	1.3E-06	2.2E-06	NOE	1.6E-03	NA	2.6E-03	4.2E-03
			Cobalt	NA	NA	NA	NA	Thyroid	1.1E-02	NA	4.2E-04	1.1E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E-02	NA	5.4E-04	1.4E-02
			Manganese	NA	NA	NA	NA	CNS	5.2E-04	NA	2.1E-05	5.4E-04
			Vanadium	NA	NA	NA	NA	Hair Cystine	4.7E-03	NA	7.2E-03	1.2E-02
			Chemical Total	1.1E-05	NA	2.5E-06	1.3E-05		9.7E-02	NA	1.9E-02	1.2E-01
		Exposure Point Total					1.3E-05					1.2E-01
	Exposure Medium Total						1.3E-05					1.2E-01
Medium Total							1.3E-05					1.2E-01
Ash	Air	Emissions from Ash	Chromium	NA	1.2E-08	NA	1.2E-08	Respiratory	NA	4.2E-06	NA	4.2E-06
			Chemical Total	NA	1.2E-08	NA	1.2E-08		NA	4.2E-06	NA	4.2E-06
		Exposure Point Total					1.2E-08					4.2E-06
	Exposure Medium Total						1.3E-05					1.2E-01
Medium Total							1.3E-05					1.2E-01

TABLE 9.8.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	1.1E-07	NA	5.0E-07	6.1E-07	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	3.0E-08	NA	1.3E-07	1.6E-07	NA	NA	NA	NA	NA
			Arsenic	4.0E-07	NA	4.1E-07	8.0E-07	Skin, Vascular	2.6E-03	NA	2.6E-03	5.2E-03
			Chromium	2.9E-07	NA	4.0E-06	4.3E-06	NOE	5.7E-04	NA	7.7E-03	8.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-03	NA	2.2E-03	8.8E-03
			Chemical Total	8.3E-07	NA	5.0E-06	5.8E-06		9.7E-03	NA	1.3E-02	2.2E-02
		Exposure Point Total					5.8E-06					2.2E-02
	Exposure Medium Total						5.8E-06					2.2E-02
Medium Total							5.8E-06					2.2E-02
Receptor Total			Total Receptor Risks				4.1E-05	Receptor HI Total				1.8E-01
Receptor Total			Total Receptor Risks (Ash)				1.9E-05	Receptor HI Total (Ash)				1.4E-01
Receptor Total			Total Receptor Risks (Soil)				2.8E-05	Receptor HI Total (Soil)				6.0E-02

CNS - Central Nervous System

Total Vascular HI Across Media =	8E-02
Total Skin HI Across Media =	8E-02
Total development HI Across Media =	6E-04
Total CNS HI Across Media =	3E-03
Total NOE HI Across Media =	2E-02
Total Thyroid HI Across Media =	3E-02
Total Gastrointestinal HI Across Media =	2E-02
Total Hair Cystine HI Across Media =	2E-02
Total Liver HI Across Media =	7E-04
Total Kidney HI Across Media =	5E-04
Total Blood Pressure HI Across Media =	5E-03
Total Respiratory HI Across Media =	8E-04
Total Whole Body HI Across Media =	2E-04
Total Blood HI Across Media =	6E-03
Total Nasal HI Across Media =	8E-04

TABLE 9.9.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	4.1E-07	NA	6.2E-07	1.0E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	4.3E-06	NA	6.5E-06	1.1E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	4.3E-07	NA	6.5E-07	1.1E-06	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	3.6E-08	NA	5.5E-08	9.1E-08	NA	NA	NA	NA	NA
			Chrysene	4.3E-09	NA	6.5E-09	1.1E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.0E-06	NA	1.6E-06	2.6E-06	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	2.0E-04	NA	2.3E-04	4.3E-04
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	2.2E-04	NA	3.4E-04	5.6E-04
			Indeno(1,2,3-cd)pyrene	2.9E-07	NA	4.4E-07	7.3E-07	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	4.3E-06	NA	6.5E-06	1.1E-05
			Pyrene	NA	NA	NA	NA	Kidney	2.4E-04	NA	3.6E-04	6.0E-04
			4,4'-DDD	6.3E-08	NA	1.0E-07	1.7E-07	NA	NA	NA	NA	NA
			Dieldrin	3.0E-09	NA	3.5E-09	6.6E-09	Liver	2.9E-05	NA	3.4E-05	6.4E-05
			Heptachlor epoxide	6.4E-09	NA	7.5E-09	1.4E-08	Liver	4.2E-04	NA	4.9E-04	9.2E-04
			2,3,7,8-TCDD TEQ	1.2E-08	NA	4.2E-09	1.6E-08	Development	7.2E-04	NA	2.5E-04	9.7E-04
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	5.3E-03	NA	6.2E-03	1.2E-02
			Arsenic	5.6E-07	NA	2.0E-07	7.5E-07	Skin, Vascular	9.6E-03	NA	3.4E-03	1.3E-02
			Chromium	3.1E-07	NA	1.4E-06	1.8E-06	NOE	1.6E-03	NA	7.5E-03	9.1E-03
			Cobalt	NA	NA	NA	NA	Thyroid	8.2E-03	NA	9.6E-04	9.2E-03
			Iron	NA	NA	NA	NA	Gastrointestinal	8.6E-03	NA	1.0E-03	9.6E-03
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	3.8E-04	NA	4.5E-05	4.3E-04
			Mercury	NA	NA	NA	NA	Immune	1.9E-03	NA	3.2E-03	5.1E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	2.2E-03	NA	1.0E-02	1.2E-02
			Chemical Total	7.5E-06	NA	1.2E-05	1.9E-05		4.0E-02	NA	3.4E-02	7.4E-02
		Exposure Point Total					1.9E-05					7.4E-02
	Exposure Medium Total						1.9E-05					7.4E-02
Medium Total							1.9E-05					7.4E-02

TABLE 9.9.RME
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	9.9E-09	NA	9.9E-09	Nasal, Respiratory	NA	7.6E-04	NA	7.6E-04
			Chromium	NA	3.0E-09	NA	3.0E-09	Respiratory	NA	2.8E-06	NA	2.8E-06
			Chemical Total	NA	1.3E-08	NA	1.3E-08		NA	7.6E-04	NA	7.6E-04
		Exposure Point Total					1.3E-08					7.6E-04
	Exposure Medium Total						1.9E-05					7.5E-02
Medium Total							1.9E-05					7.5E-02
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	2.7E-03	NA	3.2E-04	3.1E-03
			Arsenic	5.1E-06	NA	1.8E-06	6.9E-06	Skin, Vascular	8.8E-02	NA	3.1E-02	1.2E-01
			Chromium	4.3E-07	NA	2.0E-06	2.5E-06	NOE	2.2E-03	NA	1.1E-02	1.3E-02
			Cobalt	NA	NA	NA	NA	Thyroid	1.4E-02	NA	1.7E-03	1.6E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.8E-02	NA	2.2E-03	2.1E-02
			Manganese	NA	NA	NA	NA	CNS	7.2E-04	NA	8.4E-05	8.0E-04
			Vanadium	NA	NA	NA	NA	Hair Cystine	6.5E-03	NA	2.9E-02	3.6E-02
			Chemical Total	5.5E-06	NA	3.8E-06	9.3E-06		1.3E-01	NA	7.5E-02	2.1E-01
		Exposure Point Total					9.3E-06					2.1E-01
	Exposure Medium Total						9.3E-06					2.1E-01
Medium Total							9.3E-06					2.1E-01
Ash	Air	Emissions from Ash	Chromium	NA	4.5E-09	NA	4.5E-09	Respiratory	NA	4.2E-06	NA	4.2E-06
			Chemical Total	NA	4.5E-09	NA	4.5E-09		NA	4.2E-06	NA	4.2E-06
		Exposure Point Total					4.5E-09					4.2E-06
	Exposure Medium Total						9.3E-06					2.1E-01
Medium Total							9.3E-06					2.1E-01

TABLE 9.9.RME

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

REASONABLE MAXIMUM EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Trespasser/Visitor
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	5.7E-08	NA	5.8E-07	6.4E-07	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.5E-08	NA	5.8E-08	7.4E-08	NA	NA	NA	NA	NA
			Arsenic	2.0E-07	NA	4.8E-07	6.8E-07	Skin, Vascular	3.5E-03	NA	3.1E-03	6.6E-03
			Chromium	1.5E-07	NA	4.7E-06	4.8E-06	NOE	7.8E-04	NA	9.1E-03	9.9E-03
			Cobalt	NA	NA	NA	NA	Thyroid	9.0E-03	NA	2.6E-03	1.2E-02
			Chemical Total	4.3E-07	NA	5.8E-06	6.2E-06		1.3E-02	NA	1.5E-02	2.8E-02
		Exposure Point Total					6.2E-06					2.8E-02
	Exposure Medium Total						6.2E-06					2.8E-02
Medium Total							6.2E-06					2.8E-02
Receptor Total			Total Receptor Risks				3.5E-05	Receptor HI Total				3.1E-01
Receptor Total			Total Receptor Risks (Ash)				1.6E-05	Receptor HI Total (Ash)				2.4E-01
Receptor Total			Total Receptor Risks (Soil)				2.5E-05	Receptor HI Total (Soil)				1.0E-01

CNS - Central Nervous System

Total Vascular HI Across Media =	1E-01
Total Skin HI Across Media =	1E-01
Total development HI Across Media =	1E-03
Total CNS HI Across Media =	4E-03
Total NOE HI Across Media =	3E-02
Total Thyroid HI Across Media =	4E-02
Total Gastrointestinal HI Across Media =	3E-02
Total Hair Cystine HI Across Media =	5E-02
Total Liver HI Across Media =	2E-03
Total Kidney HI Across Media =	1E-03
Total Blood Pressure HI Across Media =	1E-02
Total Respiratory HI Across Media =	8E-04
Total Whole Body HI Across Media =	4E-04
Total Blood HI Across Media =	1E-02
Total Nasal HI Across Media =	8E-04

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	3.2E-04	NA	2.6E-04	5.8E-04
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	3.6E-04	NA	3.8E-04	7.4E-04
			Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	7.0E-06	NA	7.3E-06	1.4E-05
			Pyrene	NA	NA	NA	NA	Kidney	3.9E-04	NA	4.0E-04	7.9E-04
			4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dieldrin	NA	NA	NA	NA	Liver	4.8E-05	NA	3.9E-05	8.7E-05
			Heptachlor epoxide	NA	NA	NA	NA	Liver	6.9E-04	NA	5.5E-04	1.2E-03
			2,3,7,8-TCDD TEQ	NA	NA	NA	NA	Development	1.2E-03	NA	2.8E-04	1.5E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	8.7E-03	NA	6.9E-03	1.6E-02
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.6E-02	NA	3.8E-03	2.0E-02
			Chromium	NA	NA	NA	NA	NOE	2.6E-03	NA	8.4E-03	1.1E-02
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-02	NA	1.1E-03	1.5E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.4E-02	NA	1.1E-03	1.5E-02
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	6.3E-04	NA	5.0E-05	6.8E-04
			Mercury	NA	NA	NA	NA	Immune	3.2E-03	NA	3.6E-03	6.7E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.7E-03	NA	1.1E-02	1.5E-02
			Chemical Total	NA	NA	NA	NA		6.5E-02	NA	3.8E-02	1.0E-01
		Exposure Point Total					NA					1.0E-01
	Exposure Medium Total						NA					1.0E-01
Medium Total							NA					1.0E-01

TABLE 9.1.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	2.0E-02	NA	2.0E-02
			Chromium	NA	NA	NA	NA	Respiratory	NA	7.6E-05	NA	7.6E-05
			Chemical Total	NA	NA	NA	NA		NA	2.0E-02	NA	2.0E-02
		Exposure Point Total					NA					2.0E-02
	Exposure Medium Total						NA					1.2E-01
Medium Total							NA					1.2E-01
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	4.5E-03	NA	3.6E-04	4.9E-03
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.4E-01	NA	3.5E-02	1.8E-01
			Chromium	NA	NA	NA	NA	NOE	3.7E-03	NA	1.2E-02	1.5E-02
			Cobalt	NA	NA	NA	NA	Thyroid	2.4E-02	NA	1.9E-03	2.6E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	3.0E-02	NA	2.4E-03	3.3E-02
			Manganese	NA	NA	NA	NA	CNS	1.2E-03	NA	9.4E-05	1.3E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	1.1E-02	NA	3.2E-02	4.3E-02
			Chemical Total	NA	NA	NA	NA		2.2E-01	NA	8.4E-02	3.0E-01
		Exposure Point Total					NA					3.0E-01
	Exposure Medium Total						NA					3.0E-01
Medium Total							NA					3.0E-01
Ash	Air	Emissions from Ash	Chromium	NA	NA	NA	NA	Respiratory	NA	1.1E-04	NA	1.1E-04
			Chemical Total	NA	NA	NA	NA		NA	1.1E-04	NA	1.1E-04
		Exposure Point Total					NA					1.1E-04
	Exposure Medium Total						NA					3.0E-01
Medium Total							NA					3.0E-01

TABLE 9.1.CTE

SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation Report

NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Arsenic	NA	NA	NA	NA	Skin, Vascular	2.6E-03	NA	2.6E-03	5.2E-03
			Chromium	NA	NA	NA	NA	NOE	5.7E-04	NA	7.7E-03	8.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-03	NA	2.2E-03	8.8E-03
			Chemical Total	NA	NA	NA	NA		9.7E-03	NA	1.3E-02	2.2E-02
		Exposure Point Total					NA					2.2E-02
	Exposure Medium Total						NA					2.2E-02
Medium Total							NA					2.2E-02
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	1.1E-03	NA	1.2E-03	2.3E-03
			Heptachlor	NA	NA	NA	NA	Liver	5.4E-04	NA	3.7E-04	9.0E-04
			Arsenic	NA	NA	NA	NA	Skin, Vascular	5.5E-01	NA	3.5E-02	5.8E-01
			Cobalt	NA	NA	NA	NA	Thyroid	2.0E+00	NA	1.5E-02	2.0E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	3.9E-01	NA	5.8E-03	3.9E-01
			Manganese	NA	NA	NA	NA	CNS	8.0E-02	NA	6.0E-04	8.1E-02
			Chemical Total	NA	NA	NA	NA		3.0E+00	NA	5.8E-02	3.0E+00
		Exposure Point Total					NA					3.0E+00
	Exposure Medium Total						NA					3.0E+00
Medium Total							NA					3.0E+00
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	1.2E-02	NA	1.2E-02
			Chemical Total	NA	NA	NA	NA		NA	1.2E-02	NA	1.2E-02
		Exposure Point Total					NA					1.2E-02
	Exposure Medium Total						NA					3.1E+00
Medium Total							NA					3.1E+00
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				3.5E+00
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				3.4E+00
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				3.2E+00

CNS - Central Nervous System

Total Vascular HI Across Media =	8E-01
Total Skin HI Across Media =	8E-01
Total Development HI Across Media =	1E-03
Total CNS HI Across Media =	9E-02

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	3.0E-03	NA	1.7E-03	4.7E-03
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	3.4E-03	NA	2.5E-03	5.8E-03
			Indeno(1,2,3-cd)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	6.5E-05	NA	4.7E-05	1.1E-04
			Pyrene	NA	NA	NA	NA	Kidney	3.6E-03	NA	2.6E-03	6.3E-03
			4,4'-DDD	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dieldrin	NA	NA	NA	NA	Liver	4.5E-04	NA	2.5E-04	7.0E-04
			Heptachlor epoxide	NA	NA	NA	NA	Liver	6.5E-03	NA	3.6E-03	1.0E-02
			2,3,7,8-TCDD TEQ	NA	NA	NA	NA	Development	1.1E-02	NA	1.8E-03	1.3E-02
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	8.1E-02	NA	4.5E-02	1.3E-01
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.5E-01	NA	2.5E-02	1.7E-01
			Chromium	NA	NA	NA	NA	NOE	2.5E-02	NA	5.5E-02	8.0E-02
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-01	NA	7.0E-03	1.3E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E-01	NA	7.4E-03	1.4E-01
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	5.8E-03	NA	3.3E-04	6.2E-03
			Mercury	NA	NA	NA	NA	Immune	2.9E-02	NA	2.4E-02	5.3E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.4E-02	NA	7.3E-02	1.1E-01
			Chemical Total	NA	NA	NA	NA		6.1E-01	NA	2.5E-01	8.6E-01
		Exposure Point Total					NA					8.6E-01
	Exposure Medium Total						NA					8.6E-01
Medium Total							NA					8.6E-01
Soil*	Air	Emissions from Soil*	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	2.0E-02	NA	2.0E-02
			Chromium	NA	NA	NA	NA	Respiratory	NA	7.6E-05	NA	7.6E-05
			Chemical Total	NA	NA	NA	NA		NA	2.0E-02	NA	2.0E-02
		Exposure Point Total					NA					2.0E-02
	Exposure Medium Total						NA					8.8E-01
Medium Total							NA					8.8E-01

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	4.2E-02	NA	2.4E-03	4.4E-02
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.3E+00	NA	2.3E-01	1.6E+00
			Chromium	NA	NA	NA	NA	NOE	3.4E-02	NA	7.7E-02	1.1E-01
			Cobalt	NA	NA	NA	NA	Thyroid	2.2E-01	NA	1.2E-02	2.3E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	2.8E-01	NA	1.6E-02	3.0E-01
			Manganese	NA	NA	NA	NA	CNS	1.1E-02	NA	6.2E-04	1.2E-02
			Vanadium	NA	NA	NA	NA	Hair Cystine	9.9E-02	NA	2.1E-01	3.1E-01
			Chemical Total	NA	NA	NA	NA		2.0E+00	NA	5.5E-01	2.6E+00
		Exposure Point Total					NA					2.6E+00
	Exposure Medium Total						NA					2.6E+00
Medium Total							NA					2.6E+00
Ash	Air	Emissions from Ash	Chromium	NA	NA	NA	NA	Respiratory	NA	1.1E-04	NA	1.1E-04
			Chemical Total	NA	NA	NA	NA		NA	1.1E-04	NA	1.1E-04
		Exposure Point Total					NA					1.1E-04
	Exposure Medium Total						NA					2.6E+00
Medium Total							NA					2.6E+00
Sediment	Sediment	Sediment	Benzo(a)pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Arsenic	NA	NA	NA	NA	Skin, Vascular	2.4E-02	NA	6.0E-03	3.0E-02
			Chromium	NA	NA	NA	NA	NOE	5.3E-03	NA	1.8E-02	2.3E-02
			Cobalt	NA	NA	NA	NA	Thyroid	6.1E-02	NA	5.1E-03	6.6E-02
			Chemical Total	NA	NA	NA	NA		9.0E-02	NA	2.9E-02	1.2E-01
		Exposure Point Total					NA					1.2E-01
	Exposure Medium Total						NA					1.2E-01
Medium Total							NA					1.2E-01

TABLE 9.2.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	3.6E-03	NA	2.4E-03	6.1E-03
			Heptachlor	NA	NA	NA	NA	Liver	1.8E-03	NA	8.2E-04	2.6E-03
			Arsenic	NA	NA	NA	NA	Skin, Vascular	1.8E+00	NA	1.0E-01	1.9E+00
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E+00	NA	4.3E-02	6.6E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E+00	NA	1.7E-02	1.3E+00
			Manganese	NA	NA	NA	NA	CNS	2.7E-01	NA	1.8E-03	2.7E-01
			Chemical Total	NA	NA	NA	NA		1.0E+01	NA	1.7E-01	1.0E+01
		Exposure Point Total					NA					1.0E+01
	Exposure Medium Total						NA					1.0E+01
Medium Total							NA					1.0E+01
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	NA	NA	NA	Nasal, Respiratory	NA	3.1E-02	NA	3.1E-02
			Chemical Total	NA	NA	NA	NA		NA	3.1E-02	NA	3.1E-02
		Exposure Point Total					NA					3.1E-02
	Exposure Medium Total						NA					1.0E+01
Medium Total							NA					1.0E+01
Receptor Total			Total Receptor Risks				NA		Receptor HI Total			1.4E+01
Receptor Total			Total Receptor Risks (Ash)				NA		Receptor HI Total (Ash)			1.3E+01
Receptor Total			Total Receptor Risks (Soil)				NA		Receptor HI Total (Soil)			1.1E+01

HI - Hazard Index
CNS - Central Nervous System

Total Vascular HI Across Media =	**4E+00**
Total Skin HI Across Media =	**4E+00**
Total Development HI Across Media =	1E-02
Total CNS HI Across Media =	3E-01

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	2.5E-05	NA	1.9E-05	4.4E-05	NA	NA	NA	NA	NA
			Benzo(a)pyrene	2.6E-04	NA	2.0E-04	4.7E-04	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	2.6E-05	NA	2.0E-05	4.7E-05	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	2.2E-06	NA	1.7E-06	3.9E-06	NA	NA	NA	NA	NA
			Chrysene	2.6E-07	NA	2.0E-07	4.6E-07	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	6.4E-05	NA	4.9E-05	1.1E-04	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	1.8E-05	NA	1.4E-05	3.1E-05	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Pyrene	NA	NA	NA	NA	Kidney	NA	NA	NA	NA
			4,4'-DDD	7.5E-07	NA	4.9E-07	1.2E-06	NA	NA	NA	NA	NA
			Dieldrin	3.6E-08	NA	1.6E-08	5.2E-08	Liver	NA	NA	NA	NA
			Heptachlor epoxide	7.6E-08	NA	3.5E-08	1.1E-07	Liver	NA	NA	NA	NA
			2,3,7,8-TCDD TEQ	1.4E-07	NA	2.0E-08	1.6E-07	Development	NA	NA	NA	NA
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	NA	NA	NA	NA
			Arsenic	6.6E-06	NA	9.1E-07	7.5E-06	Skin, Vascular	NA	NA	NA	NA
			Chromium	1.9E-05	NA	4.5E-05	6.4E-05	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Mercury	NA	NA	NA	NA	Immune	NA	NA	NA	NA
			Vanadium	NA	NA	NA	NA	Hair Cystine	NA	NA	NA	NA
			Chemical Total	4.3E-04	NA	3.5E-04	7.8E-04		NA	NA	NA	NA
		Exposure Point Total					7.8E-04					NA
	Exposure Medium Total						7.8E-04					NA
Medium Total							7.8E-04					NA

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	8.9E-07	NA	8.9E-07	Nasal, Respiratory	NA	NA	NA	NA
			Chromium	NA	6.5E-07	NA	6.5E-07	Respiratory	NA	NA	NA	NA
			Chemical Total	NA	1.5E-06	NA	1.5E-06		NA	NA	NA	NA
		Exposure Point Total					1.5E-06					NA
	Exposure Medium Total						7.8E-04					NA
Medium Total							7.8E-04					NA
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Arsenic	6.0E-05	NA	8.3E-06	6.9E-05	Skin, Vascular	NA	NA	NA	NA
			Chromium	2.7E-05	NA	6.3E-05	8.9E-05	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Vanadium	NA	NA	NA	NA	Hair Cystine	NA	NA	NA	NA
			Chemical Total	8.7E-05	NA	7.1E-05	1.6E-04		NA	NA	NA	NA
		Exposure Point Total					1.6E-04					NA
	Exposure Medium Total						1.6E-04					NA
Ash	Air	Emissions from Ash	Chromium	NA	9.7E-07	NA	9.7E-07	Respiratory	NA	NA	NA	NA
			Chemical Total	NA	9.7E-07	NA	9.7E-07		NA	NA	NA	NA
		Exposure Point Total					9.7E-07					NA
	Exposure Medium Total						9.7E-07					NA
Medium Total							1.6E-04					NA
Sediment	Sediment	Sediment	Benzo(a)pyrene	3.7E-07	NA	7.8E-07	1.2E-06	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	9.9E-08	NA	2.1E-07	3.1E-07	NA	NA	NA	NA	NA
			Arsenic	1.3E-06	NA	6.4E-07	2.0E-06	Skin, Vascular	NA	NA	NA	NA
			Chromium	9.7E-07	NA	6.3E-06	7.2E-06	NOE	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Chemical Total	2.8E-06	NA	7.9E-06	1.1E-05		NA	NA	NA	NA
		Exposure Point Total					1.1E-05					NA
	Exposure Medium Total						1.1E-05					NA
Medium Total							1.1E-05					NA

TABLE 9.3.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Naphthalene	NA	NA	NA	NA	Whole Body	NA	NA	NA	NA
			Heptachlor	9.4E-07	NA	2.6E-07	1.2E-06	Liver	NA	NA	NA	NA
			Arsenic	1.9E-04	NA	6.0E-06	2.0E-04	Skin, Vascular	NA	NA	NA	NA
			Cobalt	NA	NA	NA	NA	Thyroid	NA	NA	NA	NA
			Iron	NA	NA	NA	NA	Gastrointestinal	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	NA	NA	NA	NA
			Chemical Total	1.9E-04	NA	6.3E-06	2.0E-04		NA	NA	NA	NA
		Exposure Point Total					2.0E-04					NA
	Exposure Medium Total						2.0E-04					NA
Medium Total							2.0E-04					NA
Groundwater	Air	Shallow Groundwater-Water Vapors at Showerhead	Naphthalene	NA	4.3E-07	NA	4.3E-07	Nasal, Respiratory	NA	NA	NA	NA
			Chemical Total	NA	4.3E-07	NA	4.3E-07		NA	NA	NA	NA
		Exposure Point Total					4.3E-07					NA
	Exposure Medium Total						2.0E-04					NA
Medium Total							2.0E-04					NA
Receptor Total			Total Receptor Risks				1.1E-03	Receptor HI Total				NA

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	6.2E-07	NA	1.1E-07	7.3E-07	NA	NA	NA	NA	NA
			Benzo(a)pyrene	6.6E-06	NA	1.1E-06	7.7E-06	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	6.6E-07	NA	1.1E-07	7.7E-07	NA	NA	NA	NA	NA
			Benzo(k)fluoranthene	5.5E-08	NA	9.5E-09	6.5E-08	NA	NA	NA	NA	NA
			Chrysene	6.6E-09	NA	1.1E-09	7.7E-09	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.6E-06	NA	2.7E-07	1.9E-06	NA	NA	NA	NA	NA
			Dibenzofuran	NA	NA	NA	NA	Whole Body	3.0E-04	NA	4.0E-05	3.4E-04
			Fluoranthene	NA	NA	NA	NA	Kidney, Liver, Blood	3.4E-04	NA	5.8E-05	4.0E-04
			Indeno(1,2,3-cd)pyrene	4.4E-07	NA	7.6E-08	5.2E-07	NA	NA	NA	NA	NA
			Naphthalene	NA	NA	NA	NA	Whole Body	6.5E-06	NA	1.1E-06	7.7E-06
			Pyrene	NA	NA	NA	NA	Kidney	3.6E-04	NA	6.2E-05	4.3E-04
			4,4'-DDD	9.7E-08	NA	1.8E-08	1.1E-07	NA	NA	NA	NA	NA
			Dieldrin	4.6E-09	NA	6.1E-10	5.3E-09	Liver	4.5E-05	NA	6.0E-06	5.1E-05
			Heptachlor epoxide	9.8E-09	NA	1.3E-09	1.1E-08	Liver	6.5E-04	NA	8.5E-05	7.3E-04
			2,3,7,8-TCDD TEQ	1.8E-08	NA	7.3E-10	1.9E-08	Development	1.1E-03	NA	4.4E-05	1.1E-03
			Nitroglycerin	NA	NA	NA	NA	Blood Pressure	8.1E-03	NA	1.1E-03	9.2E-03
			Arsenic	8.6E-07	NA	3.4E-08	8.9E-07	Skin, Vascular	1.5E-02	NA	5.9E-04	1.5E-02
			Chromium	4.7E-07	NA	2.5E-07	7.3E-07	NOE	2.5E-03	NA	1.3E-03	3.8E-03
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-02	NA	1.7E-04	1.3E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E-02	NA	1.7E-04	1.3E-02
			Lead	NA	NA	NA	NA	NA	NA	NA	NA	NA
			Manganese	NA	NA	NA	NA	CNS	5.9E-04	NA	7.7E-06	5.9E-04
			Mercury	NA	NA	NA	NA	Immune	2.9E-03	NA	5.6E-04	3.5E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	3.4E-03	NA	1.7E-03	5.2E-03
			Chemical Total	1.1E-05	NA	2.0E-06	1.3E-05		6.1E-02	NA	5.9E-03	6.7E-02
		Exposure Point Total					1.3E-05					6.7E-02
	Exposure Medium Total						1.3E-05					6.7E-02
Medium Total							1.3E-05					6.7E-02

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Air	Emissions from Soil*	Naphthalene	NA	4.2E-08	NA	4.2E-08	Nasal, Respiratory	NA	3.2E-03	NA	3.2E-03
			Chromium	NA	1.3E-08	NA	1.3E-08	Respiratory	NA	1.2E-05	NA	1.2E-05
			Chemical Total	NA	5.5E-08	NA	5.5E-08		NA	3.2E-03	NA	3.2E-03
		Exposure Point Total					5.5E-08					3.2E-03
	Exposure Medium Total						1.4E-05					7.0E-02
Medium Total							1.4E-05					7.0E-02
Ash	Ash	Ash	Aluminum	NA	NA	NA	NA	CNS	4.2E-03	NA	5.6E-05	4.3E-03
			Arsenic	7.8E-06	NA	3.1E-07	8.1E-06	Skin, Vascular	1.4E-01	NA	5.4E-03	1.4E-01
			Chromium	6.6E-07	NA	3.5E-07	1.0E-06	NOE	3.4E-03	NA	1.8E-03	5.3E-03
			Cobalt	NA	NA	NA	NA	Thyroid	2.2E-02	NA	2.9E-04	2.2E-02
			Iron	NA	NA	NA	NA	Gastrointestinal	2.8E-02	NA	3.7E-04	2.9E-02
			Manganese	NA	NA	NA	NA	CNS	1.1E-03	NA	1.5E-05	1.1E-03
			Vanadium	NA	NA	NA	NA	Hair Cystine	9.9E-03	NA	5.0E-03	1.5E-02
			Chemical Total	8.5E-06	NA	6.6E-07	9.1E-06		2.0E-01	NA	1.3E-02	2.2E-01
		Exposure Point Total					9.1E-06					2.2E-01
	Exposure Medium Total						9.1E-06					2.2E-01
Medium Total							9.1E-06					2.2E-01
Ash	Air	Emissions from Ash	Chromium	NA	1.2E-09	NA	1.2E-09	Respiratory	NA	1.0E-05	NA	1.0E-05
			Chemical Total	NA	1.2E-09	NA	1.2E-09		NA	1.0E-05	NA	1.0E-05
		Exposure Point Total					1.2E-09					1.0E-05
	Exposure Medium Total						9.1E-06					2.2E-01
Medium Total							9.1E-06					2.2E-01

TABLE 9.4.CTE
SUMMARY OF RECEPTOR RISKS AND HAZARDS FOR COPCs
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	8.0E-09	NA	2.1E-08	2.9E-08	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	2.1E-09	NA	5.5E-09	7.7E-09	NA	NA	NA	NA	NA
			Arsenic	2.9E-08	NA	1.7E-08	4.6E-08	Skin, Vascular	4.9E-04	NA	2.9E-04	7.9E-04
			Chromium	2.1E-08	NA	1.7E-07	1.9E-07	NOE	1.1E-04	NA	8.6E-04	9.7E-04
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-03	NA	2.5E-04	1.5E-03
			Chemical Total	6.0E-08	NA	2.1E-07	2.7E-07		1.9E-03	NA	1.4E-03	3.3E-03
		Exposure Point Total					2.7E-07					3.3E-03
	Exposure Medium Total						2.7E-07					3.3E-03
Medium Total							2.7E-07					3.3E-03
Receptor Total			Total Receptor Risks				2.3E-05	Receptor HI Total				2.9E-01
Receptor Total			Total Receptor Risks (Ash)				9.4E-06	Receptor HI Total (Ash)				2.2E-01
Receptor Total			Total Receptor Risks (Soil)				1.4E-05	Receptor HI Total (Soil)				7.3E-02

HI - Hazard Index
CNS - Central Nervous System

Total Vascular HI Across Media =	2E-01
Total Skin HI Across Media =	2E-01
Total Development HI Across Media =	1E-03
Total CNS HI Across Media =	6E-03

TABLE 10.1.RME
RISK SUMMARY TABLE
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Ash	Ash	Ash	Arsenic	NA	NA	NA	NA	Skin, Vascular	4.3E-01	NA	5.2E-02	4.8E-01
			Chemical Total	NA	NA	NA	NA		6.5E-01	NA	1.3E-01	7.8E-01
		Exposure Point Total					NA					7.8E-01
	Exposure Medium Total						NA					7.8E-01
Medium Total							NA					7.8E-01
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Arsenic	NA	NA	NA	NA	Skin, Vascular	1.2E+00	NA	5.2E-02	1.2E+00
			Cobalt	NA	NA	NA	NA	Thyroid	4.2E+00	NA	2.2E-02	4.2E+00
			Chemical Total	NA	NA	NA	NA		6.4E+00	NA	8.6E-02	6.5E+00
		Exposure Point Total					NA					6.5E+00
	Exposure Medium Total						NA					6.5E+00
Medium Total							NA					6.5E+00
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				7.6E+00
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				7.3E+00
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				6.8E+00

Total Vascular HI Across Media = **2E+00**
Total Skin HI Across Media = **2E+00**

CNS - Central Nervous System

TABLE 10.2.RME
RISK SUMMARY TABLE
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Arsenic	NA	NA	NA	NA	Skin, Vascular	4.4E-01	NA	3.7E-02	4.8E-01
			Cobalt	NA	NA	NA	NA	Thyroid	3.8E-01	NA	1.1E-02	3.9E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	3.9E-01	NA	1.1E-02	4.1E-01
			Chemical Total	NA	NA	NA	NA		1.8E+00	NA	3.7E-01	2.2E+00
		Exposure Point Total					NA					2.2E+00
	Exposure Medium Total						NA					2.2E+00
Medium Total							NA					2.2E+00
Ash	Ash	Ash	Arsenic	NA	NA	NA	NA	Skin, Vascular	4.0E+00	NA	3.4E-01	4.4E+00
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E-01	NA	1.8E-02	6.8E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	8.5E-01	NA	2.4E-02	8.7E-01
			Chemical Total	NA	NA	NA	NA		6.1E+00	NA	8.2E-01	6.9E+00
		Exposure Point Total					NA					6.9E+00
	Exposure Medium Total						NA					6.9E+00
Medium Total							NA					6.9E+00
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Arsenic	NA	NA	NA	NA	Skin, Vascular	2.7E+00	NA	1.5E-01	2.9E+00
			Cobalt	NA	NA	NA	NA	Thyroid	9.8E+00	NA	6.5E-02	9.9E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	1.9E+00	NA	2.6E-02	2.0E+00
			Chemical Total	NA	NA	NA	NA		1.5E+01	NA	2.5E-01	1.5E+01
		Exposure Point Total					NA					1.5E+01
	Exposure Medium Total						NA					1.5E+01
Medium Total							NA					1.5E+01
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				2.4E+01
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				2.2E+01
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				1.8E+01

Total Vascular HI Across Media =	**8E+00**
Total Skin HI Across Media =	**8E+00**

CNS - Central Nervous System

TABLE 10.3.RME
RISK SUMMARY TABLE
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	7.6E-05	NA	2.9E-05	1.0E-04
			Benzo(a)pyrene	8.0E-04	NA	3.1E-04	1.1E-03
			Benzo(b)fluoranthene	8.0E-05	NA	3.1E-05	1.1E-04
			Benzo(k)fluoranthene	6.7E-06	NA	2.6E-06	9.3E-06
			Chrysene	8.0E-07	NA	3.1E-07	1.1E-06
			Dibenz(a,h)anthracene	1.9E-04	NA	7.5E-05	2.7E-04
			Indeno(1,2,3-cd)pyrene	5.4E-05	NA	2.1E-05	7.4E-05
			4,4'-DDD	2.7E-06	NA	1.2E-06	4.0E-06
			Arsenic	2.4E-05	NA	2.3E-06	2.7E-05
			Chromium	5.8E-05	NA	6.8E-05	1.3E-04
			Chemical Total	1.3E-03	NA	5.4E-04	1.8E-03
		Exposure Point Total					1.8E-03
	Exposure Medium Total						1.8E-03
Medium Total							1.8E-03
Soil*	Air	Emissions from Soil*	Naphthalene	NA	1.3E-06	NA	1.3E-06
			Chromium	NA	1.0E-06	NA	1.0E-06
			Chemical Total	NA	2.4E-06	NA	2.4E-06
		Exposure Point Total					2.4E-06
	Exposure Medium Total						1.8E-03
Medium Total							1.8E-03

TABLE 10.3.RME
RISK SUMMARY TABLE
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Ash	Ash	Ash	Arsenic	2.2E-04	NA	2.1E-05	2.4E-04
			Chromium	8.1E-05	NA	9.5E-05	1.8E-04
			Chemical Total	3.0E-04	NA	1.2E-04	4.2E-04
		Exposure Point Total					4.2E-04
	Exposure Medium Total						4.2E-04
Ash	Air	Emissions from Ash	Chromium	NA	1.5E-06	NA	1.5E-06
			Chemical Total	NA	1.5E-06	NA	1.5E-06
		Exposure Point Total					1.5E-06
	Exposure Medium Total						1.5E-06
Medium Total							4.2E-04
Sediment	Sediment	Sediment	Benzo(a)pyrene	3.7E-07	NA	7.8E-07	1.2E-06
			Arsenic	1.3E-06	NA	6.4E-07	2.0E-06
			Chromium	9.7E-07	NA	6.3E-06	7.2E-06
			Chemical Total	2.8E-06	NA	7.9E-06	1.1E-05
		Exposure Point Total					1.1E-05
	Exposure Medium Total						1.1E-05
Medium Total							1.1E-05
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Heptachlor	1.4E-06	NA	6.6E-07	2.1E-06
			Arsenic	2.9E-04	NA	1.4E-05	3.0E-04
			Chemical Total	2.9E-04	NA	1.5E-05	3.0E-04
		Exposure Point Total					3.0E-04
	Exposure Medium Total						3.0E-04
Medium Total							3.0E-04
Receptor Total			Total Receptor Risks				2.6E-03

TABLE 10.4.RME
RISK SUMMARY TABLE
REASONABLE MAXIMUM EXPOSURE
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Industrial Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	3.9E-06	NA	3.4E-06	7.3E-06	NA	NA	NA	NA	NA
			Benzo(a)pyrene	4.2E-05	NA	3.6E-05	7.8E-05	NA	NA	NA	NA	NA
			Benzo(b)fluoranthene	4.2E-06	NA	3.6E-06	7.8E-06	NA	NA	NA	NA	NA
			Dibenz(a,h)anthracene	1.0E-05	NA	8.7E-06	1.9E-05	NA	NA	NA	NA	NA
			Indeno(1,2,3-cd)pyrene	2.8E-06	NA	2.4E-06	5.2E-06	NA	NA	NA	NA	NA
			4,4'-DDD	6.1E-07	NA	5.7E-07	1.2E-06	NA	NA	NA	NA	NA
			Arsenic	5.4E-06	NA	1.1E-06	6.5E-06	Skin, Vascular	3.4E-02	NA	6.7E-03	4.0E-02
			Chromium	3.0E-06	NA	8.0E-06	1.1E-05	NOE	5.6E-03	NA	1.5E-02	2.0E-02
			Chemical Total	7.3E-05	NA	6.4E-05	1.4E-04		1.4E-01	NA	6.7E-02	2.1E-01
		Exposure Point Total					1.4E-04					2.1E-01
	Exposure Medium Total						1.4E-04					2.1E-01
Medium Total							1.4E-04					2.1E-01
Ash	Ash	Ash	Arsenic	5.0E-05	NA	9.8E-06	5.9E-05	Skin, Vascular	3.1E-01	NA	6.1E-02	3.7E-01
			Chromium	4.2E-06	NA	1.1E-05	1.5E-05	NOE	7.9E-03	NA	2.1E-02	2.9E-02
			Chemical Total	5.4E-05	NA	2.1E-05	7.5E-05		4.7E-01	NA	1.5E-01	6.1E-01
		Exposure Point Total					7.5E-05					6.1E-01
	Exposure Medium Total						7.5E-05					6.1E-01
Medium Total							7.5E-05					6.1E-01
Receptor Total			Total Receptor Risks				2.1E-04	Receptor HI Total				8.3E-01
Receptor Total			Total Receptor Risks (Ash)				7.5E-05	Receptor HI Total (Ash)				6.2E-01
Receptor Total			Total Receptor Risks (Soil)				1.4E-04	Receptor HI Total (Soil)				2.2E-01

TABLE 10.1.CTE
RISK SUMMARY TABLE
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Cobalt	NA	NA	NA	NA	Thyroid	2.0E+00	NA	1.5E-02	2.0E+00
			Chemical Total	NA	NA	NA	NA		3.0E+00	NA	5.8E-02	3.0E+00
		Exposure Point Total					NA					3.0E+00
	Exposure Medium Total						NA					3.0E+00
Medium Total							NA					3.1E+00
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				3.5E+00
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				3.4E+00
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				3.2E+00

Total Thyroid HI Across Media = **2E+00**

TABLE 10.2.CTE
RISK SUMMARY TABLE
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk				Non-Carcinogenic Hazard Quotient				
				Ingestion	Inhalation	Dermal	Exposure Routes Total	Primary Target Organ(s)	Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Arsenic	NA	NA	NA	NA	Skin, Vascular	1.5E-01	NA	2.5E-02	1.7E-01
			Cobalt	NA	NA	NA	NA	Thyroid	1.3E-01	NA	7.0E-03	1.3E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E-01	NA	7.4E-03	1.4E-01
			Chemical Total	NA	NA	NA	NA		6.1E-01	NA	2.5E-01	8.6E-01
		Exposure Point Total					NA					8.6E-01
	Exposure Medium Total						NA					8.6E-01
Medium Total							NA					8.8E-01
Ash	Ash	Ash	Arsenic	NA	NA	NA	NA	Skin, Vascular	1.3E+00	NA	2.3E-01	1.6E+00
			Cobalt	NA	NA	NA	NA	Thyroid	2.2E-01	NA	1.2E-02	2.3E-01
			Iron	NA	NA	NA	NA	Gastrointestinal	2.8E-01	NA	1.6E-02	3.0E-01
			Chemical Total	NA	NA	NA	NA		2.0E+00	NA	5.5E-01	2.6E+00
		Exposure Point Total					NA					2.6E+00
	Exposure Medium Total						NA					2.6E+00
Medium Total							NA					2.6E+00
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Arsenic	NA	NA	NA	NA	Skin, Vascular	1.8E+00	NA	1.0E-01	1.9E+00
			Cobalt	NA	NA	NA	NA	Thyroid	6.6E+00	NA	4.3E-02	6.6E+00
			Iron	NA	NA	NA	NA	Gastrointestinal	1.3E+00	NA	1.7E-02	1.3E+00
			Chemical Total	NA	NA	NA	NA		1.0E+01	NA	1.7E-01	1.0E+01
		Exposure Point Total					NA					1.0E+01
	Exposure Medium Total						NA					1.0E+01
Medium Total							NA					1.0E+01
Receptor Total			Total Receptor Risks				NA	Receptor HI Total				1.4E+01
Receptor Total			Total Receptor Risks (Ash)				NA	Receptor HI Total (Ash)				1.3E+01
Receptor Total			Total Receptor Risks (Soil)				NA	Receptor HI Total (Soil)				1.1E+01

HI - Hazard Index
CNS - Central Nervous System

Total Vascular HI Across Media =	**4E+00**
Total Skin HI Across Media =	**4E+00**

TABLE 10.3.CTE

RISK SUMMARY TABLE

CENTRAL TENDENCY EXPOSURE

Site 66 Remedial Investigation

NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil*	Soil*	Soil*	Benzo(a)anthracene	2.5E-05	NA	1.9E-05	4.4E-05
			Benzo(a)pyrene	2.6E-04	NA	2.0E-04	4.7E-04
			Benzo(b)fluoranthene	2.6E-05	NA	2.0E-05	4.7E-05
			Benzo(k)fluoranthene	2.2E-06	NA	1.7E-06	3.9E-06
			Dibenz(a,h)anthracene	6.4E-05	NA	4.9E-05	1.1E-04
			Indeno(1,2,3-cd)pyrene	1.8E-05	NA	1.4E-05	3.1E-05
			4,4'-DDD	7.5E-07	NA	4.9E-07	1.2E-06
			Arsenic	6.6E-06	NA	9.1E-07	7.5E-06
			Chromium	1.9E-05	NA	4.5E-05	6.4E-05
			Chemical Total	4.3E-04	NA	3.5E-04	7.8E-04
		Exposure Point Total					7.8E-04
	Exposure Medium Total						7.8E-04
Medium Total							7.8E-04
Ash	Ash	Ash	Arsenic	6.0E-05	NA	8.3E-06	6.9E-05
			Chromium	2.7E-05	NA	6.3E-05	8.9E-05
			Chemical Total	8.7E-05	NA	7.1E-05	1.6E-04
		Exposure Point Total					1.6E-04
	Exposure Medium Total						1.6E-04
Medium Total							1.6E-04

TABLE 10.3.CTE
RISK SUMMARY TABLE
CENTRAL TENDENCY EXPOSURE
Site 66 Remedial Investigation
NSWC Indian Head, Maryland

Scenario Timeframe: Future
Receptor Population: Resident
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical of Potential Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment	Sediment	Sediment	Benzo(a)pyrene	3.7E-07	NA	7.8E-07	1.2E-06
			Arsenic	1.3E-06	NA	6.4E-07	2.0E-06
			Chromium	9.7E-07	NA	6.3E-06	7.2E-06
			Chemical Total	2.8E-06	NA	7.9E-06	1.1E-05
		Exposure Point Total					1.1E-05
	Exposure Medium Total						1.1E-05
Medium Total							1.1E-05
Groundwater	Groundwater	Shallow Groundwater- Tap Water	Heptachlor	9.4E-07	NA	2.6E-07	1.2E-06
			Arsenic	1.9E-04	NA	6.0E-06	2.0E-04
			Chemical Total	1.9E-04	NA	6.3E-06	2.0E-04
		Exposure Point Total					2.0E-04
	Exposure Medium Total						2.0E-04
Medium Total							2.0E-04
Receptor Total				Total Receptor Risks			1.1E-03

Table 11.3
ALM Calculations of Blood Lead Concentrations (PbBs) for an Industrial Worker
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Calculations of Blood Lead Concentrations (PbBs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee
Version date 6/21/09

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 1999-2004	GSDi and PbBo from Analysis of NHANES III (Phases 1&2)
PbS	Soil lead concentration	ug/g or ppm	63.05	63.05
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4
GSD_i	Geometric standard deviation PbB	--	1.8	2.1
PbB_0	Baseline PbB	ug/dL	1.0	1.5
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100	0.100
IR_{S+D}	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--
W_S	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--
K_{SD}	Mass fraction of soil in dust	--	--	--
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	250	250
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**1.2**	**1.7**
$PbB_{fetal, 0.95}$	95th percentile PbB among fetuses of adult workers	ug/dL	2.9	5.2
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	**%**	**0.01%**	**0.58%**

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

Table 11.4
ALM Calculations of Blood Lead Concentrations (PbBs) for a Construction Worker
Site 66 Remedial Investigation Report
NSF-IH, Indian Head, Maryland

Calculations of Blood Lead Concentrations (PbBs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee
Version date 6/21/09

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 1999-2004	GSDi and PbBo from Analysis of NHANES III (Phases 1&2)
PbS	Soil lead concentration	ug/g or ppm	63.05	63.05
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4	0.4
GSD_i	Geometric standard deviation PbB	--	1.8	2.1
PbB_0	Baseline PbB	ug/dL	1.0	1.5
IR_S	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.480	0.480
IR_{S+D}	Total ingestion rate of outdoor soil and indoor dust	g/day	--	--
W_S	Weighting factor; fraction of IR_{S+D} ingested as outdoor soil	--	--	--
K_{SD}	Mass fraction of soil in dust	--	--	--
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	125	125
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365	365
PbB_{adult}	**PbB of adult worker, geometric mean**	**ug/dL**	**1.5**	**2.0**
$PbB_{fetal, 0.95}$	95th percentile PbB among fetuses of adult workers	ug/dL	3.5	6.1
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	**10.0**	**10.0**
$P(PbB_{fetal} > PbB_t)$	**Probability that fetal PbB > PbB_t, assuming lognormal distribution**	**%**	**0.03%**	**1.0%**

Source: U.S. EPA (1996). Recommendations of the Technical Review Workgroup for Lead for an Interim Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil

LEAD MODEL FOR WINDOWS Version 1.1

==========

Model Version: 1.1 Build11
User Name:
Date: February 23, 2011
Site Name: Site 66
Operable Unit:
Run Mode: Research

==========

****** Air ******

Indoor Air Pb Concentration: 30.000 percent of outdoor.
Other Air Parameters:

Age	Time Outdoors (hours)	Ventilation Rate (m^3/day)	Lung Absorption (%)	Outdoor Air Pb Conc (µg Pb/m^3)
.5-1	1.000	2.000	32.000	0.100
1-2	2.000	3.000	32.000	0.100
2-3	3.000	5.000	32.000	0.100
3-4	4.000	5.000	32.000	0.100
4-5	4.000	5.000	32.000	0.100
5-6	4.000	7.000	32.000	0.100
6-7	4.000	7.000	32.000	0.100

****** Diet ******

Age	Diet Intake(µg/day)
.5-1	2.260
1-2	1.960
2-3	2.130
3-4	2.040
4-5	1.950
5-6	2.050
6-7	2.220

****** Drinking Water ******

Water Consumption:

Age	Water (L/day)
.5-1	0.200
1-2	0.500
2-3	0.520
3-4	0.530
4-5	0.550
5-6	0.580
6-7	0.590

Drinking Water Concentration: 4.000 µg Pb/L

****** Soil & Dust ******

Multiple Source Analysis Used
Average multiple source concentration: 54.135 µg/g

Mass fraction of outdoor soil to indoor dust conversion factor: 0.700
Outdoor airborne lead to indoor household dust lead concentration: 100.000
Use alternate indoor dust Pb sources? No

Age	Soil (µg Pb/g)	House Dust (µg Pb/g)
.5-1	63.050	54.135
1-2	63.050	54.135
2-3	63.050	54.135
3-4	63.050	54.135
4-5	63.050	54.135
5-6	63.050	54.135
6-7	63.050	54.135

****** Alternate Intake ******

Age	Alternate (µg Pb/day)
.5-1	0.000
1-2	0.000
2-3	0.000
3-4	0.000
4-5	0.000
5-6	0.000
6-7	0.000

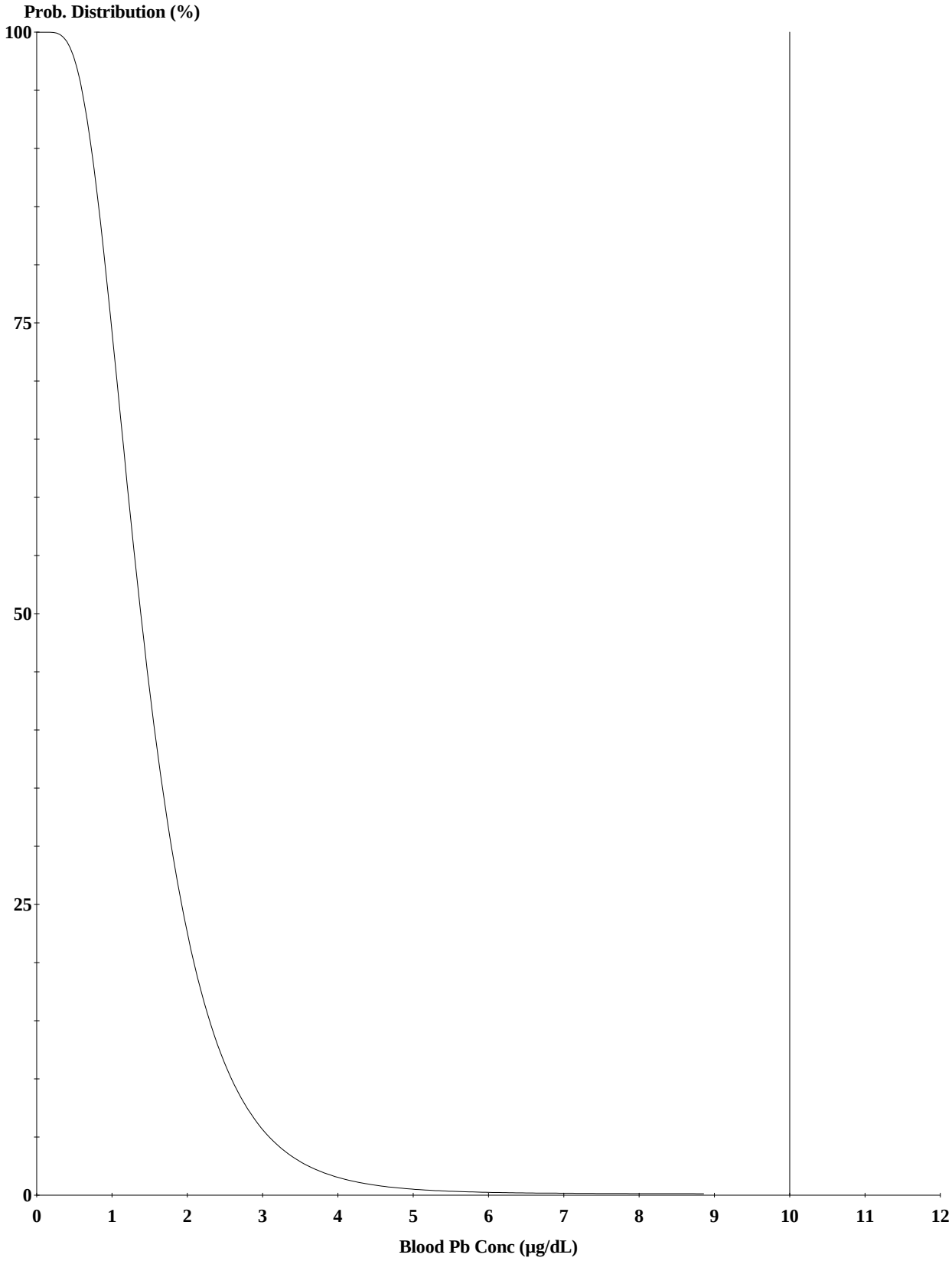
****** Maternal Contribution: Infant Model ******

Maternal Blood Concentration: 1.000 µg Pb/dL

****
CALCULATED BLOOD LEAD AND LEAD UPTAKES:
****

Year	Air (µg/day)	Diet (µg/day)	Alternate (µg/day)	Water (µg/day)
.5-1	0.021	1.093	0.000	0.387
1-2	0.034	0.945	0.000	0.964
2-3	0.062	1.032	0.000	1.007
3-4	0.067	0.993	0.000	1.031
4-5	0.067	0.955	0.000	1.078
5-6	0.093	1.007	0.000	1.140
6-7	0.093	1.092	0.000	1.161

Year	Soil+Dust (µg/day)	Total (µg/day)	Blood (µg/dL)
.5-1	1.435	2.936	1.6
1-2	2.271	4.214	1.8
2-3	2.281	4.382	1.6
3-4	2.292	4.382	1.5
4-5	1.709	3.809	1.3
5-6	1.542	3.782	1.2
6-7	1.459	3.805	1.1



Cutoff = 10.000 µg/dl
Geo Mean = 1.449
GSD = 1.600
% Above = 0.002

Age Range = 0 to 84 months

Run Mode = Research
Comment = Site 66 - Soil*

Appendix H
Ecological Risk Assessment Tables

Table H-1
Summary Statistics - Site 66 Surface Water (Used in Food Web Modeling)
Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Inorganics (UG/L)						
Aluminum	3 / 4	122	525	IS66SW03	279	194
Antimony	0 / 4	1.50	--	--	0.75	0.0
Arsenic	1 / 4	2.70	3.90	IS66SW03	1.99	1.28
Barium	4 / 4	--	54.9	IS66SW02	42.7	10.3
Beryllium	0 / 4	0.20	--	--	0.10	0.0
Cadmium	0 / 4	0.20	--	--	0.10	0.0
Calcium	4 / 4	--	16,300	IS66SW03	12,650	4,343
Chromium	0 / 4	1.00	--	--	0.36	0.096
Cobalt	4 / 4	--	9.00	IS66SW02	6.05	2.27
Copper	0 / 4	4.40	--	--	1.53	0.49
Cyanide	0 / 4	1.20	--	--	0.60	0.0
Iron	4 / 4	--	7,960	IS66SW02	5,233	2,417
Lead	4 / 4	--	2.60	IS66SW02	2.03	0.48
Magnesium	4 / 4	--	7,250	IS66SW03	4,325	2,024
Manganese	4 / 4	--	1,230	IS66SW02	721	368
Mercury	0 / 4	0.10	--	--	0.050	0.0
Nickel	1 / 4	3.60	5.10	IS66SW05	2.59	1.68
Potassium	4 / 4	--	2,160	IS66SW05	1,675	431
Selenium	0 / 4	2.90	--	--	1.45	0.0
Silver	0 / 4	0.50	--	--	0.25	0.0
Sodium	4 / 4	--	44,200	IS66SW04	34,900	12,230
Thallium	0 / 4	4.90	--	--	2.45	0.0
Vanadium	4 / 4	--	4.60	IS66SW05	3.10	1.00
Zinc	1 / 4	11.3	65.0	IS66SW05	19.3	30.5
Dissolved Metals (UG/L)						
Aluminum	0 / 4	22.1	--	--	7.15	2.60
Antimony	0 / 4	1.50	--	--	0.75	0.0
Arsenic	0 / 4	2.70	--	--	1.35	0.0
Barium	4 / 4	--	49.9	IS66SW02	36.9	11.5
Beryllium	0 / 4	0.20	--	--	0.10	0.0
Cadmium	0 / 4	0.20	--	--	0.10	0.0
Calcium	4 / 4	--	17,100	IS66SW03	12,148	4,286
Chromium	0 / 4	0.40	--	--	0.20	0.0
Cobalt	2 / 4	4.40	9.70	IS66SW02	4.63	3.79
Copper	0 / 4	1.60	--	--	0.58	0.19
Iron	4 / 4	--	3,400	IS66SW02	1,676	1,473
Lead	0 / 4	1.50	--	--	0.68	0.050
Magnesium	4 / 4	--	7,520	IS66SW03	4,375	2,158
Manganese	4 / 4	--	1,280	IS66SW02	716	398
Mercury	0 / 4	0.14	--	--	0.059	0.0085
Nickel	0 / 4	2.90	--	--	1.19	0.29
Potassium	4 / 4	--	2,280	IS66SW05	1,805	451
Selenium	0 / 4	2.90	--	--	1.45	0.0
Silver	0 / 4	0.50	--	--	0.25	0.0
Sodium	4 / 4	--	45,200	IS66SW04	35,775	12,220
Thallium	0 / 4	4.90	--	--	2.45	0.0

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-1
Summary Statistics - Site 66 Surface Water (Used in Food Web Modeling)
Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Vanadium	0 / 4	1.10	--	--	0.35	0.17
Zinc	0 / 4	5.90	--	--	2.54	0.32
Pesticide/Polychlorinated Biphenyls (UG/L)						
4,4'-DDD	0 / 4	0.10	--	--	0.050	0.0
4,4'-DDE	0 / 4	0.10	--	--	0.050	0.0
4,4'-DDT	0 / 4	0.10	--	--	0.050	0.0
Aldrin	0 / 4	0.050	--	--	0.025	0.0
alpha-BHC	0 / 4	0.050	--	--	0.025	0.0
alpha-Chlordane	0 / 4	0.050	--	--	0.025	0.0
Aroclor-1016	0 / 4	1.00	--	--	0.50	0.0
Aroclor-1221	0 / 4	2.00	--	--	1.00	0.0
Aroclor-1232	0 / 4	1.00	--	--	0.50	0.0
Aroclor-1242	0 / 4	1.00	--	--	0.50	0.0
Aroclor-1248	0 / 4	1.00	--	--	0.50	0.0
Aroclor-1254	0 / 4	1.00	--	--	0.50	0.0
Aroclor-1260	0 / 4	1.00	--	--	0.50	0.0
beta-BHC	0 / 4	0.050	--	--	0.025	0.0
delta-BHC	0 / 4	0.050	--	--	0.025	0.0
Dieldrin	0 / 4	0.10	--	--	0.050	0.0
Endosulfan I	0 / 4	0.050	--	--	0.025	0.0
Endosulfan II	0 / 4	0.10	--	--	0.050	0.0
Endosulfan sulfate	0 / 4	0.10	--	--	0.050	0.0
Endrin	0 / 4	0.10	--	--	0.050	0.0
Endrin aldehyde	0 / 4	0.10	--	--	0.050	0.0
Endrin ketone	0 / 4	0.10	--	--	0.050	0.0
gamma-BHC (Lindane)	0 / 4	0.050	--	--	0.025	0.0
gamma-Chlordane	0 / 4	0.050	--	--	0.025	0.0
Heptachlor	0 / 4	0.050	--	--	0.025	0.0
Heptachlor epoxide	0 / 4	0.050	--	--	0.025	0.0
Methoxychlor	0 / 4	0.50	--	--	0.25	0.0
Toxaphene	0 / 4	5.00	--	--	2.50	0.0
Semivolatile Organic Compounds (UG/L)						
1,1-Biphenyl	0 / 4	10.0	--	--	5.00	0.0
2,2'-Oxybis(1-chloropropane)	0 / 4	10.0	--	--	5.00	0.0
2,4,5-Trichlorophenol	0 / 4	25.0	--	--	12.5	0.0
2,4,6-Trichlorophenol	0 / 4	10.0	--	--	5.00	0.0
2,4-Dichlorophenol	0 / 4	10.0	--	--	5.00	0.0
2,4-Dimethylphenol	0 / 4	10.0	--	--	5.00	0.0
2,4-Dinitrophenol	0 / 4	25.0	--	--	12.5	0.0
2,4-Dinitrotoluene	0 / 4	5.00	--	--	2.50	0.0
2,6-Dinitrotoluene	0 / 4	5.00	--	--	2.50	0.0
2-Chloronaphthalene	0 / 4	10.0	--	--	5.00	0.0
2-Chlorophenol	0 / 4	10.0	--	--	5.00	0.0
2-Methylnaphthalene	0 / 4	10.0	--	--	5.00	0.0
2-Methylphenol	0 / 4	10.0	--	--	5.00	0.0
2-Nitroaniline	0 / 4	25.0	--	--	12.5	0.0
2-Nitrophenol	0 / 4	10.0	--	--	5.00	0.0

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-1
Summary Statistics - Site 66 Surface Water (Used in Food Web Modeling)
Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
3,3'-Dichlorobenzidine	0 / 4	10.0	--	--	5.00	0.0
3-Nitroaniline	0 / 4	25.0	--	--	12.5	0.0
4,6-Dinitro-2-methylphenol	0 / 4	25.0	--	--	12.5	0.0
4-Bromophenyl-phenylether	0 / 4	10.0	--	--	5.00	0.0
4-Chloro-3-methylphenol	0 / 4	10.0	--	--	5.00	0.0
4-Chloroaniline	0 / 4	10.0	--	--	5.00	0.0
4-Chlorophenyl-phenylether	0 / 4	10.0	--	--	5.00	0.0
4-Methylphenol	0 / 4	10.0	--	--	5.00	0.0
4-Nitroaniline	0 / 4	25.0	--	--	12.5	0.0
4-Nitrophenol	0 / 4	25.0	--	--	12.5	0.0
Acenaphthene	0 / 4	10.0	--	--	5.00	0.0
Acenaphthylene	0 / 4	10.0	--	--	5.00	0.0
Acetophenone	0 / 4	10.0	--	--	5.00	0.0
Anthracene	0 / 4	10.0	--	--	5.00	0.0
Atrazine	0 / 4	10.0	--	--	5.00	0.0
Benzaldehyde	0 / 4	10.0	--	--	5.00	0.0
Benzo(a)anthracene	0 / 4	10.0	--	--	5.00	0.0
Benzo(a)pyrene	0 / 4	10.0	--	--	5.00	0.0
Benzo(b)fluoranthene	0 / 4	10.0	--	--	5.00	0.0
Benzo(g,h,i)perylene	0 / 4	10.0	--	--	5.00	0.0
Benzo(k)fluoranthene	0 / 4	10.0	--	--	5.00	0.0
bis(2-Chloroethoxy)methane	0 / 4	10.0	--	--	5.00	0.0
bis(2-Chloroethyl)ether	0 / 4	10.0	--	--	5.00	0.0
bis(2-Ethylhexyl)phthalate	0 / 4	10.0	--	--	5.00	0.0
Butylbenzylphthalate	0 / 4	10.0	--	--	5.00	0.0
Caprolactam	0 / 4	10.0	--	--	5.00	0.0
Carbazole	0 / 4	10.0	--	--	5.00	0.0
Chrysene	0 / 4	10.0	--	--	5.00	0.0
Dibenz(a,h)anthracene	0 / 4	10.0	--	--	5.00	0.0
Dibenzofuran	0 / 4	10.0	--	--	5.00	0.0
Diethylphthalate	0 / 4	10.0	--	--	5.00	0.0
Dimethyl phthalate	0 / 4	10.0	--	--	5.00	0.0
Di-n-butylphthalate	0 / 4	10.0	--	--	5.00	0.0
Di-n-octylphthalate	0 / 4	10.0	--	--	5.00	0.0
Fluoranthene	0 / 4	10.0	--	--	5.00	0.0
Fluorene	0 / 4	10.0	--	--	5.00	0.0
Hexachlorobenzene	0 / 4	10.0	--	--	5.00	0.0
Hexachlorobutadiene	0 / 4	10.0	--	--	5.00	0.0
Hexachlorocyclopentadiene	0 / 4	10.0	--	--	5.00	0.0
Hexachloroethane	0 / 4	10.0	--	--	5.00	0.0
Indeno(1,2,3-cd)pyrene	0 / 4	10.0	--	--	5.00	0.0
Isophorone	0 / 4	10.0	--	--	5.00	0.0
Naphthalene	0 / 4	10.0	--	--	5.00	0.0
n-Nitroso-di-n-propylamine	0 / 4	10.0	--	--	5.00	0.0
n-Nitrosodiphenylamine	0 / 4	10.0	--	--	5.00	0.0
Nitrobenzene	0 / 4	2.50	--	--	1.25	0.0
Pentachlorophenol	0 / 4	25.0	--	--	12.5	0.0

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-1
Summary Statistics - Site 66 Surface Water (Used in Food Web Modeling)
Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Phenanthrene	0 / 4	10.0	--	--	5.00	0.0
Phenol	0 / 4	10.0	--	--	5.00	0.0
Pyrene	0 / 4	10.0	--	--	5.00	0.0
Explosives (UG/L)						
1,3,5-Trinitrobenzene	0 / 4	2.50	--	--	1.25	0.0
1,3-Dinitrobenzene	0 / 4	2.50	--	--	1.25	0.0
2,4,6-Trinitrotoluene	0 / 4	2.50	--	--	1.25	0.0
2-Amino-4,6-dinitrotoluene	0 / 4	5.00	--	--	2.50	0.0
2-Nitrotoluene	0 / 4	5.00	--	--	2.50	0.0
3-Nitrotoluene	0 / 4	5.00	--	--	2.50	0.0
4-Amino-2,6-dinitrotoluene	0 / 4	5.00	--	--	2.50	0.0
4-Nitrotoluene	0 / 4	5.00	--	--	2.50	0.0
HMX	0 / 4	2.50	--	--	1.25	0.0
Nitroglycerin	0 / 4	16.0	--	--	8.00	0.0
Nitroguanidine	0 / 4	5.00	--	--	2.50	0.0
Perchlorate	0 / 4	0.20	--	--	0.10	0.0
RDX	0 / 4	2.50	--	--	1.25	0.0
Tetryl	0 / 4	5.00	--	--	2.50	0.0
Volatile Organic Compounds (UG/L)						
1,1,1-Trichloroethane	0 / 4	10.0	--	--	5.00	0.0
1,1,2,2-Tetrachloroethane	0 / 4	10.0	--	--	5.00	0.0
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 4	10.0	--	--	5.00	0.0
1,1,2-Trichloroethane	0 / 4	10.0	--	--	5.00	0.0
1,1-Dichloroethane	0 / 4	10.0	--	--	5.00	0.0
1,1-Dichloroethene	0 / 4	10.0	--	--	5.00	0.0
1,2,4-Trichlorobenzene	0 / 4	10.0	--	--	5.00	0.0
1,2-Dibromo-3-chloropropane	0 / 4	10.0	--	--	5.00	0.0
1,2-Dibromoethane	0 / 4	10.0	--	--	5.00	0.0
1,2-Dichlorobenzene	0 / 4	10.0	--	--	5.00	0.0
1,2-Dichloroethane	0 / 4	10.0	--	--	5.00	0.0
1,2-Dichloropropane	0 / 4	10.0	--	--	5.00	0.0
1,3-Dichlorobenzene	0 / 4	10.0	--	--	5.00	0.0
1,4-Dichlorobenzene	0 / 4	10.0	--	--	5.00	0.0
2-Butanone	0 / 4	10.0	--	--	5.00	0.0
2-Hexanone	0 / 4	10.0	--	--	5.00	0.0
4-Methyl-2-pentanone	0 / 4	10.0	--	--	5.00	0.0
Acetone	0 / 4	14.0	--	--	4.75	2.06
Benzene	0 / 4	10.0	--	--	5.00	0.0
Bromodichloromethane	1 / 4	10.0	2.00	IS66SW03	4.25	1.50
Bromoform	0 / 4	10.0	--	--	5.00	0.0
Bromomethane	0 / 4	10.0	--	--	5.00	0.0
Carbon disulfide	0 / 4	10.0	--	--	5.00	0.0
Carbon tetrachloride	0 / 4	10.0	--	--	5.00	0.0
Chlorobenzene	0 / 4	10.0	--	--	5.00	0.0
Chloroethane	0 / 4	10.0	--	--	5.00	0.0
Chloroform	1 / 4	10.0	1.00	IS66SW03	4.00	2.00
Chloromethane	0 / 4	10.0	--	--	5.00	0.0

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-1
Summary Statistics - Site 66 Surface Water (Used in Food Web Modeling)
Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
cis-1,2-Dichloroethene	0 / 4	10.0	--	--	5.00	0.0
cis-1,3-Dichloropropene	0 / 4	10.0	--	--	5.00	0.0
Cyclohexane	0 / 4	10.0	--	--	5.00	0.0
Dibromochloromethane	0 / 4	10.0	--	--	5.00	0.0
Dichlorodifluoromethane (Freon-12)	0 / 4	10.0	--	--	5.00	0.0
Ethylbenzene	0 / 4	10.0	--	--	5.00	0.0
Isopropylbenzene	0 / 4	10.0	--	--	5.00	0.0
Methyl acetate	0 / 4	10.0	--	--	5.00	0.0
Methylcyclohexane	0 / 4	10.0	--	--	5.00	0.0
Methylene chloride	0 / 4	10.0	--	--	4.38	1.25
Methyl-tert-butyl ether (MTBE)	0 / 4	10.0	--	--	5.00	0.0
Styrene	0 / 4	10.0	--	--	5.00	0.0
Tetrachloroethene	0 / 4	10.0	--	--	5.00	0.0
Toluene	0 / 4	10.0	--	--	3.88	2.25
trans-1,2-Dichloroethene	0 / 4	10.0	--	--	5.00	0.0
trans-1,3-Dichloropropene	0 / 4	10.0	--	--	5.00	0.0
Trichloroethene	0 / 4	10.0	--	--	5.00	0.0
Trichlorofluoromethane (Freon-11)	0 / 4	10.0	--	--	5.00	0.0
Vinyl chloride	0 / 4	10.0	--	--	5.00	0.0
Xylene, total	0 / 4	10.0	--	--	5.00	0.0
Other Parameters (MG/L)						
Hardness	4 / 4	--	81.1	IS66SW03	53.8	21.7

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-2

Summary Statistics - Site 66 Shallow Subsurface Soil (Used in Food Web Modeling)

Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Inorganics (MG/KG)						
Aluminum	4 / 4	--	10,900	IS66SB070103	8,848	1,532
Antimony	0 / 4	0.48	--	--	0.21	0.024
Arsenic	4 / 4	--	17.1	IS66SB030306	6.00	7.44
Barium	4 / 4	--	131	IS66SB030306	73.0	39.8
Beryllium	2 / 4	0.67	2.30	IS66SB030306	0.98	0.93
Cadmium	0 / 4	0.55	--	--	0.091	0.12
Calcium	4 / 4	--	22,600	IS66SB030306	7,049	10,464
Chromium	4 / 4	--	26.2	IS66SB030306	19.7	4.53
Cobalt	4 / 4	--	12.8	IS66SB070103	7.80	3.72
Copper	4 / 4	--	40.4	IS66SB030306	23.3	12.0
Cyanide	0 / 4	0.097	--	--	0.043	0.0052
Iron	4 / 4	--	32,200	IS66SB020205	27,100	5,604
Lead	4 / 4	--	186	IS66SB030306	59.8	84.7
Magnesium	4 / 4	--	2,120	IS66SB090104	1,337	599
Manganese	4 / 4	--	278	IS66SB070103	179	112
Mercury	1 / 4	0.11	0.63	IS66SB030306	0.19	0.29
Nickel	4 / 4	--	25.4	IS66SB030306	14.2	8.43
Potassium	4 / 4	--	1,010	IS66SB090104	789	210
Selenium	1 / 4	0.82	3.00	IS66SB030306	1.04	1.31
Silver	0 / 4	0.15	--	--	0.068	0.0065
Sodium	0 / 4	293	--	--	77.0	47.6
Thallium	0 / 4	1.50	--	--	0.68	0.065
Vanadium	4 / 4	--	156	IS66SB030306	66.6	62.3
Zinc	4 / 4	--	391	IS66SB030306	127	176
Pesticide/Polychlorinated Biphenyls (UG/KG)						
4,4'-DDD	3 / 4	4.20	33.0	IS66SB030306	16.8	12.8
4,4'-DDE	3 / 4	4.20	14.0	IS66SB070103	8.63	5.80
4,4'-DDT	2 / 4	5.60	40.0	IS66SB070103	17.2	18.3
Aldrin	0 / 4	2.70	--	--	1.20	0.15
alpha-BHC	1 / 4	2.70	4.00	IS66SB070103	1.88	1.42
alpha-Chlordane	0 / 4	2.70	--	--	1.20	0.15
Aroclor-1016	0 / 4	52.0	--	--	23.3	2.90
Aroclor-1221	0 / 4	110	--	--	47.5	6.14
Aroclor-1232	0 / 4	52.0	--	--	23.3	2.90
Aroclor-1242	0 / 4	52.0	--	--	23.3	2.90
Aroclor-1248	0 / 4	52.0	--	--	23.3	2.90
Aroclor-1254	0 / 4	52.0	--	--	23.3	2.90
Aroclor-1260	0 / 4	52.0	--	--	23.3	2.90
beta-BHC	2 / 4	2.20	8.50	IS66SB070103	2.87	3.76
delta-BHC	0 / 4	2.70	--	--	1.20	0.15
Dieldrin	2 / 4	4.20	2.00	IS66SB030306	2.04	0.048
Endosulfan I	1 / 4	2.70	1.30	IS66SB070103	1.20	0.15
Endosulfan II	2 / 4	4.20	1.20	IS66SB030306	1.64	0.51
Endosulfan sulfate	1 / 4	5.20	7.70	IS66SB070103	3.61	2.74
Endrin	1 / 4	5.20	0.91	IS66SB020205	2.04	0.79
Endrin aldehyde	2 / 4	5.20	19.0	IS66SB070103	6.38	8.42
Endrin ketone	2 / 4	5.20	29.0	IS66SB070103	9.03	13.3
gamma-BHC (Lindane)	0 / 4	2.70	--	--	1.20	0.15
gamma-Chlordane	2 / 4	2.70	14.0	IS66SB070103	4.26	6.50

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-2

Summary Statistics - Site 66 Shallow Subsurface Soil (Used in Food Web Modeling)

Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Heptachlor	0 / 4	2.70	--	--	1.20	0.15
Heptachlor epoxide	2 / 4	2.20	0.83	IS66SB070103	0.93	0.17
Methoxychlor	1 / 4	27.0	77.0	IS66SB070103	28.0	32.7
Toxaphene	0 / 4	270	--	--	120	14.7
Semivolatile Organic Compounds (UG/KG)						
1,1-Biphenyl	0 / 4	520	--	--	233	29.0
2,2'-Oxybis(1-chloropropane)	0 / 4	520	--	--	233	29.0
2,4,5-Trichlorophenol	0 / 4	1,300	--	--	588	75.0
2,4,6-Trichlorophenol	0 / 4	520	--	--	233	29.0
2,4-Dichlorophenol	0 / 4	520	--	--	233	29.0
2,4-Dimethylphenol	0 / 4	520	--	--	233	29.0
2,4-Dinitrophenol	0 / 4	1,300	--	--	588	75.0
2,4-Dinitrotoluene	0 / 4	520	--	--	233	29.0
2,6-Dinitrotoluene	0 / 4	520	--	--	233	29.0
2-Chloronaphthalene	0 / 4	520	--	--	233	29.0
2-Chlorophenol	0 / 4	520	--	--	233	29.0
2-Methylnaphthalene	1 / 4	520	210	IS66SB070103	221	25.9
2-Methylphenol	0 / 4	520	--	--	233	29.0
2-Nitroaniline	0 / 4	1,300	--	--	588	75.0
2-Nitrophenol	0 / 4	520	--	--	233	29.0
3- and 4-Methylphenol						
3,3'-Dichlorobenzidine	0 / 4	520	--	--	233	29.0
3-Nitroaniline	0 / 4	1,300	--	--	588	75.0
4,6-Dinitro-2-methylphenol	0 / 4	1,300	--	--	588	75.0
4-Bromophenyl-phenylether	0 / 4	520	--	--	233	29.0
4-Chloro-3-methylphenol	0 / 4	520	--	--	233	29.0
4-Chloroaniline	0 / 4	520	--	--	233	29.0
4-Chlorophenyl-phenylether	0 / 4	520	--	--	233	29.0
4-Methylphenol	0 / 4	520	--	--	233	29.0
4-Nitroaniline	0 / 4	1,300	--	--	588	75.0
4-Nitrophenol	0 / 4	1,300	--	--	588	75.0
Acenaphthene	2 / 4	520	1,700	IS66SB070103	580	748
Acenaphthylene	1 / 4	520	170	IS66SB070103	211	37.1
Acetophenone	1 / 4	520	110	IS66SB070103	196	62.6
Anthracene	2 / 4	520	4,700	IS66SB070103	1,403	2,201
Atrazine	0 / 4	520	--	--	233	29.0
Benzaldehyde	0 / 4	520	--	--	233	29.0
Benzo(a)anthracene	3 / 4	420	15,000	IS66SB070103	4,120	7,262
Benzo(a)pyrene	3 / 4	420	15,000	IS66SB070103	4,095	7,275
Benzo(b)fluoranthene	3 / 4	420	15,000	IS66SB070103	4,150	7,239
Benzo(g,h,i)perylene	3 / 4	420	11,000	IS66SB070103	2,945	5,370
Benzo(k)fluoranthene	3 / 4	420	13,000	IS66SB070103	3,610	6,268
bis(2-Chloroethoxy)methane	0 / 4	520	--	--	233	29.0
bis(2-Chloroethyl)ether	0 / 4	520	--	--	233	29.0
bis(2-Ethylhexyl)phthalate	0 / 4	520	--	--	192	98.7
Butylbenzylphthalate	0 / 4	520	--	--	233	29.0
Caprolactam	0 / 4	520	--	--	233	29.0
Carbazole	3 / 4	420	2,900	IS66SB070103	923	1,320
Chrysene	3 / 4	420	15,000	IS66SB070103	4,190	7,220
Dibenz(a,h)anthracene	2 / 4	520	2,600	IS66SB070103	825	1,184

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-2

Summary Statistics - Site 66 Shallow Subsurface Soil (Used in Food Web Modeling)

Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
Dibenzofuran	2 / 4	520	710	IS66SB070103	338	251
Diethylphthalate	0 / 4	520	--	--	233	29.0
Dimethyl phthalate	0 / 4	520	--	--	233	29.0
Di-n-butylphthalate	0 / 4	520	--	--	233	29.0
Di-n-octylphthalate	0 / 4	520	--	--	233	29.0
Fluoranthene	3 / 4	420	27,000	IS66SB070103	7,620	12,957
Fluorene	3 / 4	420	1,200	IS66SB070103	453	503
Hexachlorobenzene	0 / 4	520	--	--	233	29.0
Hexachlorobutadiene	0 / 4	520	--	--	233	29.0
Hexachlorocyclopentadiene	0 / 4	520	--	--	233	29.0
Hexachloroethane	0 / 4	520	--	--	233	29.0
Indeno(1,2,3-cd)pyrene	3 / 4	420	11,000	IS66SB070103	3,010	5,329
Isophorone	0 / 4	520	--	--	233	29.0
Naphthalene	3 / 4	420	630	IS66SB070103	273	242
n-Nitroso-di-n-propylamine	0 / 4	520	--	--	233	29.0
n-Nitrosodiphenylamine	0 / 4	520	--	--	233	29.0
Nitrobenzene	0 / 4	520	--	--	233	29.0
Pentachlorophenol	0 / 4	1,300	--	--	588	75.0
Phenanthrene	3 / 4	420	17,000	IS66SB070103	4,905	8,097
Phenol	0 / 4	520	--	--	233	29.0
Pyrene	3 / 4	420	25,000	IS66SB070103	6,923	12,073
Explosives (UG/KG)						
1,3,5-Trinitrobenzene	0 / 4	620	--	--	310	0.0
1,3-Dinitrobenzene	0 / 4	620	--	--	310	0.0
2,4,6-Trinitrotoluene	0 / 4	620	--	--	310	0.0
2-Amino-4,6-dinitrotoluene	0 / 4	1,200	--	--	600	0.0
2-Nitrotoluene	0 / 4	1,200	--	--	600	0.0
3-Nitrotoluene	0 / 4	1,200	--	--	600	0.0
4-Amino-2,6-dinitrotoluene	0 / 4	1,200	--	--	600	0.0
4-Nitrotoluene	0 / 4	1,200	--	--	600	0.0
HMX	0 / 4	620	--	--	310	0.0
Nitroglycerin	0 / 4	4,000	--	--	2,000	0.0
Nitroguanidine	0 / 4	150	--	--	65.0	7.07
Perchlorate	3 / 4	2.80	1.70	IS66SB090104	1.29	0.36
RDX	0 / 4	620	--	--	310	0.0
Tetryl	0 / 4	1,200	--	--	600	0.0
Volatile Organic Compounds (UG/KG)						
1,1,1-Trichloroethane	0 / 4	18.0	--	--	7.75	1.32
1,1,2,2-Tetrachloroethane	0 / 4	18.0	--	--	7.75	1.32
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 4	18.0	--	--	7.75	1.32
1,1,2-Trichloroethane	0 / 4	18.0	--	--	7.75	1.32
1,1-Dichloroethane	0 / 4	18.0	--	--	7.75	1.32
1,1-Dichloroethene	0 / 4	18.0	--	--	7.75	1.32
1,2,4-Trichlorobenzene	0 / 4	18.0	--	--	7.75	1.32
1,2-Dibromo-3-chloropropane	0 / 4	18.0	--	--	7.75	1.32
1,2-Dibromoethane	0 / 4	18.0	--	--	7.75	1.32
1,2-Dichlorobenzene	0 / 4	18.0	--	--	7.75	1.32
1,2-Dichloroethane	0 / 4	18.0	--	--	7.75	1.32
1,2-Dichloropropane	0 / 4	18.0	--	--	7.75	1.32
1,3-Dichlorobenzene	0 / 4	18.0	--	--	7.75	1.32

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-2

Summary Statistics - Site 66 Shallow Subsurface Soil (Used in Food Web Modeling)

Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
1,4-Dichlorobenzene	0 / 4	18.0	--	--	7.75	1.32
2-Butanone	0 / 4	18.0	--	--	7.75	1.32
2-Hexanone	0 / 4	18.0	--	--	7.75	1.32
4-Methyl-2-pentanone	0 / 4	18.0	--	--	7.75	1.32
Acetone	0 / 4	18.0	--	--	7.75	1.32
Benzene	0 / 4	18.0	--	--	7.75	1.32
Bromodichloromethane	0 / 4	18.0	--	--	7.75	1.32
Bromoform	0 / 4	18.0	--	--	7.75	1.32
Bromomethane	0 / 4	18.0	--	--	7.75	1.32
Carbon disulfide	0 / 4	18.0	--	--	7.75	1.32
Carbon tetrachloride	0 / 4	18.0	--	--	7.75	1.32
Chlorobenzene	0 / 4	18.0	--	--	7.75	1.32
Chloroethane	0 / 4	18.0	--	--	7.75	1.32
Chloroform	0 / 4	18.0	--	--	7.75	1.32
Chloromethane	0 / 4	18.0	--	--	7.75	1.32
cis-1,2-Dichloroethene	0 / 4	18.0	--	--	7.75	1.32
cis-1,3-Dichloropropene	0 / 4	18.0	--	--	7.75	1.32
Cyclohexane	0 / 4	18.0	--	--	7.75	1.32
Dibromochloromethane	0 / 4	18.0	--	--	7.75	1.32
Dichlorodifluoromethane (Freon-12)	0 / 4	18.0	--	--	7.75	1.32
Ethylbenzene	0 / 4	18.0	--	--	7.75	1.32
Isopropylbenzene	0 / 4	18.0	--	--	7.75	1.32
Methyl acetate	0 / 4	18.0	--	--	7.75	1.32
Methylcyclohexane	0 / 4	18.0	--	--	7.75	1.32
Methylene chloride	0 / 4	18.0	--	--	7.75	1.32
Methyl-tert-butyl ether (MTBE)	0 / 4	18.0	--	--	7.75	1.32
Styrene	0 / 4	18.0	--	--	7.75	1.32
Tetrachloroethene	0 / 4	18.0	--	--	7.75	1.32
Toluene	0 / 4	18.0	--	--	7.75	1.32
trans-1,2-Dichloroethene	0 / 4	18.0	--	--	7.75	1.32
trans-1,3-Dichloropropene	0 / 4	18.0	--	--	7.75	1.32
Trichloroethene	0 / 4	18.0	--	--	7.75	1.32
Trichlorofluoromethane (Freon-11)	0 / 4	18.0	--	--	7.75	1.32
Vinyl chloride	0 / 4	18.0	--	--	7.75	1.32
Xylene, total	0 / 4	18.0	--	--	7.75	1.32
Dioxin/Furans (PG/G)						
1,2,3,4,6,7,8-Heptachlorodibenzofuran						
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin						
1,2,3,4,7,8,9-Heptachlorodibenzofuran						
1,2,3,4,7,8-Hexachlorodibenzofuran						
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin						
1,2,3,6,7,8-Hexachlorodibenzofuran						
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin						
1,2,3,7,8,9-Hexachlorodibenzofuran						
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin						
1,2,3,7,8-Pentachlorodibenzofuran						
1,2,3,7,8-Pentachlorodibenzo-p-dioxin						
2,3,4,6,7,8-Hexachlorodibenzofuran						
2,3,4,7,8-Pentachlorodibenzofuran						
2,3,7,8-TCDD (dioxin)						

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.

Table H-2

Summary Statistics - Site 66 Shallow Subsurface Soil (Used in Food Web Modeling)

Naval Support Facility - Indian Head, Indian Head, MD

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Arithmetic Mean[1]	Standard Deviation of Mean
2,3,7,8-Tetrachlorodibenzofuran						
Octachlorodibenzofuran						
Octachlorodibenzo-p-dioxin						
Total heptachlorodibenzofuran						
Total heptachlorodibenzo-p-dioxin						
Total hexachlorodibenzofuran						
Total hexachlorodibenzo-p-dioxin						
Total pentachlorodibenzofuran						
Total pentachlorodibenzo-p-dioxin						
Total tetrachlorodibenzofuran						
Total tetrachlorodibenzo-p-dioxin						
Toxic Equivalents (Total TEQ)						
Other Parameters (MG/KG)						
pH	4 / 4	--	8.52	IS66SB030306	7.09	1.60
Total organic carbon	4 / 4	--	73,100	IS66SB030306	25,353	31,902

1 - One-half of the reporting limit was used for non-detected samples when calculating the mean.