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FINAL SITE INSPECTION REPORT AT SITE 66 NSWC INDIAN HEAD MD
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CH2MHILL

Final

Site 66—Turkey Run Disposal Area
Site Inspection Report

Naval Support Facility, Indian Head
Indian Head, Maryland

Contract Task Order 0079

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Prepared by

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Executive Summary

This report presents the results of a Site Inspection (SI) conducted for Site 66, the Turkey Run Disposal Area, at Naval Support Facility, Indian Head (NSF-IH), in Indian Head, Maryland. This SI 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 (CLEAN) III Contract N62470-02-D-3052, Contract Task Order (CTO) 0079, in accordance with the *Final Site Inspection Work Plan for Site 66 Turkey Run Disposal Area* (CH2M HILL, 2007). This SI report is being submitted to NAVFAC Washington, NSF-IH, the United States Environmental Protection Agency (EPA) Region III, and the Maryland Department of the Environment (MDE) 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 EPA Region III (EPA/Navy, 2000).

Site 66 was designated as a new IR Program site following discovery of the site by NSF-IH personnel during the remedial investigation of Site 11, the Caffee Road Landfill, and discussion with the Indian Head Installation Restoration Team (IHIRT). Site 66 is an unregulated dump area that contains various solid wastes, including construction debris, metal scrap, lead flooring, scrap wood, asphalt, and laboratory bottles.

Previous environmental investigations have not been conducted at this site. Therefore, an initial site reconnaissance was conducted by CH2M HILL, NAVFAC Washington, NSF-IH, and MDE on October 11, 2006. 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) 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.

Environmental sampling 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, 10 surface soil, 10 subsurface soil, and 10 *in situ* groundwater samples were collected from 10 direct-push technology (DPT) soil boring locations across the site. In addition, 5 surface water, 5 sediment, 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 EPA 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 EPA guidance, and the data analysis is complete.

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. Based on the findings of the SI, further investigation is warranted for the site.

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Acronyms and Abbreviations

µg/kg	micrograms per kilogram
µg/L	micrograms per liter
4,4′-DDD	4,4′-dichlorodiphenyldichloroethane
4,4′-DDE	4,4′-dichlorodiphenyldichloroethene
4,4′-DDT	4,4′-dichlorodiphenyltrichloroethane
amsl	above mean sea level
bgs	below ground surface
BHC	benzene hexachloride
CLEAN	Comprehensive Long-Term Environmental Action, Navy
COPC	chemical of potential concern
CTO	contract task order
DO	dissolved oxygen
DPT	direct-push technology
Eco-SSL	Ecological Soil Screening Level
EPA	United States Environmental Protection Agency
GPS	global positioning system
IAS	Initial Assessment Study
IHIRT	Indian Head Installation Restoration Team
IR	Installation Restoration
MDE	Maryland Department of the Environment
mg/kg	milligrams per kilogram
MS/MSD	matrix spike/matrix spike duplicate
NAVFAC	Naval Facilities Engineering Command
Navy	United States Department of the Navy
NEESA	Naval Energy and Environmental Support Activity
NSF-IH	Naval Support Facility, Indian Head
ORP	oxidation-reduction potential
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCDD	polychlorinated dibenzo(p)dioxin
PCDF	polychlorinated dibenzofuran
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RBC	risk-based concentration

SC	specific conductivity
SI	site inspection
SOP	standard operating procedure
SSL	soil screening level
SVOC	semivolatile organic compound
TAL	target analyte list
TCDD	tetrachlorodibenzo-p-dioxin (dioxin)
TCL	target compound list
TDS	total dissolved solids
TEF	toxicity equivalency factor
TEQ	toxicity equivalents
TOC	total organic carbon
USGS	United States Geological Survey
UTL	upper tolerance limit
VOC	volatile organic compound
WHO	World Health Organization

SECTION 1

Introduction

This report presents the results of a Site Inspection (SI) for Site 66, Turkey Run Disposal Area, at Naval Support Facility, Indian Head (NSF-IH) in Indian Head, Maryland (Figure 1-1). This SI 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 (CLEAN) III Contract N62470-02-D-3052, Contract Task Order (CTO) 0079, in accordance with the *Final Site Inspection Work Plan for Site 66 Turkey Run Disposal Area* (CH2M HILL, 2007). This SI report is being submitted to NAVFAC Washington, NSF-IH, the United States Environmental Protection Agency (EPA) Region III, and the Maryland Department of the Environment (MDE) 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 EPA Region III (EPA/Navy, 2000).

1.1 Project Objectives

As agreed to by the Navy, EPA, and MDE, and identified in the work plan (CH2M HILL, 2007), the objectives of the SI are to:

- Determine the nature and extent of contamination in various environmental media (surface soil, subsurface soil, groundwater, surface water, sediment, ash material) from past unregulated solid waste disposal activities.
- Determine if contaminants are present at levels that might pose risks to human health and the environment.
- Decide if contaminants are present at levels that warrant the need for further investigation or remediation, based on the results of data analysis.

To achieve these objectives, environmental sampling was conducted at Site 66 in April 2007. Analytical data for all media were evaluated and compared to appropriate regulatory screening criteria and background concentrations to assess potential human health and ecological risks.

1.2 Document Organization

This report documents the field investigation activities and data evaluation process for Site 66 and provides recommendations for a path forward for the site. Section 1 describes the objectives of the SI. Section 2 presents NSF-IH and Site 66 background information. Sections 3 and 4 detail the field activities and results of the SI activities at Site 66. Section 5 presents the results of the human health and ecological risk screening activities. Section 6 provides the conclusions and recommendations of the SI. Finally, Section 7 provides a list of

references used in the preparation of this report. In addition, Appendix A provides the boring logs from Site 66, and Appendix B presents the validated analytical data reports for the field investigation sampling.

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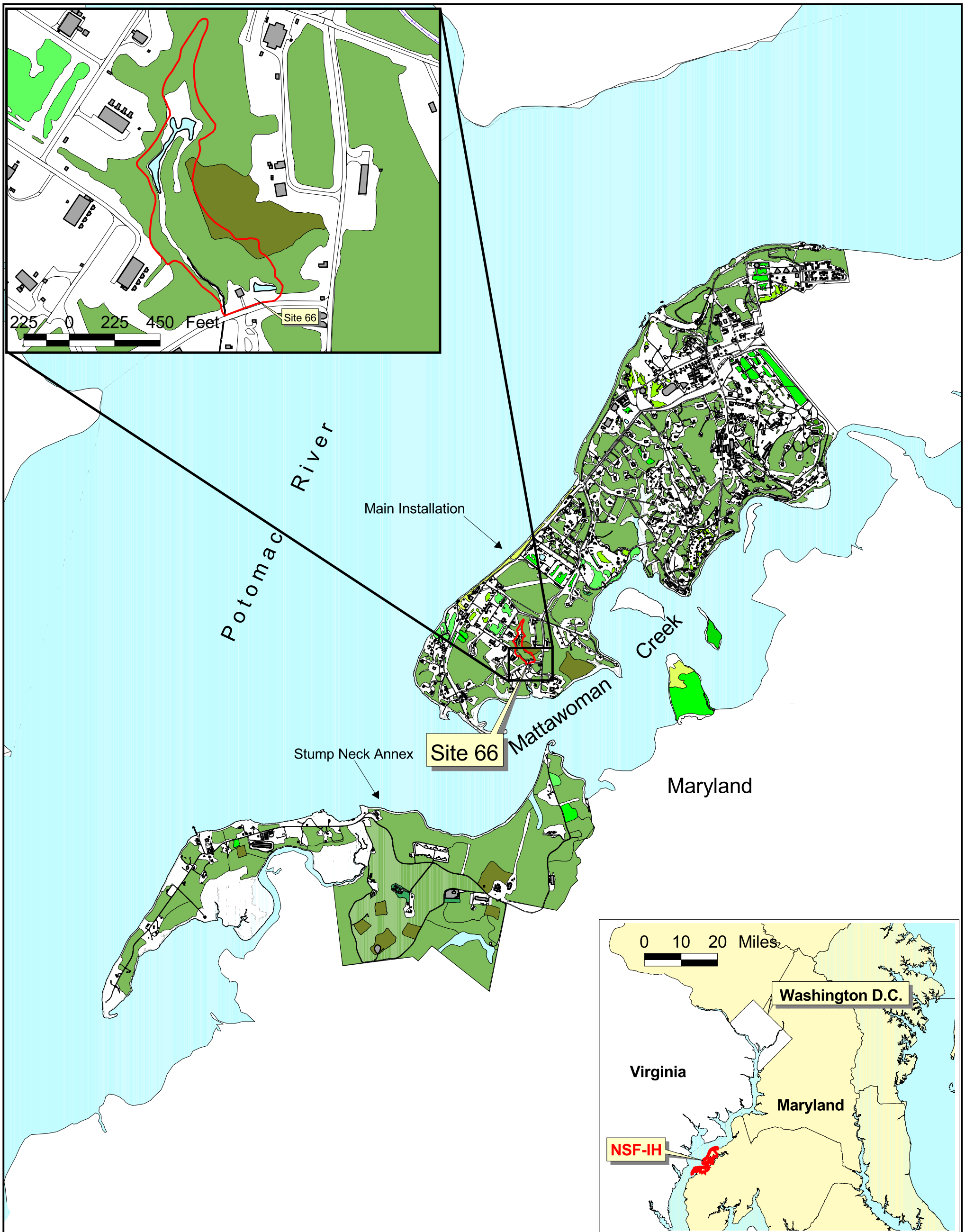

LEGEND

- Approximate Site Boundary
- Buildings
- Road
- Wooded Area
- Dense Wooded Area

N

3000 0 3000 Feet

Figure 1-1
Facility Location Map
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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SECTION 2

Facility and Site Background

This section provides specific background information for NSF-IH and Site 66, including the physical characteristics and a summary of past activities conducted at Site 66. A site map, showing the facility and site location, is provided as Figure 2-1.

2.1 Facility

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 located across Mattawoman Creek from the main area (Figure 1-1).

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, which are located 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 EPA identification numbers, and perform dissimilar operations.

2.1.2 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).

2.1.3 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 [NEESA], 1992).

2.1.4 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 United States Geological Survey (USGS) 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.

2.1.5 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 below ground surface (bgs) within the Quaternary sediment belt. Lithologies of the water-bearing zones were 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 were 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 NFS-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 (TDS) in the water table aquifer suggesting that water from the surficial zones is not suitable as a potable water source. This unit is not used by the facility as a potable source. The water table aquifer is not used as a potable water source on the peninsula (Hiortdahl, 1993).

2.2 Site 66

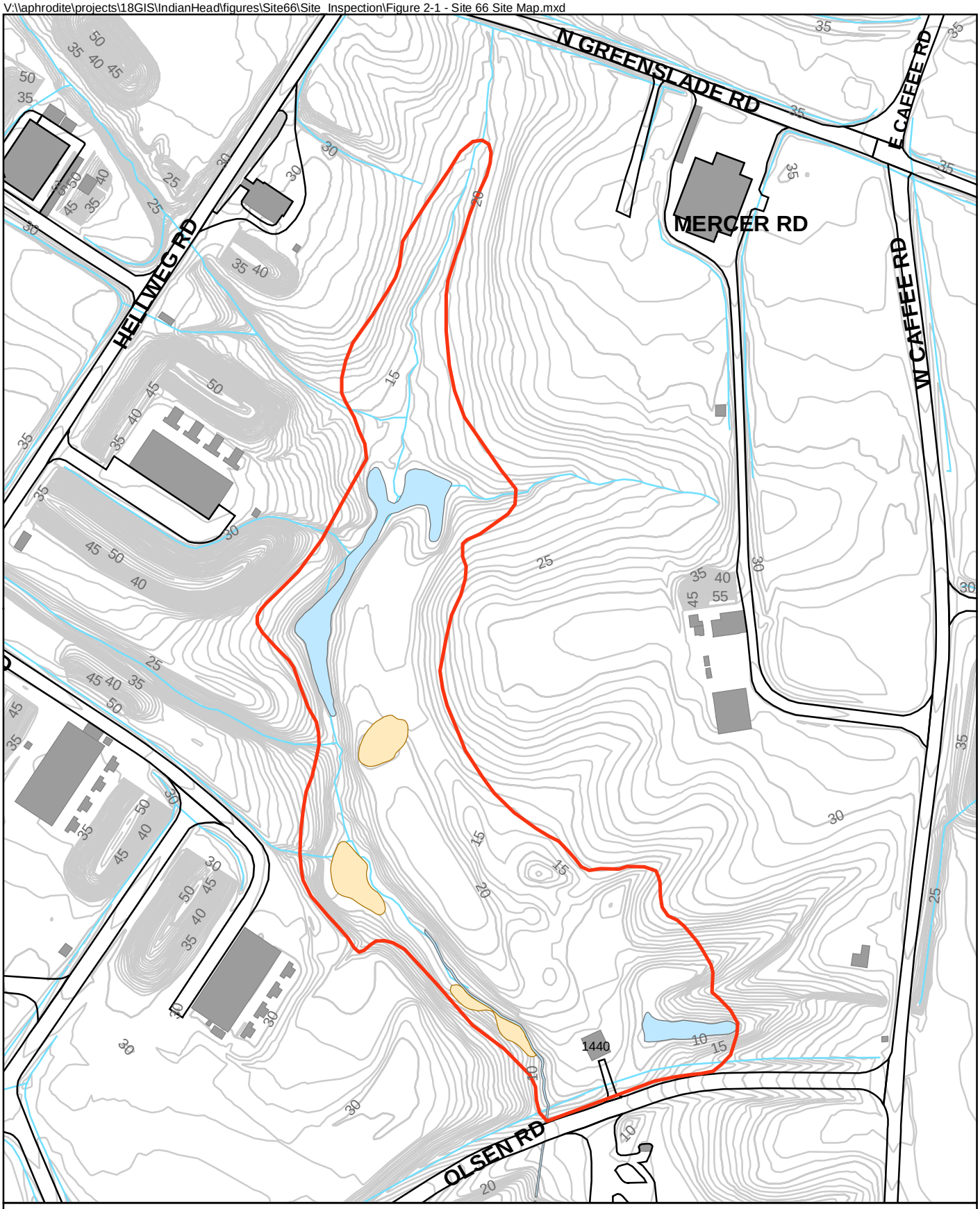
Site 66, the Turkey Run Disposal Area, is located west of West Caffee Road, extending approximately 900 feet north of Olsen Road along both sides of the unnamed creek that discharges into Mattawoman Creek, a tributary of the Potomac River (Figure 2-1). The site is defined as the area that includes obvious wastes present on the land surface, and is approximately 8.2 acres in size.

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.

According to the interpretation of the EPA Environmental Photographic Information Center photos (1956-1967), there is evidence of both buried and surficial waste at the site. The Initial Assessment Study (IAS) (Fred C. Hart Associates, Inc., 1983) reported that "other undetermined materials were deposited in the lowland areas near Building 1440." Building 1440 is a former fuel storage and polychlorinated biphenyl (PCB) transformer storage building.

Previous environmental investigations have not been conducted at this site. Therefore, an initial site reconnaissance was conducted by CH2M HILL, NAVFAC Washington, NSF-IH, and MDE on October 11, 2006. The site appeared to be hummocky along the banks of the unnamed creek because of mounds of waste and ash material, which are partially overgrown with vegetation. 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) 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.

V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 2-1 - Site 66 Site Map.mxd



Legend

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

Note:
Site boundary and ash pile locations based on observations during April 2007 field event.

N

0 100 200 Feet

1 INCH = 200'

Figure 2-1
Site Map
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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SECTION 3

Field Activities

Environmental sampling was conducted at Site 66 in April 2007 to identify the potential contaminants in site surface soil, subsurface soil, groundwater, surface water, and sediment. Sample locations were chosen based on observations from the October 2006 site reconnaissance and field conditions present during the April 2007 investigation. Table 3-1 provides a summary of the sampling and analyses conducted as part of this investigation.

Samples were collected in accordance with the standard operating procedures (SOPs) in the *Master Plans for Installation Restoration Program Environmental Investigations at Naval District Washington, Indian Head, Indian Head, Maryland* (herein referred to as Master Plans) (Tetra Tech NUS, 2004). Generally, 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 work plan, 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. All samples were analyzed by Compuchem Laboratories of Cary, North Carolina, or their subcontracted laboratory Columbia Analytical Services. Sample locations were surveyed using a Trimble Pro-XRS® Global Positioning System (GPS) unit, which is accurate to within several feet. Sample locations are shown on Figure 3-1.

3.1 Debris and Site Boundary Survey

Prior to sampling activities, a site boundary survey was conducted to define the limits of visible waste materials at Site 66. The locations of surficial and/or partially buried visible debris were staked by the field team and surveyed using a GPS unit. The locations of the visible ash piles at the site were staked and surveyed in a similar manner. The site boundary and ash pile locations are shown on Figure 3-1.

3.2 Surface Soil Sampling

Surface soil samples were collected from 0 to 6 inches bgs. A total of 20 surface soil samples were collected from the site on April 11 and 12, 2007. Ten surface soil samples were collected from the 10 direct-push technology (DPT) soil boring locations (IS66DP01 through IS66DP10) advanced at the site. The remaining 10 surface soil samples (IS66SO11 through IS66SO17, and IS66SO19 through IS66SO21) were collected using a hand trowel from areas of visible waste material, as identified by the field team. Originally, 11 areas of visible waste material were identified as potential surface soil grab sample locations; however, the field team identified one potential surface soil sample location (originally identified as IS66SO18) as a redundant sample location and did not collect a sample from this location. Surface soil samples were collected in accordance with SOPs SA-2.5 (DPT samples) and SA-1.3 (grab samples) in the Master Plans. Samples were analyzed for EPA SW-846 target compound list

(TCL) volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and pesticides/PCBs; target analyte list (TAL) total metals and cyanide; explosives including nitroglycerine and nitroguanidine; perchlorate; pH; and total organic carbon (TOC).

3.3 Subsurface Soil Sampling

Ten subsurface soil samples (IS66DP01 through IS66DP10) were collected from Site 66 on April 11 and 12, 2007. Subsurface soil samples were collected from DPT soil borings from the depth interval directly above the water table, in accordance with SOP SA-2.5 in the Master Plans. Subsurface soil samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL total metals and cyanide; explosives including nitroglycerine and nitroguanidine; perchlorate; pH; and TOC.

3.4 *In Situ* Groundwater Sampling

Ten *in situ* groundwater samples were collected from 10 DPT soil boreholes (IS66DP01 through IS66DP10) at Site 66 on April 13, 16, and 17, 2007. The DPT boreholes were advanced below the water table and temporary piezometers (screened 1.5-inch inner-diameter polyvinyl chloride [PVC]) were constructed. 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. The length of PVC casing was then measured and subtracted from the water depth measurement to obtain a water depth in feet bgs. The approximate groundwater elevation at each borehole location was determined by subtracting the water depth from the approximated ground surface elevation. Ground surface elevations were determined to the nearest 0.1 foot by using available topographic data with contours spaced in intervals of 1 foot relative to mean sea level.

Field parameters—pH, specific conductivity (SC), turbidity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and temperature—were measured using a flow-through cell and recorded at each sample location. Groundwater was purged from each sample location until field parameters were stabilized. Table 3-2 presents the final measurements taken prior to groundwater sampling.

Samples were collected using a peristaltic pump and tubing set at the midpoint of each saturated well screen interval, in accordance with SOPs SA-1.1 and 2.5, respectively, in the Master Plans. Groundwater samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL total metals, dissolved metals, and cyanide; explosives including nitroglycerine and nitroguanidine; perchlorate; and hardness. However, low water production at two locations (IS66DP01 and IS66DP10) precluded the collection of enough groundwater volume to analyze these samples for all sample parameters.

3.5 Surface Water Sampling

Five surface water samples were collected from locations IS66SWSD01 through IS66SWSD05 at Site 66 from April 9 through 11, 2007. Because surface water and sediment sample locations were co-located, surface water samples were collected first to minimize turbidity

and ensure the collection of undisturbed samples. For the same reason, samples were collected from downstream to upstream.

Prior to sampling, field parameters (pH, SC, turbidity, ORP, DO, and temperature) were measured and recorded (Table 3-3). Surface water samples were collected in accordance with SOP SA-1.2 in the Master Plans and analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL total metals, dissolved metals, and cyanide; explosives including nitroglycerine and nitroguanidine; perchlorate; and hardness.

3.6 Sediment Sampling

Five shallow (0 to 6 inches bgs) sediment samples were collected at the site on April 10 and 12, 2007, from locations IS66SWSD01 through IS66SWSD05. Because surface water and sediment sample locations were co-located, surface water samples were collected first to minimize turbidity and ensure the collection of undisturbed samples. For the same reason, samples were collected from downstream to upstream. A Wildco® Hand Core Sediment Sampler was used to collect sediment samples in accordance with SOP SA-1.2 in the Master Plans. Sediment samples were analyzed for TCL VOCs, SVOCs, and pesticides/PCBs; TAL total metals and cyanide; explosives including nitroglycerine and nitroguanidine; perchlorate; pH; and TOC.

3.7 Ash Sampling

Three ash samples were collected from piles observed at the site on April 10, 2007. Sample locations IS66ASH01 through IS66ASH03 were selected by the field team at the time of the field activities. Ash samples were collected using a hand trowel in accordance with SOP SA-1.3 (grab surface soil samples) in the Master Plans, and analyzed for dioxins and furans.

Table 3-1
Summary of Sampling and Analyses
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID Number	Media	Depth (feet bgs)	Analyses												
				VOCs	SVOCs	Pest/PCBs	Explosives (8330&8332)	TAL Metals	Dissolved Metals	Cyanide	Nitroguanadine	Perchlorate	Hardness	TOC & pH	Dioxins/Furans	Full TCLP & RCI
IH-QC	IS66EB01-041007	QC	--	X	X	X	X	X	X	X	X	X				
IH-QC	IS66EB02-041007	QC	--	X	X	X	X	X		X	X	X				
IH-QC	IS66EB03-041007	QC	--												X	
IH-QC	IS66FB041007	QC	--	X	X	X	X	X		X	X	X			X	
IH-QC	IS66TB041007	QC	--	X												
IH-QC	IS66EB01-041107	QC	--	X	X	X	X	X	X	X	X	X				
IH-QC	IS66EB02-041107	QC	--	X	X	X	X	X		X	X	X				
IH-QC	IS66TB041107	QC	--	X												
IH-QC	IS66TB041207	QC	--	X												
IH-QC	IS66EB01-041207	QC	--	X	X	X	X	X		X	X	X				
IH-QC	IS66TB041307	QC	--	X												
IH-QC	IS66TB041607	QC	--	X												
IH-QC	IS66FB041707	QC	--	X	X	X	X	X		X	X	X				
IH-QC	IS66TB041707	QC	--	X												
IS66ASH01	IS66AH01	Ash	--												X	
IS66ASH02	IS66AH02	Ash	--												X	
IS66ASH02	IS66AH02P	Ash	--												X	
IS66ASH03	IS66AH03	Ash	--												X	
IS66DP01	IS66SS010001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP01	IS66SB010710	Subsurface Soil	7-10	X	X	X	X	X		X	X	X		X		
IS66DP01	IS66GW010407	Groundwater	--	X	X	X	X	X	X		X					
IS66DP02	IS66SS020001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP02	IS66SB020205	Subsurface Soil	2-5	X	X	X	X	X		X	X	X		X		
IS66DP02	IS66GW020407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP02	IS66GW020407P	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP03	IS66SS030001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP03	IS66SB030306	Subsurface Soil	3-6	X	X	X	X	X		X	X	X		X		
IS66DP03	IS66GW030407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP04	IS66SS040001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP04	IS66SB040912	Subsurface Soil	9-12	X	X	X	X	X		X	X	X		X		
IS66DP04	IS66GW040407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP05	IS66SS050001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP05	IS66SB050812	Subsurface Soil	8-12	X	X	X	X	X		X	X	X		X		
IS66DP05	IS66SB05P0812	Subsurface Soil	8-12	X	X	X	X	X		X	X	X		X		
IS66DP05	IS66GW050407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP06	IS66SS060001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP06	IS66SB061216	Subsurface Soil	12-16	X	X	X	X	X		X	X	X		X		
IS66DP06	IS66GW060407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP07	IS66SS070001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP07	IS66SB070103	Subsurface Soil	1-3	X	X	X	X	X		X	X	X		X		
IS66DP07	IS66GW070407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP08	IS66SB081014	Subsurface Soil	10-14	X	X	X	X	X		X	X	X		X		
IS66DP08	IS66SS080001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP08	IS66GW080407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP09	IS66SS090001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP09	IS66SB090104	Subsurface Soil	1-4	X	X	X	X	X		X	X	X		X		
IS66DP09	IS66GW090407	Groundwater	--	X	X	X	X	X	X	X	X	X	X			
IS66DP10	IS66SS100001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66DP10	IS66SB101214	Subsurface Soil	12-14	X	X	X	X	X		X	X	X		X		
IS66DP10	IS66GW100407	Groundwater	--	X				X								
IS66SO11	IS66SS110001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO12	IS66SS120001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO13	IS66SS130001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO14	IS66SS140001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO15	IS66SS150001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO15	IS66SS15P0001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		

Table 3-1
Summary of Sampling and Analyses
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID Number	Media	Depth (feet bgs)	Analyses												
				VOCs	SVOCs	Pest/PCBs	Explosives (8330&8332)	TAL Metals	Dissolved Metals	Cyanide	Nitroguanadine	Perchlorate	Hardness	TOC & pH	Dioxins/Furans	Full TCLP & RCI
IS66SO16	IS66SS160001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO17	IS66SS170001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO19	IS66SS190001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO19	IS66SS19P0001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO20	IS66SS200001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SO21	IS66SS210001	Surface Soil	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD01	IS66SW01	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD01	IS66SD01	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD02	IS66SD02	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD02	IS66SD02P	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD02	IS66SW02	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD03	IS66SW03	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD03	IS66SW03P	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD03	IS66SD03	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD04	IS66SW04	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD04	IS66SD04	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
IS66SWSD05	IS66SW05	Surface Water	--	X	X	X	X	X	X	X	X	X	X			
IS66SWSD05	IS66SD05	Sediment	0-0.5	X	X	X	X	X		X	X	X		X		
ISIDW	IS66IS041207	IDW	--													X
ISIDW	IS66IW041707	IDW	--													X

Notes:
Station IDs with a QC indicates a quality assurance sample, which can be a trip blank (TB), equipment blank (EB) or field blank (FB).
"P" at the end of the sample ID indicates it is a duplicate sample.
Subsurface soil samples collected from the capillary fringe; area of soil above the water table that is moist due to capillary action of the groundwater
-- means not depth dependent

Table 3-2
Static Water Levels and Physico-chemical Properties
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Sample ID	Ground Elevation (feet MSL)[1]	Depth to Water (feet)[2]	Groundwater Elevation (feet MSL)	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation-Reduction Potential (mV)
IS66DP01	21.5	3.90	17.6	NM[3]	NM[3]	NM[3]	NM[3]	NM[3]	NM[3]
IS66DP02	20.9	3.97	16.9	6.17	0.179	NM[4]	7.06	10.6	-56
IS66DP03	19.9	4.96	14.9	6.49	0.196	126	9.71	8.3	49
IS66DP04	18.5	7.0	11.5	6.24	0.663	NM[4]	7.13	11.1	-93
IS66DP05	17.5	7.92	9.6	5.70	0.207	NM[4]	9.66	NM[5]	69
IS66DP06	20.3	8.65	11.7	6.02	0.542	NM[4]	11.59	NM[5]	-39
IS66DP07	10.0	2.57	7.4	5.04	0.141	NM[4]	7.37	NM[5]	80
IS66DP08	13.5	1.52	12.0	5.63	0.233	87	6.43	11.1	10
IS66DP09	10.5	2.43	8.1	6.33	0.466	132	8.3	NM[5]	-95
IS66DP10	30.8	10.0	20.8	5.40	0.090	323	10.3	10.6	74

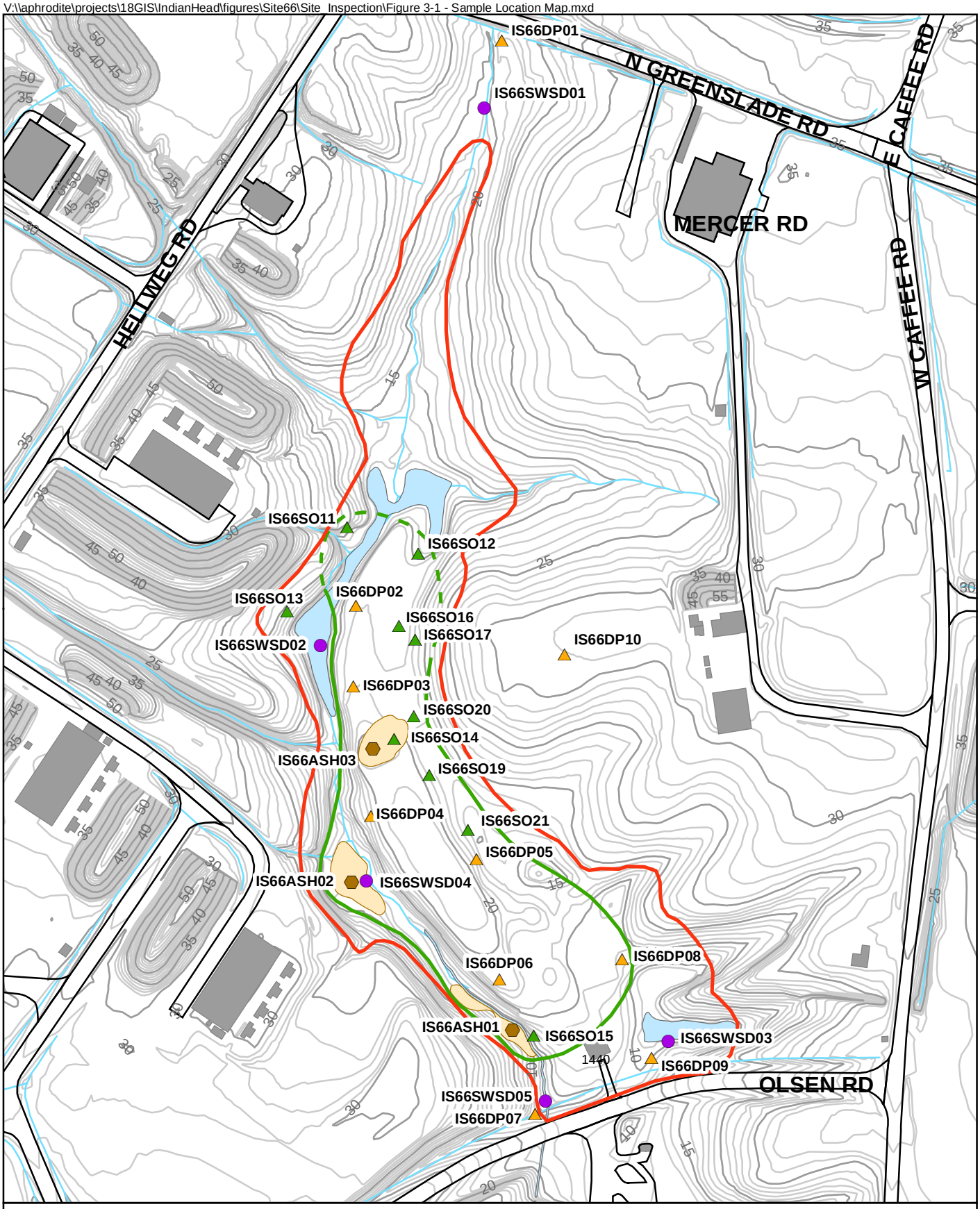
Notes:
[1] = Ground elevation is feet above mean sea level (feet MSL); it is approximated at each location based on available topographic map.
[2] = Static water depth in feet below ground surface measured prior to purging groundwater (measured from ground surface).
[3] = Not Measured (NM) due to low column of water present in borehole.
[4] = Not Measured (NM) due to high turbidity of water retained in flow cell. Sample water observed to be clear.
[5] = Not Measured (NM) due to malfunction of temperature probe.
mS/cm - millisiemens per centimeter
NTU - nephelometric turbidity unit
mg/L - milligrams per liter
°C - Degrees Celsius
mV - millivolts

Table 3-3
Physico-chemical Properties of Surface Water Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	Sample ID	pH	Conductivity (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Temperature (°C)	Oxidation-Reduction Potential (mV)
IS66SWSD01	IS66SW01	6.11	0.1	9.2	13.28	1.5	49
IS66SWSD02	IS66SW02	6.35	0.15	31.2	10.92	4.51	-22
IS66SWSD03	IS66SW03	6.67	0.235	54	14.34	4.11	128
IS66SWSD04	IS66SW04	6.4	0.207	97.4	12.98	8.8	46
IS66SWSD05	IS66SW05	6.33	0.222	53.8	14.1	4.47	-22

Notes:
mS/cm - millisiemens per centimeter
NTU - nephelometric turbidity unit
mg/L - milligrams per liter
°C - Degrees Celsius
mV - millivolts

V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 3-1 - Sample Location Map.mxd



Legend

- Ash Pile Sample
- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Surface Water/ Sediment Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Approximate Limit of Fill
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour

N

0 100 200 Feet

1 INCH = 200'

Figure 3-1
Sample Locations
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

CH2MHILL

SECTION 4

Results

This section presents the nature and extent of contamination found at Site 66 based on the April 2007 sampling activities and data analyses. A description of the stratigraphy at the site and a summary of analytical results for surface soil, subsurface soil, groundwater, surface water, sediment, and ash samples are provided below. All analytical data were validated, accepted, and assembled digitally in the tables referenced in this section. Soil boring logs are provided in Appendix A and validated analytical data for each medium are provided in Appendix B.

4.1 Management and Evaluation

This section presents information on the analytical data collected during the SI and the documentation process used to ensure data quality. Data tracking and management procedures, from the collection of the data in the field through data validation, are presented in the following sections.

4.1.1 Data Tracking and 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 work plan. 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 included field blanks, equipment blanks, trip blanks, duplicate samples, matrix spike/matrix spike duplicates (MS/MSDs), and laboratory blanks.

The samples collected during the SI were analyzed for various groups of parameters. Analytical data reports for the SI samples were submitted to E-Data, Inc. for third-party 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* (EPA Region III, 1994), and *Region III Modifications to Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (EPA Region III, 1993). These steps (third-party validation and electronic data handling) serve to reduce inherent uncertainties associated with data authenticity and usability.

4.1.2 Data Qualifiers

All analytical data used in the SI were validated. The tables in this section of the report show the validated results. The data validation qualifiers, or flags, used for the data and a brief interpretation follow.

Data qualified with a "B" flag by the data validator indicate that the analytes also have been detected in a field, equipment, or trip blank, or in a laboratory QA/QC sample. The concentration of a "B"-qualified result is less than 10 times the concentration of the constituent for an associated QA/QC result. If the sample concentration is less than 10 times the associated blank concentration, the conclusion is that the parameter was not detected. Further discussion of potential sources of blank contamination is provided in Section 4.1.3 below.

- Data qualified with a "J" flag 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 because of QA/QC deficiencies.
- Data qualified with an "R" indicate an unusable result. The analyte may or may not be present in the sample and the result is rejected. All rejected data were excluded from the SI evaluation and risk assessments.
- Data qualified with a "U" indicate that the analyte was not detected and the associated concentration value indicates the approximate sample concentration necessary to be detected.
- Data qualified with a "UJ" indicate that the analyte was not detected and the report limit value is estimated because of QA/QC deficiencies.

4.1.3 Evaluation of Non-Site-Related Results

Some of the organic and inorganic constituents detected in various media may be attributed to non-site-related conditions or activities such as laboratory contaminants, anthropogenic sources, and naturally occurring (background) concentrations of constituents. Discussions of non-site-related conditions are provided in the following subsections.

4.1.3.1 Laboratory and Sampling Blank Contamination

Some chemical compounds detected in field samples may have been introduced during field sampling, transportation to the analytical laboratory, or during laboratory procedures. A variety of blank samples were used in the QA process to determine which of the contaminants may or may not be attributable to the field sample. A field blank is collected to account for ambient conditions during sample collection. An equipment, or rinsate, blank is collected to determine if the equipment used to collect the samples (e.g., augers, bailers, and sample containers) was adequately clean. A trip blank is used to ascertain whether volatile compounds were introduced during packing or shipping.

Common laboratory contaminants that can be introduced during the analytical process are acetone, 2-butanone, methylene chloride, and common phthalate contaminants. The laboratory includes a method blank in each batch of 20 samples analyzed to verify instrument cleanliness and function.

When sampling or laboratory blank samples are found to contain common laboratory contaminants, the aqueous field samples that are associated with that blank and contain up to 10 times the concentrations in the blanks are qualified during data validation with a "B" for that compound. A "B" qualifier means that the compound may not be attributed to the site at that sample location. For example, if acetone is found in a field blank at a

concentration of 5 micrograms per liter (µg/L), an acetone concentration of 50 µg/L or less in any sample from the group associated with that blank would be given a "B" flag and considered invalid. When a sampling or laboratory blank contains contaminants other than common laboratory contaminants, aqueous field samples that are associated with that blank and contain up to 5 times the concentrations are qualified during data validation with a "B" for that compound.

A unit conversion is performed by data validators to compare soil sample concentrations with aqueous samples or laboratory blank concentrations to determine if a "B" qualifier should be assigned to the soil sample. The concentrations of contaminants detected in sampling or laboratory blanks are compared to soil sample concentrations by dividing the soil concentration by the percent moisture, then dividing the result by 5. A "B" qualifier designation as described above for aqueous samples can then be applied directly to the converted soil concentrations.

4.1.3.2 Background Data

A basewide background study of soil and groundwater was completed at Indian Head and Stump Neck Annex in 2002 (*Background Soil Investigation Report for Indian Head and Stump Neck Annex Naval Surface Warfare Center, Indian Head, Maryland* [herein referred to as the Background Soil Investigation Report] [Tetra Tech NUS, Inc., 2002]). The objective of this investigation was to establish background concentrations of metals, pesticides, and polycyclic aromatic hydrocarbons (PAHs) in surface and subsurface soil and, to a lesser extent, sediment and groundwater for use in comparison to site data to better identify release-related constituents of concern. Background levels are due to naturally occurring (those chemicals or compounds expected at a site in the absence of human influence) or anthropogenic (those chemicals or compounds that are present in the environment due to man-made, non-site-related) sources. Results of the comparison of site data to background data performed as part of the human health and ecological risk screening are provided in Section 5.

4.1.4 Data Presentation and Evaluation

In Sections 4.4 through 4.9, data are summarized within groups of samples that represent the various media (surface soil, subsurface soil, *in situ* groundwater, surface water, sediment, and ash) sampled at the site. The data are presented in tables and figures. Complete data tables, provided in Appendix B, list analytical results for all constituents analyzed in the samples from the various media (surface soil, subsurface soil, *in situ* groundwater, surface water, sediment, and ash) collected. Tables 4-1 through 4-6 show constituents that were detected in one or more samples for a given matrix. The nature and extent of the constituents for Site 66 will be evaluated for each matrix based on detected constituents. The distribution of parameters in site media based on this evaluation approach is shown on Figures 4-4 through 4-24.

4.2 Debris and Site Boundary Survey

Figure 4-1 shows the approximate site boundary for Site 66. The boundary was drawn based on GPS coordinates of approximate limits of waste materials and ash piles observed during

the SI. The boundary width is narrow to the north (just to the south of location IS66SWSD01) and widens to the south.

4.3 Site Geology and Hydrogeology

4.3.1 Site Geology

Three distinct units were identified at Site 66 during the field investigation. These include ash, fill, and silt and clay. A summary of the depths and thicknesses of each of the units found in the soil borings during the investigation is provided in the description of each unit below. Figure 4-1 shows the location of the cross-section and approximate areal extent of both the ash and fill units. A generalized cross-section depicting the horizontal and vertical extent of these units is provided as Figure 4-2. Soil boring logs are provided in Appendix A.

4.3.1.1 Ash

Ash is composed of dark gray to black to grayish black, loose, fine to very fine silty sand-sized particles. Ash piles were observed to be at various locations within the site boundary, as shown on Figure 4-1. The lateral extents are based on the GPS survey of these piles during the investigation. These piles were sampled during the investigation (locations IS66ASH01, IS66ASH02, and IS66ASH03, shown on Figure 3-1). None of the soil borings were advanced through the ash piles. Ash also was encountered in 4 of the 10 DPT soil borings: IS66DP03 (3 feet thick), IS66DP05 (7.5 feet thick), IS66DP06 (1 foot thick), and IS66DP08 (12 feet thick) at depths of about 3 feet, 5 feet, 11 feet, and 0.5 foot bgs, respectively.

Ash was not encountered in borings IS66DP01, IS66DP02, IS66DP04, IS66DP07, IS66DP09, and IS66DP10. Borings IS66DP01 and IS66DP07 are to the north and south, respectively, of the approximate site boundary. Borings IS66DP02, IS66DP04, IS66DP09, and IS66DP10 are to the east and upgradient of the east bank of the unnamed creek.

4.3.1.2 Fill

The fill consists of yellowish brown to grayish brown sand, silt, and clay mixed with varying amounts of debris. The subsurface debris encountered in soil borings included concrete, brick, gravel, cinder, charred wood, pieces of wood, and ash. Sample recovery was generally poor because the material was loose or soft. Due to low sample recovery and boring refusal at buried debris, the constraints on the thickness of the waste area fill are limited.

Fill was encountered in 4 of 10 DPT borings: IS66DP02, IS66DP03, IS66DP04, and IS66DP06 (Figure 3-1). The full thickness of this stratum was penetrated at IS66DP02 (4 feet), IS66DP03 (1 foot), IS66DP04 (11 feet), and IS66DP06 (11 feet). Native soil consisting of sand, silt, and clay was encountered beneath the fill at depths ranging from 9 to 17 feet bgs at locations IS66DP02, IS66DP04, and IS66DP06.

4.3.1.3 Silt, Clay, and Sand

Neither fill nor ash was visible at the surface or encountered in the subsurface at locations IS66DP01, IS66DP07, IS66DP09, and IS66DP10. The soil at Site 66 consists mostly of silt, clay,

and sand. The surface soil (0 to 6 inches bgs) was observed to be generally dark brown to very dark brown silt that is generally loose, contains organic material in the form of roots and leaves, and may contain little to some sand. Large chunks of waste debris at the site are typically buried or partially buried by the surface soil, but in general, small particles of waste do not appear to be disseminated within this unit. The subsurface lithology consisted 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.

At a depth of 8 feet bgs at location IS66DP01 and a depth of 18 feet bgs at location IS66DP10, the mottled silt and clay were observed to be underlain by a dark gray to dark olive gray, medium stiff lean clay. This clay also appears to have been encountered at location IS66DP06 where it is layered with peat.

4.3.2 Site Hydrogeology

Static groundwater levels were measured with an electric water level meter in the soil borings at locations IS66DP01 through IS66DP10 prior to groundwater sampling on April 13, 16, and 17, 2007. Static groundwater levels ranged from approximately 1.5 feet bgs (IS66DP08) to 10.0 feet bgs (IS66DP10). This groundwater level range corresponds to an approximate elevation range of 7.4 feet amsl (IS66DP07) to 20.8 feet amsl (IS66DP10). Figure 4-3 is an interpreted water table elevation contour map using the static groundwater level elevation data. As shown in Figure 4-3, shallow groundwater flows to the east and southeast toward the unnamed creek.

4.4 Surface Soil

A summary of the constituents detected in the 20 surface soil samples collected from Site 66 is presented in Table 4-1; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-1 in Appendix B. Surface soil sample locations are shown on Figure 3-1.

4.4.1 VOCs

Styrene was the only VOC detected in surface soil (Figure 4-4). It was detected in one sample from location IS66DP07 at a concentration of 16 micrograms per kilogram (µg/kg). IS66DP07 is located in the southernmost portion of the site, just north of Olsen Road.

4.4.2 SVOCs

One or more SVOCs were detected in 12 of the 20 surface soil samples (Figure 4-5). SVOCs were not detected in samples from the following locations: IS66DP04 through IS66DP07, IS66DP09 through IS66SO11, and IS66SO14. Most of the SVOCs detected (18 of 65 SVOCs) were in samples from locations IS66SO12 and IS66SO15. The sample from location IS66SO15, however, had most of the SVOC detections with the maximum concentrations. Location IS66SO15 is in the southern portion of Site 66. Only two SVOCs, acenaphthylene (340 J µg/kg) and bis(2-ethylhexyl)phthalate (27,000 µg/kg), had maximum detected concentrations at other sample locations.

4.4.3 Pesticides/PCBs

PCBs were not detected in any surface soil samples. One or more pesticides were detected in all samples except the samples from locations IS66DP10 and IS66SO14 (Figure 4-6). Location IS66DP10 is to the east of the Site 66 boundary, and IS66SO14 is centrally located within an ash pile. The sample from location IS66SO15 had the majority of maximum pesticide concentrations.

4.4.4 Explosives

Perchlorate was the only explosive constituent detected in the surface soil (Figure 4-7); it was detected at concentrations ranging from 1.2 J µg/kg (at IS66SO20) to 18 J µg/kg (at IS66DP07). Perchlorate was detected in all soil samples except the samples from locations IS66SO16, IS66SO17, and IS66SO19, which are located within the eastern bank of the unnamed creek.

4.4.5 Inorganics

Except for antimony, cadmium, sodium, and thallium, all metals were detected in the surface soil samples (Figure 4-8). Twelve of the 20 detected metals were detected in all samples; they are aluminum, barium, chromium, cobalt, copper, iron, lead, manganese, nickel, potassium, vanadium, and zinc. The sample from location IS66SO15, located in the southern portion of the site, had most of the maximum concentrations of metals detected.

4.4.6 Summary

In summary, samples from locations IS66DP10 and IS66SO14 had the least number of detections; only perchlorate and several metals were detected at these two locations. Except for PCBs, which were not detected in any samples, the other groups of parameters were detected in one or more samples. There is no trend in the spatial distribution of the compounds.

4.5 Subsurface Soil

A summary of the constituents detected in the subsurface soil samples is presented in Table 4-2; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-2 in Appendix B. Figure 3-1 shows subsurface soil sample locations.

4.5.1 VOCs

VOCs were not detected in any of the subsurface soil samples collected from Site 66.

4.5.2 SVOCs

Several SVOCs were detected in 7 of 10 samples (Figure 4-9); SVOCs were not detected in the samples from locations IS66DP01, IS66DP09, and IS66DP10. The subsurface soil sample from location IS66DP07 contained the highest frequency of detections and the highest concentrations of SVOCs. This sample was collected from the southern boundary of the site, just north of Olsen Road.

4.5.3 Pesticides/PCBs

PCBs were not detected in any of the 10 subsurface soil samples. One or more pesticides were detected in all samples except the sample from location IS66DP09 (Figure 4-10). Overall, the sample from IS66DP07 exhibited the highest frequency of pesticide detections. The following is a summary of pesticide detections:

- 4,4′-Dichlorodiphenyldichloroethane (4,4′-DDD) was detected in nine samples, with concentrations ranging from 1.6 J µg/kg (IS66DP08) to 83,000 µg/kg (IS66DP04).
- 4,4′-Dichlorodiphenyldichloroethene (4,4′-DDE) was detected in six samples, with concentrations ranging from 2.6 J µg/kg (IS66DP08) to 280 J µg/kg (IS66DP04).
- 4,4′-Dichlorodiphenyltrichloroethane (4,4′-DDT) was detected in five samples, with concentrations ranging from 10 µg/kg (IS66DP05 and IS66DP08) to 620 µg/kg (IS66DP04).
- Dieldrin was detected at a concentration of 2 J µg/kg in the samples from IS66DP03 and IS66DP07.
- Endosulfan I was detected at a concentration of 1.3 J µg/kg in the sample from IS66DP07.
- Endosulfan II was detected at a concentration of 1.2 J µg/kg in the samples from IS66DP03 and IS66DP07.
- Endosulfan sulfate was detected at a concentration of 7.7 J µg/kg in the sample from IS66DP07.
- Endrin was detected at a concentration of 0.91 J µg/kg in the sample from IS66DP02.
- Endrin aldehyde was detected at concentrations of 1.8 J µg/kg and 19 J µg/kg in the samples from IS66DP02 and IS66DP07, respectively.
- Endrin ketone was detected at concentrations of 2.4 J µg/kg and 29 J µg/kg in the samples from IS66DP02 and IS66DP07, respectively.
- Heptachlor epoxide was detected in four samples with concentrations ranging from 0.74 J µg/kg (IS66DP03) to 210 J µg/kg (IS66DP04).
- Methoxychlor was detected at concentrations of 77 J µg/kg and 8.3 J µg/kg in the samples from IS66DP07 and IS66DP08, respectively.
- Alpha benzene hexachloride (alpha-BHC) was detected at a concentration of 4 J µg/kg in the sample from IS66DP07.
- Beta-BHC was detected at concentrations of 0.82 J µg/kg and 8.5 J µg/kg in the samples from IS66DP03 and IS66DP07, respectively.
- Alpha-chlordane was detected at a concentration of 3.9 J µg/kg in the sample from IS66DP05.
- Gamma-chlordane was detected in five samples with concentrations ranging from 0.5 J µg/kg (IS66DP08) to 240 J µg/kg (IS66DP04).

4.5.4 Explosives

Perchlorate was the only explosive constituent detected in subsurface soil (Figure 4-11). It was detected in 6 of the 10 samples at concentrations ranging from 0.85 J µg/kg (IS66DP02) to 2.8 J µg/kg (IS66DP04). Perchlorate was not detected in samples from locations IS66DP01, IS66DP03, IS66DP05, and IS66DP06.

4.5.5 Inorganics

Twenty of 24 inorganics were detected in one or more subsurface samples (Figure 4-12). All metals except antimony, silver, sodium, and thallium were detected in all 10 samples. Metals were detected throughout the site; the majority of the maximum concentrations were detected in the sample from location IS66DP03, which was centrally located within an ash pile. Cyanide was detected at only one sample location (IS66DP04). Fourteen metals were detected in all Site 66 samples: aluminum, arsenic, barium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, vanadium, and zinc.

4.5.6 Summary

In summary, samples from locations IS66DP01, IS66DP09, and IS66DP10 had the least number of constituents detected. Except for PCBs, which were not detected in any samples, there is no trend in the spatial distribution of the detected compounds.

4.6 *In Situ* Groundwater

A summary of the constituents detected in the *in situ* groundwater samples is presented in Table 4-3; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-3 in Appendix B. Groundwater sample locations are shown on Figure 3-1.

Because of low water production at two locations, IS66DP01 and IS66DP10, not all sample parameters were analyzed with the volume of groundwater collected. Both of these sample locations are outside the Site 66 boundary. As shown in Table 4-3, detected constituents were observed in one or more *in situ* groundwater samples.

4.6.1 VOCs

VOCs were not detected in any of the *in situ* groundwater samples.

4.6.2 SVOCs

Two SVOCs were detected in groundwater at Site 66 (Figure 4-13): acenaphthene at a concentration of 3 J µg/L (IS66DP06) and di-n-butylphthalate at a concentration of 2 J µg/L (IS66DP01). Because of insufficient groundwater volume, the sample from location IS66DP10 was not analyzed for SVOCs.

4.6.3 Pesticides/PCBs

PCBs were not detected in any of the groundwater samples. Four pesticides (4,4′-DDD, 4,4′-DDE, 4,4′-DDT, and heptachlor epoxide) were detected in only one groundwater sample from location IS66DP04, in the center of the site within the fill area (Figure 4-14).

Because of insufficient groundwater volume, the sample from location IS66DP10 was not analyzed for pesticides and PCBs.

4.6.4 Explosives

Perchlorate was the only explosive constituent detected in three of the eight samples analyzed for explosives (Figure 4-15). Perchlorate concentrations ranged from 0.08 J µg/L (IS66DP09) to 0.58 J µg/L (IS66DP03). Because of insufficient groundwater volume, the samples from locations IS66DP01 and IS66DP10 were not analyzed for explosives.

4.6.5 Inorganics

Of the 19 total metals detected, the following 7 metals were detected in all groundwater samples: barium, calcium, iron, magnesium, manganese, potassium, and sodium (Figure 4-16). Generally, the highest concentrations of total metals were found in sample IS66DP01 (north of the site boundary) and IS66DP04 (located in the fill area).

Of the 12 dissolved metals detected, the following 8 metals were detected in all groundwater samples: aluminum, barium, calcium, iron, magnesium, manganese, potassium, and sodium (Figure 4-16). Generally, the highest concentrations of dissolved metals were found in sample IS66DP04 (located within the fill area) and IS66DP08 (located in the southern portion of the site).

4.6.6 Summary

In summary, VOCs and PCBs were not detected in any of the samples. Metals were the prevalent compounds detected in all samples. Perchlorate was detected in three samples, two SVOCs were detected at two locations, and four pesticides were detected in only one sample from location IS66DP04. None of the results exhibit a trend in the spatial distribution of detected compounds. Location IS66DP04 had the most detected compounds and the overall highest concentrations of detected compounds.

4.7 Surface Water

A summary of the constituents detected in the surface water samples is presented in Table 4-4; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-4 in Appendix B. Surface water sampling locations are shown on Figure 3-1.

4.7.1 VOCs

Both of the VOCs detected in Site 66 surface water samples, bromodichloromethane (2 J µg/L) and chloroform (1 J µg/L), were collected from sample location IS66SWSD03 (Figure 4-17). This sample was located adjacent to a water body in the southeastern portion of the site.

4.7.2 SVOCs

SVOCs were not detected in any of the surface water samples.

4.7.3 Pesticides/PCBs

Pesticides and PCBs were not detected in any of the surface water samples.

4.7.4 Explosives

Explosives were not detected in any of the surface water samples.

4.7.5 Inorganics

Several of the 14 total metals detected were observed in samples from all locations, with the majority of maximum concentrations found at sample locations IS66SWSD01, IS66SWSD02, and IS66SWSD03 (Figure 4-18). The lowest detections were observed in samples from locations IS66SWSD03 and IS66SWSD04. Several of the detected nine dissolved metals were observed in samples from all locations, with the majority of maximum concentrations found at sample locations IS66SWSD01 and IS66SWSD02.

4.7.6 Summary

In summary, SVOCs, pesticides, PCBs, and explosives were not detected in any of the surface water samples. Only two VOCs were detected at low concentrations at location IS66SWSD03. Several total and dissolved metals were detected in all samples; however, most of the maximum concentrations were observed in samples from locations IS66SWSD01, IS66SWSD02, and IS66SWSD03. Location IS66SWSD01 is outside and to the north of the approximated site boundary, whereas the other samples were collected from within the site boundary. The results do not show an upgradient to downgradient trend in the distribution of total and dissolved metals at the site.

4.8 Sediment

A summary of the constituents detected in sediment samples is presented in Table 4-5; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-5 in Appendix B. Sediment sample locations are shown on Figure 3-1.

4.8.1 VOCs

One VOC, 2-butanone, was detected in one sample from location IS66SWSD02 at a concentration of 24 J µg/kg (Figure 4-19). This compound was not detected in the duplicate sample collected from this location nor in any of the other four samples.

4.8.2 SVOCs

No SVOCs were detected at location IS66SWSD01. Only fluoranthene was detected at location IS66SWSD02 at a concentration of 260 J µg/kg (Figure 4-20). All detected SVOCs, with the exception of fluoranthene, were found in samples collected from locations in the southern portion of the site: IS66SWSD03, IS66SWSD04, and IS66SWSD05. With the exception of location IS66SWSD03, which is not along the unnamed creek, the results at the other four locations show an increase in concentrations from the upgradient locations (nondetect) to IS66SWSD05. This could be due to the transport and deposition of sediment along the creek bed.

4.8.3 Pesticides/ PCBs

One PCB, Aroclor-1260, was detected in one sediment sample from location IS66SWSD03 at a concentration of 160 µg/kg (Figure 4-21). Of the 10 pesticides detected, 4 (4,4'-DDD, 4,4'-DDE, alpha-chlordane, and gamma-chlordane) were detected in all sediment samples. The majority of the maximum concentrations detected were found in sample IS66SWSD02, located in the pond in the central portion of the site.

4.8.4 Explosives

Perchlorate was the only explosive constituent detected, at concentrations of 2.9 J µg/kg (IS66SWSD01) and 7.7 J µg/kg (IS66SWSD03) (Figure 4-22).

4.8.5 Inorganics

Several metals were detected in all samples with the majority of maximum concentrations detected in the sample from location IS66SWSD02, located in the pond in the central portion of the site (Figure 4-23). Of note is that mercury was only detected in a sediment sample from location IS66SWSD03 at a concentration of 1.3 milligrams per kilogram (mg/kg).

4.8.6 Summary

In summary, sample locations in the southern portion of the site (IS66SWSD03 through IS66SWSD05) had SVOC detections; these locations also had more detections and exhibited higher concentrations of pesticides than locations IS66SWSD01 and IS66SWSD02 in the northern portion of the site.

4.9 Ash

A summary of the constituents detected in ash samples is presented in Table 4-6; detected concentrations are shown in bold font. Raw analytical results are presented in Table B-6 in Appendix B. Ash sample locations are shown on Figure 3-1.

Octachlorodibenzo-p-dioxin and total heptachlorodibenzo-p-dioxin were detected in all three ash samples collected from locations IS66ASH01 through IS66ASH03 (Figure 4-24) at concentrations ranging from 0.0841 J µg/kg (IS66ASH03) to 0.175 J µg/kg (IS66ASH01) and 0.012 µg/kg (IS66ASH03) to 0.017 µg/kg (IS66ASH02), respectively. Total pentachlorodibenzofuran and total tetrachlorodibenzofuran also were detected in the sample from location IS66ASH01 at concentrations of 0.02 µg/kg and 0.029 µg/kg, respectively. Of the three locations, IS66ASH02 (the southernmost ash pile at the site) exhibited more detections than the other two locations.

Although the ash pile samples were only analyzed for dioxins and furans, one surface soil sample from location IS66SO14 was collected from Ash Pile 3 and analyzed for VOCs, SVOCs, pesticides, PCBs, explosives, and total metals. The results from this surface soil sample indicate that VOCs, SVOCs, pesticides, and PCBs were all nondetects. Perchlorate was detected at a concentration of 4.1 J µg/kg and several metals were detected in the sample. This information is intended to augment the dioxin and furans data obtained for ash at Site 66. It would appear that metals are the prevalent compounds in ash.

Table 4-1
Summary of Constituents Detected in Surface Soil
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66SO11	IS66SO12	IS66SO13	IS66SO14
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001
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	04/12/07	04/12/07	04/12/07	04/12/07
Chemical Name														
Volatile Organic Compounds (ug/kg)														
Styrene	12 U	10 U	10 U	13 U	10 U	10 U	**16**	10 U	10 U	11 U	32 U	12 U	13 U	25 U
Semi-volatile Organic Compounds (ug/kg)														
2-Methylnaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**130 J**	460 U	670 U
Acenaphthene	430 U	**130 J**	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**1,100**	460 U	670 U
Acenaphthylene	**220 J**	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**120 J**	460 U	670 U
Anthracene	**110 J**	**360 J**	**110 J**	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**2,500**	460 U	670 U
Benzo(a)anthracene	**530**	**1,700**	**370 J**	400 U	420 U	390 U	400 U	**390**	410 U	420 U	720 U	**9,800**	**100 J**	670 U
Benzo(a)pyrene	**670**	**1,700**	**340 J**	400 U	420 U	390 U	400 U	**310 J**	410 U	420 U	720 U	**11,000**	460 U	670 U
Benzo(b)fluoranthene	**680**	**1,900**	**380 J**	400 U	420 U	390 U	400 U	**360 J**	410 U	420 U	720 U	**8,900**	**110 J**	670 U
Benzo(g,h,i)perylene	**510**	**1,100**	**230 J**	400 U	420 U	390 U	400 U	**160 J**	410 U	420 U	720 U	**9,500**	460 U	670 U
Benzo(k)fluoranthene	**670**	**1,600**	**380 J**	400 U	420 U	390 U	400 U	**360 J**	410 U	420 U	720 U	**11,000**	460 U	670 U
Carbazole	430 U	**300 J**	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**1,900**	460 U	670 U
Chrysene	**710**	**1,800**	**410**	400 U	420 U	390 U	400 U	**420**	410 U	420 U	720 U	**10,000**	**110 J**	670 U
Di-n-butylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U
Dibenz(a,h)anthracene	**170 J**	**400 J**	**86 J**	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**1,700**	460 U	670 U
Dibenzofuran	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**420 J**	460 U	670 U
Fluoranthene	**1,000**	**3,200**	**590**	400 U	420 U	390 U	400 U	**780**	410 U	420 U	720 U	**19,000**	**240 J**	670 U
Fluorene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**720**	460 U	670 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	720 U	**9,600**	460 U	670 U
Naphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	**360 J**	460 U	670 U
Phenanthrene	**340 J**	**1,400**	**270 J**	400 U	420 U	390 U	400 U	**250 J**	410 U	420 U	720 U	**11,000**	**160 J**	670 U
Pyrene	**1,200**	**2,800**	**570**	400 U	420 U	390 U	400 U	**720**	410 U	420 U	720 U	**16,000**	**190 J**	670 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	720 U	490 U	460 U	670 U
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	1.7 B	6.7 B	1 B	6.7 U
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	**2.2 J**	**9.6**	**7.9**	6.7 U
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	7.2 U	**35**	**8 J**	6.7 U
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	3.7 U	2.5 U	2.4 U	3.5 U
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	7.2 U	**2.2 J**	**0.97 J**	6.7 U
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	3.7 U	**0.88 J**	2.4 U	3.5 U
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	7.2 U	**1.9 J**	4.6 U	6.7 U
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	7.2 U	**4 J**	4.6 U	6.7 U
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	7.2 U	**1.2 J**	4.6 U	6.7 U
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	7.2 U	**13**	**1.3 J**	6.7 U
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	7.2 U	**23**	**1.1 J**	6.7 U
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	3.7 U	2.5 U	2.4 U	3.5 U
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	3.7 U	2.5 U	2.4 U	3.5 U
Methoxychlor	**10 J**	**13 J**	**17 J**	21 U	22 U	**8.1 J**	20 U	19 U	21 U	22 U	37 U	**60 J**	24 U	35 U
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	3.7 U	**3.2**	2.4 U	3.5 U
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	**2.1 J**	2.5 U	**0.78 J**	3.5 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	**3.2 J**	**4.5 J**	**1.8 J**	3.5 U
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	3.7 U	2.5 U	2.4 U	3.5 U
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	3.7 U	**9.6**	2.4 U	3.5 U
Explosives (ug/kg)														
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**	**11 J**	**1.5 J**	**4.2 J**	**4.1 J**

Table 4-1
Summary of Constituents Detected in Surface Soil
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NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66SO11	IS66SO12	IS66SO13	IS66SO14
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001
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	04/12/07	04/12/07	04/12/07	04/12/07
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**	**6,100**	**4,550**	**5,060**	**5,560**
Arsenic	**17.9**	**10.1**	**10.6**	0.64 U	**6**	**3.1**	**2.6**	**34.9**	**2.1 J**	**3.1**	**1.4 J**	**5**	**2.3 J**	**108**
Barium	**41.9 J**	**108**	**51.9**	**33.5 J**	**64.4**	**40.8 J**	**66.2**	**92.3**	**43.1 J**	**57**	**180**	**126**	**62.5**	**64.4 J**
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	**2.9**	0.28 B	0.29 B	**1.6 J**
Calcium	**766 J**	**2,360**	**1,370**	**402 J**	**293 J**	**249 J**	**445 J**	**15,900**	**2,990**	94 B	**3,220**	**4,440**	**412 J**	**1,950**
Chromium	**15.7**	**19.4**	**13.3**	**22.8**	**16.7**	**14.8**	**14**	**11**	**12.9**	**16.1**	**10.1**	**11.9**	**8.2**	**15.5**
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**	**17.9 J**	**3.7 J**	**4 J**	**10.3 J**
Copper	**28.1**	**26.8**	**14.1**	**22.9**	**10.8**	**9.7**	**9.8**	**20.6**	**11.3**	**7.3**	**23**	**31.4**	**29**	**33.3**
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	0.13 U	**0.12 J**	0.084 U	**0.2 J**
Iron	**11,000**	**22,300**	**13,900**	**35,500**	**29,000**	**19,500**	**18,000**	**17,300**	**11,400**	**16,600**	**5,550**	**10,900**	**10,100**	**31,600**
Lead	**73.6**	**160**	**112**	**12.1**	**13.5**	**12.3**	**11.6**	**41.8**	**14.1**	**10.6**	**20.8**	**267**	**42.6**	**12.1**
Magnesium	**584 J**	**743 J**	**685 J**	**762 J**	**882 J**	**816 J**	**987 J**	**2,310**	**875 J**	**912 J**	**1,060 J**	**894 J**	**398 J**	237 B
Manganese	**134**	**405**	**112**	**34.7**	**56**	**111**	**380**	**207**	**142**	**69.9**	**110**	**305**	**152**	**74.8**
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	0.15 B	**0.5 J**	0.14 B	0.45 B
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**	**31.9**	**10.8 J**	**5.4 J**	**28.1**
Potassium	**308 J**	**446 J**	**357 J**	**708 J**	**605 J**	**600 J**	**562 J**	**590 J**	**560 J**	**509 J**	**373 J**	**345 J**	**359 J**	**290 J**
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	1.1 U	0.76 U	0.8 U	**1.7 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	0.5 U	**0.36 J**	0.14 U	0.45 U
Vanadium	**32.5**	**31**	**25.8**	**26.7**	**30.9**	**26.8**	**24.2**	**75.9**	**19.3**	**29.9**	**19.9 J**	**27.5**	**36.5**	**115**
Zinc	**129**	**120**	**83.6**	**33.4**	**28**	**26.5**	**35.8**	**47.3**	**47.2**	**25.1**	**114**	**244**	**16.5**	**36.9**

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
R - Unreliable result
UJ - Analyte not detected, result may be estimated
Bold text indicates that the compound is detected.

Table 4-1
Summary of Constituents Detected in Surface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21
Sample ID	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001
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
Chemical Name								
Volatile Organic Compounds (ug/kg)								
Styrene	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Semi-volatile Organic Compounds (ug/kg)								
2-Methylnaphthalene	**710 J**	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Acenaphthene	**8,500 J**	**26,000 J**	**190 J**	520 U	410 U	**110 J**	540 U	800 U
Acenaphthylene	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	**340 J**
Anthracene	**21,000 J**	**56,000 J**	**500 J**	520 U	410 U	**170 J**	540 U	**530 J**
Benzo(a)anthracene	**69,000 J**	**170,000 J**	**1,800**	**530**	**220 J**	**320 J**	**350 J**	**3,100**
Benzo(a)pyrene	**58,000 J**	**180,000 J**	**2,000**	**540**	**200 J**	**1,400 J**	**440 J**	**4,400**
Benzo(b)fluoranthene	**130,000 J**	**180,000 J**	**1,800**	**660 J**	**320 J**	**260 J**	**620 J**	**7,200 J**
Benzo(g,h,i)perylene	**2,500 J**	**92,000 J**	**1,100**	**210 J**	**94 J**	**390 J**	**270 J**	**2,000**
Benzo(k)fluoranthene	**130,000 J**	**150,000 J**	**2,000**	**570**	**310 J**	**240 J**	**710**	**5,100**
Carbazole	**18,000 J**	**45,000 J**	**350 J**	520 U	410 U	**140 J**	540 U	800 U
Chrysene	**70,000 J**	**180,000 J**	**1,900**	**600**	**260 J**	**250 J**	**550**	**3,100**
Di-n-butylphthalate	**540 J**	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Dibenz(a,h)anthracene	**9,000 J**	**44,000 J**	**580**	**110 J**	410 U	400 U	540 U	**950**
Dibenzofuran	**3,000 J**	**9,200 J**	540 U	520 U	410 U	400 U	540 U	800 U
Fluoranthene	**130,000 J**	**350,000 J**	**3,300**	**840**	**330 J**	**570**	**740**	**1,700**
Fluorene	**4,200 J**	**14,000 J**	**130 J**	520 U	410 U	**140 J**	540 U	800 U
Indeno(1,2,3-cd)pyrene	**58,000 J**	**120,000 J**	**1,500**	**360 J**	**120 J**	**560**	**320 J**	**2,700**
Naphthalene	**2,300 J**	**6,100 J**	540 U	520 U	410 U	400 U	540 U	800 U
Phenanthrene	**72,000 J**	**210,000 J**	**1,800**	**290 J**	**88 J**	**440 J**	**270 J**	800 U
Pyrene	**100,000 J**	**280,000 J**	**2,800**	**860**	**410 J**	**950 J**	**670**	**3,200**
bis(2-Ethylhexyl)phthalate	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Pesticide/Polychlorinated Biphenyls (ug/kg)								
4,4'-DDD	**8.5 J**	**14 J**	3.5 B	5.2 U	1.6 B	4.3 B	4.7 B	**30**
4,4'-DDE	**250 J**	**210 J**	**11**	**10**	**5.5 J**	**7.4**	**23**	**58**
4,4'-DDT	**230 J**	**260 J**	**21**	**18**	**30 J**	**40**	**60**	**16 J**
Aldrin	**5.2 J**	**12 J**	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
Dieldrin	**5.9 J**	**40 J**	**1.8 J**	**1.2 J**	**2.4 J**	**2.8 J**	**1.2 J**	**6.3 J**
Endosulfan I	**3.8 J**	**15 J**	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
Endosulfan II	**23 J**	5.9 U	5.4 U	5.2 U	4.1 U	**8.3 J**	5.4 U	**3.9 J**
Endosulfan sulfate	**38 J**	**9.8 J**	5.4 U	5.2 U	4.1 U	4 U	5.4 U	**6.8 J**
Endrin	5.9 U	5.9 U	5.4 U	5.2 U	4.1 U	4 U	5.4 U	8 U
Endrin aldehyde	**52 J**	**62 J**	**6.9**	5.2 U	4.1 U	4 U	5.4 U	**2 J**
Endrin ketone	**78 J**	**96 J**	**7.6**	**3.4 J**	**1.8 J**	**4.7 J**	**2.3 J**	**16**
Heptachlor	3 U	3 U	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
Heptachlor epoxide	**3.3 J**	**5.3 J**	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
Methoxychlor	**230 J**	30 U	**13 J**	27 U	**27**	**23 J**	28 U	**51 J**
alpha-BHC	3 U	3 U	**0.77 J**	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
alpha-Chlordane	3 U	3 U	**1.5 J**	2.7 U	**0.63 J**	**0.49 J**	**0.78 J**	4.1 U
beta-BHC	**9.6 J**	3 U	**2.1 J**	**3.1 J**	2.1 U	**1.4 J**	**2 J**	**2.5 J**
delta-BHC	3 U	3 U	2.8 U	2.7 U	2.1 U	2.1 U	2.8 U	4.1 U
gamma-Chlordane	**12 J**	3 U	**0.93 J**	**1.2 J**	2.1 U	2.1 U	2.8 U	4.1 U
Explosives (ug/kg)								
Perchlorate	**2.4 J**	**4.6 J**	3.2 U	3.5 U	2.6 U	2.4 U	**1.2 J**	**1.8 J**

Table 4-1
Summary of Constituents Detected in Surface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21
Sample ID	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001
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
Chemical Name								
Total Metals (mg/kg)								
Aluminum	**7,030**	**6,800**	**6,200**	**5,660**	**4,700**	**4,000**	**6,290**	**9,790**
Arsenic	**30.5**	**33.1**	**9.8**	**22.2**	**6.6**	**6.1**	**5.5**	**3.5 J**
Barium	**200**	**206**	**111**	**93.6**	**50.7**	**43.5 J**	**73.8**	**98.1**
Beryllium	**1 J**	**1.1 J**	0.32 B	0.35 B	0.35 B	0.27 B	0.29 B	0.56 B
Calcium	**2,930**	**3,050**	**6,510**	**4,410**	**2,130 J**	**4,750 J**	**5,100**	**6,150**
Chromium	**18.9**	**17.8**	**11.9**	**10.9**	**11**	**8.6**	**13.9**	**14**
Cobalt	**5.6 J**	**5.3 J**	**4.5 J**	**5 J**	**9.8 J**	**3.6 J**	**3.1 J**	**9.5 J**
Copper	**56.9**	**59.6**	**19.7**	**32.4**	**9.7**	**10.1**	**27.8**	**41.5**
Cyanide	**0.28 J**	**0.2 J**	0.098 U	**0.1 J**	0.075 U	**0.083 J**	**0.25 J**	**0.57 J**
Iron	**23,400**	**22,500**	**13,700**	**10,500**	**12,700**	**9,740**	**12,900**	**18,500**
Lead	**305**	**225**	**188**	**121**	**27.4**	**28.4**	**182**	**38.7**
Magnesium	**690 J**	**732 J**	**708 J**	**726 J**	**424 J**	**549 J**	**897 J**	**1,700 J**
Manganese	**521**	**448**	**368**	**518**	**345**	**263**	**350**	**381**
Mercury	**1.3 J**	**1.1 J**	**0.56 J**	0.33 B	**0.41 J**	**0.53 J**	**22.1 J**	**1.9 J**
Nickel	**24**	**25.3**	**7.7 J**	**9.2 J**	**6.5 J**	**6.4 J**	**10.7 J**	**15 J**
Potassium	**456 J**	**462 J**	**835 J**	**434 J**	**324 J**	**298 J**	**651 J**	**1,140 J**
Selenium	**3.4**	**2.6**	0.96 U	0.85 U	0.68 U	0.61 U	0.83 U	1.3 U
Silver	**0.48 J**	0.42 U	**0.19 J**	0.38 U	**0.34 J**	**0.49 J**	**0.55 J**	0.58 U
Vanadium	**87**	**89**	**27.8**	**33.9**	**26.4**	**24.6**	**32.4**	**40**
Zinc	**203**	**177**	**373**	**373**	**35.1**	**37.4**	**149**	**211**

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
R - Unreliable result
UJ - Analyte not detected, result may be estimated
Bold text indicates that the compound is detected.

Table 4-2
Summary of Constituents Detected in Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
Chemical Name											
Semi-volatile Organic Compounds (ug/kg)											
2-Methylnaphthalene	420 U	410 U	520 U	**210 J**	650 U	550 U	420 U	**210 J**	420 U	420 U	410 U
Acenaphthene	420 U	**150 J**	520 U	**830**	650 U	550 U	420 U	**1,700**	420 U	420 U	410 U
Acenaphthylene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	**170 J**	420 U	420 U	410 U
Acetophenone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	**110 J**	420 U	420 U	410 U
Anthracene	420 U	**440**	520 U	**180 J**	650 U	**110 J**	420 U	**4,700 J**	420 U	420 U	410 U
Benzo(a)anthracene	420 U	**1,000**	**270 J**	**820**	650 U	**280 J**	420 U	**15,000**	**170 J**	420 U	410 U
Benzo(a)pyrene	420 U	**850**	**320 J**	**600 J**	650 U	**200 J**	420 U	**15,000**	**110 J**	420 U	410 U
Benzo(b)fluoranthene	420 U	**920**	**470 J**	**640**	650 U	**240 J**	420 U	**15,000**	**160 J**	420 U	410 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
Benzo(k)fluoranthene	420 U	**920**	**310 J**	**570 J**	650 U	**180 J**	420 U	**13,000**	**120 J**	420 U	410 U
Carbazole	420 U	**360 J**	**220 J**	610 U	650 U	550 U	420 U	**2,900**	420 U	420 U	410 U
Chrysene	420 U	**1,200**	**350 J**	**850**	650 U	**290 J**	420 U	**15,000**	**190 J**	420 U	410 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
Dibenzofuran	420 U	**170 J**	520 U	**410 J**	650 U	550 U	420 U	**710**	420 U	420 U	410 U
Fluoranthene	420 U	**2,500**	**770**	**1,600**	**200 J**	**720**	**120 J**	**27,000**	**340 J**	420 U	410 U
Fluorene	420 U	**280 J**	**120 J**	610 U	650 U	550 U	420 U	**1,200**	420 U	420 U	410 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
Naphthalene	420 U	**110 J**	**140 J**	610 U	650 U	550 U	420 U	**630**	420 U	420 U	410 U
Phenanthrene	420 U	**1,900**	**510 J**	**1,400**	650 U	**500 J**	**230 J**	**17,000**	**100 J**	420 U	410 U
Pyrene	420 U	**1,900**	**580**	**1,600**	**150 J**	**590**	420 U	**25,000**	**300 J**	420 U	410 U
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**
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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**

Table 4-2
Summary of Constituents Detected in Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
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**
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**
Barium	**63.4**	**47.7 J**	**131**	**87.8**	**85.3**	**126**	**66**	**46.3 J**	**34.5 J**	**66.8**	**48 J**
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
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
Calcium	**311 J**	**3,710**	**22,600**	**2,550**	**2,000**	**965 J**	**858 J**	**255 J**	**597 J**	**1,630**	35.3 B
Chromium	**11.8**	**17.4**	**26.2**	**13.3**	**16.8**	**14.4**	**11**	**19.1**	**13.3**	**16**	**13.6**
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**
Copper	**17.2**	**21.5**	**40.4**	**10.6**	**31**	**31.5**	**9.9**	**12.7**	**11.1**	**18.4**	**12**
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
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**
Lead	**10.8**	**31.5**	**186**	**37.5**	**242 J**	**1,420 J**	**16**	**10.3**	**18.7**	**11.5**	**11.3**
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**
Manganese	**64.8**	**71.9**	**272**	**106**	**79**	**73.8**	**139**	**278**	**78.4**	**93.1**	**24.6**
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
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**
Potassium	**714 J**	**552 J**	**913 J**	**722 J**	**552 J**	**370 J**	**547 J**	**680 J**	**641 J**	**1,010 J**	**778 J**
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
Vanadium	**19**	**62.2**	**156**	**31.5**	**166 J**	**73.4 J**	**21.7**	**26.2**	**25.4**	**22**	**23**
Zinc	**35.3**	**36.2**	**391**	**61.5**	**201 J**	**429 J**	**30.7**	**35**	**28.8**	**47.6**	**27.4**

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
UJ - Analyte not detected, result may be estimated
Bold text indicates that the compound is detected.

Table 4-3
Summary of Constituents Detected in In situ Groundwater
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
Chemical Name											
Semi-volatile 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
Di-n-butylphthalate	**2 J**	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
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
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
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
Explosives (ug/L)											
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
Total Metals (ug/L)											
Aluminum	**15,300**	**304**	**320**	**1,460**	**34,300**	**12,800**	**2,860**	**11,500 J**	**252**	**493**	**31,800**
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**
Barium	**1,910**	**77.5 J**	**79.2 J**	**128 J**	**848**	**238**	**171 J**	**124 J**	**347**	**137 J**	**290**
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
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**
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**
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**
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**
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
Iron	**64,800**	**11,100**	**11,200**	**2,270**	**242,000**	**22,200**	**26,200**	**25,100 J**	**28,600**	**42,100**	**66,900**
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**
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**
Manganese	**1,540**	**678**	**686**	**137**	**2,020**	**778**	**1,850**	**1,580**	**5,630**	**2,490**	**741**
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**
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**
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**
Sodium	**38,400**	**10,500**	**10,600**	**4,750 J**	**22,500**	**43,800**	**47,700**	**26,700**	**20,800**	**28,000**	**6,940**
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**
Zinc	**235**	12.1 B	12.5 B	**188**	**960**	**77.9**	21.7 B	**63.2 J**	13.2 B	**22.7**	**153**
Dissolved Metals (ug/L)											
Arsenic	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
Barium	**148 J**	**90.6 J**	**83.5 J**	**110 J**	**280**	**63.3 J**	**145 J**	**23 J**	**346**	**130 J**	NA
Calcium	**5,090**	**31,500**	**33,000**	**52,400**	**80,100**	**3,750 J**	**48,600**	**1,130 J**	**7,580**	**71,200**	NA
Cobalt	**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
Iron	**8,770**	**20,300 J**	**15,200 J**	**870**	**108,000**	**3,340**	**24,200**	**8,300**	**26,400**	**43,000**	NA
Magnesium	**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
Manganese	**759**	**921**	**809**	**131**	**937**	**652**	**1,820**	**1,090**	**6,050**	**2,490**	NA
Nickel	**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
Potassium	**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
Silver	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
Sodium	**36,200**	**10,900**	**10,900**	**4,780 J**	**23,800**	**43,900**	**47,400**	**25,400**	**20,800**	**27,900**	NA
Vanadium	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

Notes:
NA - Not analyzed
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
Bold text indicates that the compound is detected.

Table 4-4
Summary of Constituents Detected in Surface Water
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
Volatile Organic Compounds (ug/L)						
Bromodichloromethane	10 U	10 U	10 U	**2 J**	10 U	10 U
Chloroform	10 U	10 U	10 U	**1 J**	10 U	10 U
Total Metals(ug/L)						
Aluminum	**352**	122 B	**525**	113 B	**215**	**314**
Arsenic	2.7 U	2.7 U	**3.9 J**	**3.9 J**	2.7 U	2.7 U
Barium	**50.3 J**	**54.9 J**	**45.4 J**	**42.4 J**	**30.3 J**	**40 J**
Calcium	**4,860 J**	**15,700**	**16,300**	**15,700**	**6,900**	**11,700**
Cobalt	**12.5 J**	**9 J**	**3.5 J**	**3.1 J**	**6.1 J**	**5.6 J**
Iron	**3,870**	**7,960**	**2,410 J**	**1,770 J**	**4,250**	**6,310**
Lead	1.3 U	**2.6 J**	**2.2 J**	**1.6 J**	**1.5 J**	**1.8 J**
Magnesium	**3,930 J**	**3,450 J**	**7,250**	**7,090**	**2,640 J**	**3,960 J**
Manganese	**587**	**1,230**	**350**	**341**	**654**	**648**
Nickel	**7.1 J**	3.4 B	3.5 B	3.4 B	3.6 B	**5.1 J**
Potassium	**1,350 J**	**1,140 J**	**1,570 J**	**1,500 J**	**1,830 J**	**2,160 J**
Sodium	**19,700**	**17,100**	**37,000**	**36,800**	**44,200**	**41,300**
Vanadium	**6.1 J**	**2.7 J**	**2.6 J**	1.8 B	**2.5 J**	**4.6 J**
Zinc	8.5 B	5.9 B	11.3 B	8.6 B	7.5 B	**65**
Dissolved Metals (ug/L)						
Barium	**48.7 J**	**49.9 J**	**41.1 J**	**41.2 J**	**22.7 J**	**33.9 J**
Calcium	**4,900 J**	**13,300**	**17,100**	**16,600**	**6,790**	**11,400**
Cobalt	**11.8 J**	**9.7 J**	2.6 B	2.4 B	**5.3 J**	4.4 B
Iron	**1,400**	**3,400**	73.5 B	**211 J**	**724**	**2,370**
Magnesium	**4,030 J**	**3,440 J**	**7,520**	**7,400**	**2,650 J**	**3,890 J**
Manganese	**586**	**1,280**	**343**	**343**	**623**	**617**
Nickel	**6 J**	2.9 B	1.6 B	1.6 B	2.3 B	2.7 B
Potassium	**1,490 J**	**1,230 J**	**1,700 J**	**1,660 J**	**2,010 J**	**2,280 J**
Sodium	**20,200**	**17,900**	**38,600**	**38,300**	**45,200**	**41,400**

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
Bold text indicates that the compound is detected.

Table 4-5
Summary of Constituents Detected in Sediment
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	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	13 U	**24 J**	55 U	21 U	12 U	13 U
Semi-volatile Organic Compounds (ug/kg)						
Acenaphthene	430 U	1,200 U	1,200 U	830 U	510 U	**100 J**
Anthracene	430 U	1,200 U	1,200 U	830 U	**120 J**	**260 J**
Benzo(a)anthracene	430 U	1,200 U	1,200 U	**240 J**	**410 J**	**710**
Benzo(a)pyrene	430 U	1,200 U	1,200 U	**210 J**	**390 J**	**490 J**
Benzo(b)fluoranthene	430 U	1,200 U	1,200 U	**330 J**	**450 J**	**590**
Benzo(g,h,i)perylene	430 U	1,200 U	1,200 U	830 U	**230 J**	**310 J**
Benzo(k)fluoranthene	430 U	1,200 U	1,200 U	**240 J**	**360 J**	**640**
Carbazole	430 U	1,200 U	1,200 U	830 U	510 U	**170 J**
Chrysene	430 U	1,200 U	1,200 U	**300 J**	**440 J**	**730**
Dibenz(a,h)anthracene	430 U	1,200 U	1,200 U	830 U	510 U	**120 J**
Fluoranthene	430 U	**260 J**	1,200 U	**360 J**	**770**	**1,500**
Fluorene	430 U	1,200 U	1,200 U	830 U	510 U	**110 J**
Indeno(1,2,3-cd)pyrene	430 U	1,200 U	1,200 U	830 U	**280 J**	**390 J**
Phenanthrene	430 U	1,200 U	1,200 U	830 U	**360 J**	**940**
Pyrene	430 U	1,200 U	1,200 U	**330 J**	**630**	**1,100**
Pesticide/Polychlorinated Biphenyls (ug/kg)						
4,4'-DDD	**66**	**38 J**	**47**	**4.4 J**	**13**	**40**
4,4'-DDE	**8.1**	**22**	**21**	**8.4**	**4 J**	**4.2 J**
4,4'-DDT	3.1 B	12 U	12 B	**12 J**	3.1 B	2.7 B
Aroclor-1260	43 U	120 U	120 U	**160**	51 U	50 U
Endrin	4.3 U	12 U	12 U	8.3 U	**2.1 J**	5 U
Endrin aldehyde	4.3 U	12 U	**3.4 J**	8.3 U	**2.5 J**	5 U
Endrin ketone	4.3 U	12 U	**2.6 J**	8.3 U	**4.1 J**	**1.2 J**
Methoxychlor	22 U	61 U	**35 J**	43 U	**17 J**	26 U
alpha-Chlordane	**1.2 J**	**5.3 J**	**4 J**	**1.8 J**	**0.82 J**	**1.6 J**
beta-BHC	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	**1.2 J**
gamma-Chlordane	**0.67 J**	**2.3 J**	**1.6 J**	**1.6 J**	**5**	**0.65 J**
Explosives (ug/kg)						
Perchlorate	**2.9 J**	5.9 R	6.3 R	**7.7 J**	3 R	3.1 R
Total Metals (mg/kg)						
Aluminum	**928**	**14,300**	**16,500**	**9,170**	**2,190**	**3,030**
Arsenic	**1.2 J**	**6.2 J**	**8.2**	**8.9**	**13.8**	**3.5**
Barium	**16.2 J**	**154**	**170**	**93.6 J**	**34.2 J**	**36.6 J**
Calcium	**285 J**	**3,690**	**3,580 J**	**2,980**	**1,180 J**	**577 J**
Chromium	**2.6**	**26.8**	**30.2**	**13.2**	**8.2**	**7.9**
Cobalt	**3.1 J**	**40.9**	**28.9 J**	**19 J**	**15.3**	**5.5 J**
Copper	**3.5 J**	**67.8**	**73**	**30.2 J**	**13.2**	**12.9**
Iron	**3,460**	**21,300**	**25,400**	**11,300**	**13,700**	**13,700**
Lead	**3.6**	**67.5**	**78.9**	**39.8**	**70.9**	**21.6**
Magnesium	**180 J**	**1,310 J**	**1,470 J**	**1,090 J**	**868 J**	**372 J**
Manganese	**119**	**247**	**292**	**229**	**122**	**126**
Mercury	0.057 U	0.18 B	0.16 B	**1.3**	0.072 B	0.076 U
Nickel	**2 J**	**31.6**	**30**	**20.6**	**14.2**	**7.7 J**
Potassium	**66.1 J**	**878 J**	**977 J**	**679 J**	**164 J**	**219 J**
Vanadium	**9.6 J**	**61.5**	**68**	**25.7**	**26.2**	**20.6**
Zinc	**10.4**	**216**	**228**	**186**	**55.1**	**47.9**

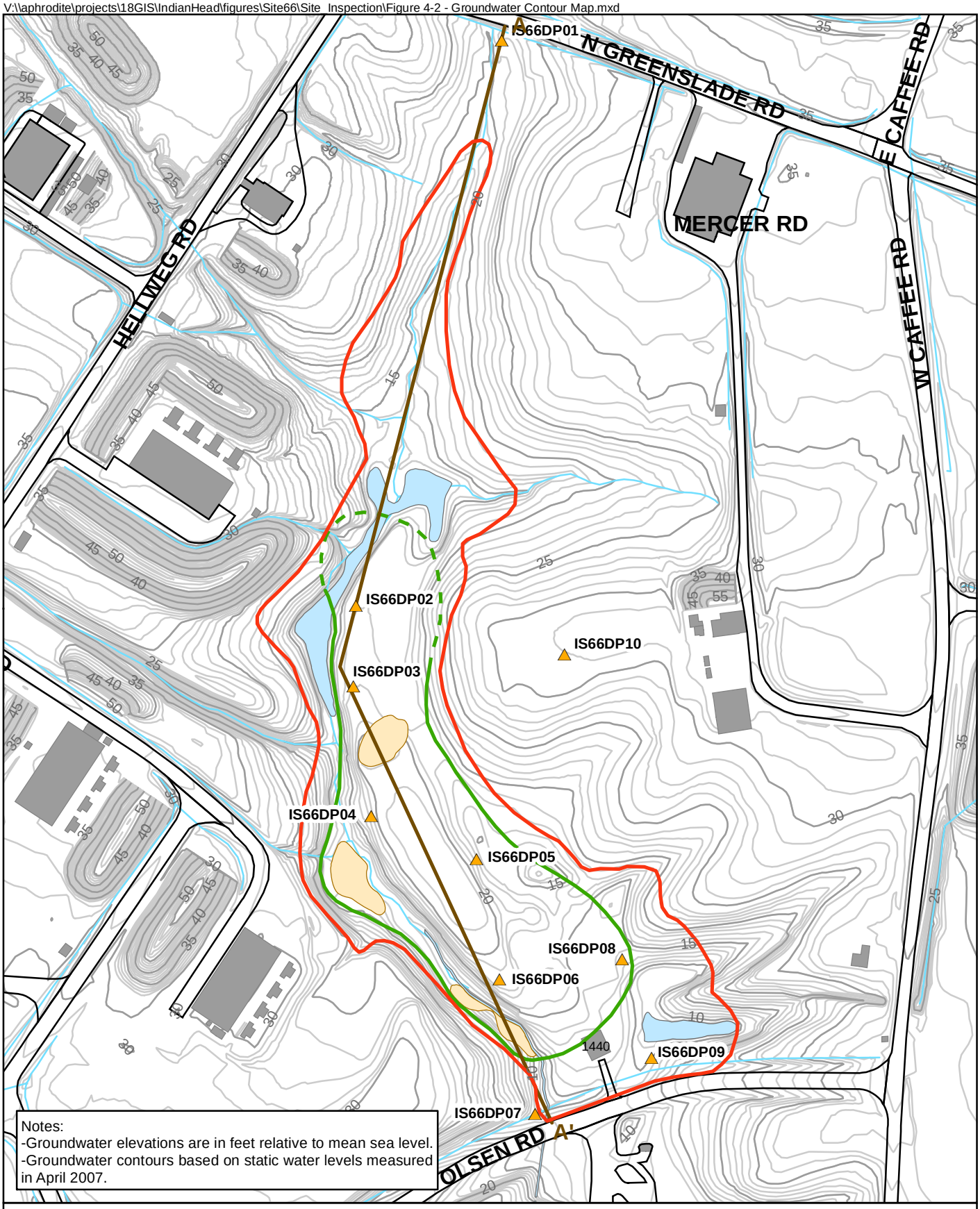
Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
R - Unreliable result
UJ - Analyte not detected, result may be estimated
Bold text indicates that the compound is detected.

Table 4-6
Summary of Constituents in Ash Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66ASH01	IS66ASH02		IS66ASH03
Sample ID	IS66AH01	IS66AH02	IS66AH02P	IS66AH03
Sample Date	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name				
Dioxin/Furans (UG_KG)				
Octachlorodibenzo-p-dioxin	**0.175 J**	**0.113 J**	**0.167 J**	**0.0841 J**
Total heptachlorodibenzo-p-dioxin	**0.013**	**0.016**	**0.017**	**0.012**
Total pentachlorodibenzofuran	**0.02**	9.42 U	8.24 U	10.0 U
Total tetrachlorodibenzofuran	**0.029**	3.77 U	3.29 U	4.02 U

Notes:
U - Analyte not detected
J - Result may be estimated
Bold text indicates that the compound is detected.

V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-2 - Groundwater Contour Map.mxd



Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Roads
- Buildings
- Surface Waterbodies
- Ash Pile
- Cross-Section Location
- Surface Water
- 5 Foot Elevation Contour
- Approximate Limit of Fill

N

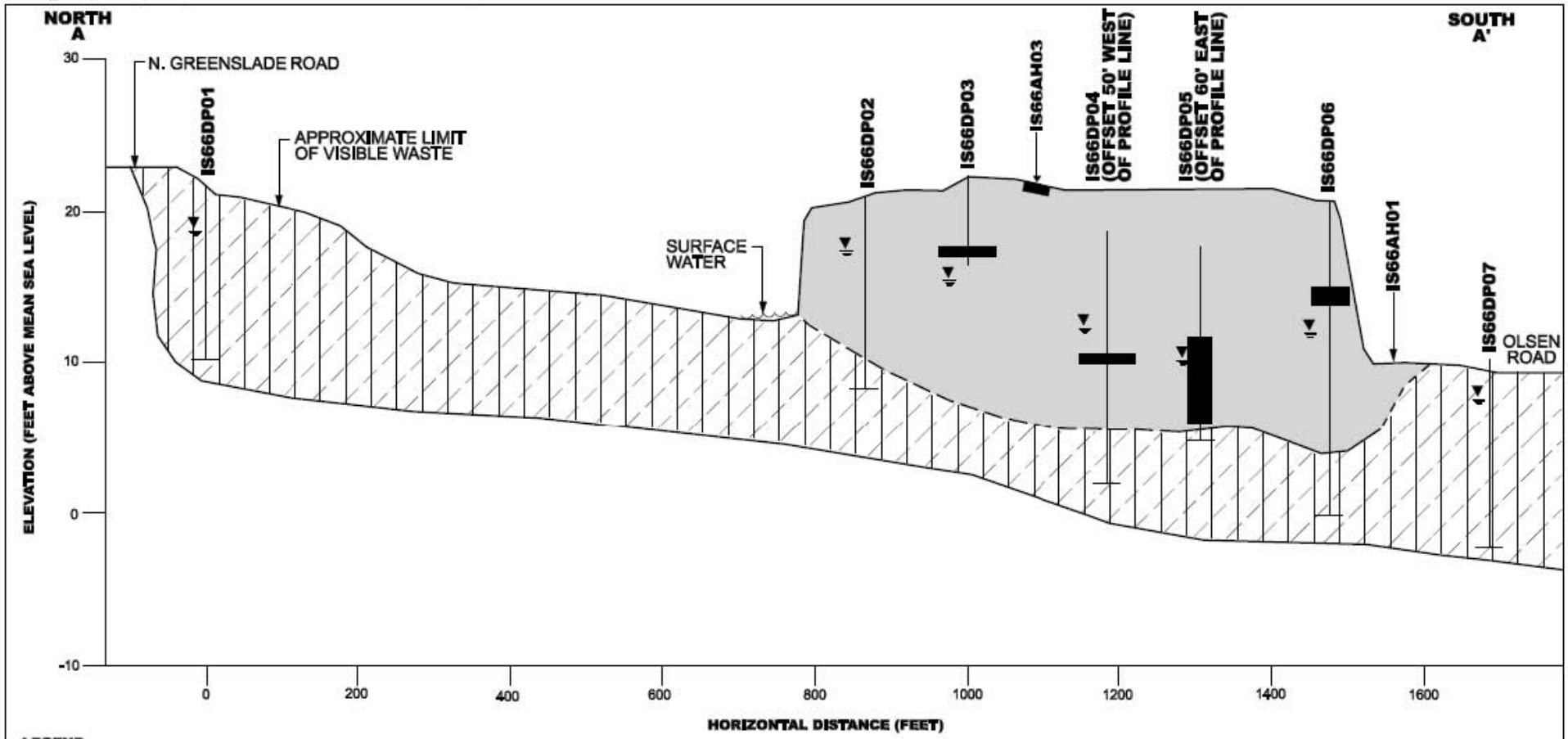
0 100 200 Feet

1 INCH = 200'

Figure 4-1
Cross-Section Location
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

CH2MHILL

317395_f06.dgn (PHL | NDM | US NAVFACENGCOM - INDIAN HEAD - 2004)



LEGEND

- ASH-LIKE MATERIAL
- FILL CONSISTING OF SILT, SAND, DEBRIS (WOOD, CONCRETE, CINDERS, METAL) AND ASH-LIKE MATERIAL
- SILT AND CLAY
- INFERRED BETWEEN SOIL BORING LOCATIONS
- IS66DP01 — SAMPLE POINT ID (WITH PROJECTED DISTANCE, IF ANY)
- SOIL BORING
- STATIC GROUNDWATER LEVEL (ELEVATION IN FEET)
- END OF BORING (ELEVATION IN FEET)

Y
X

SCALE:

HORIZONTAL: 1" = 100'
VERTICAL: 1" = 10'

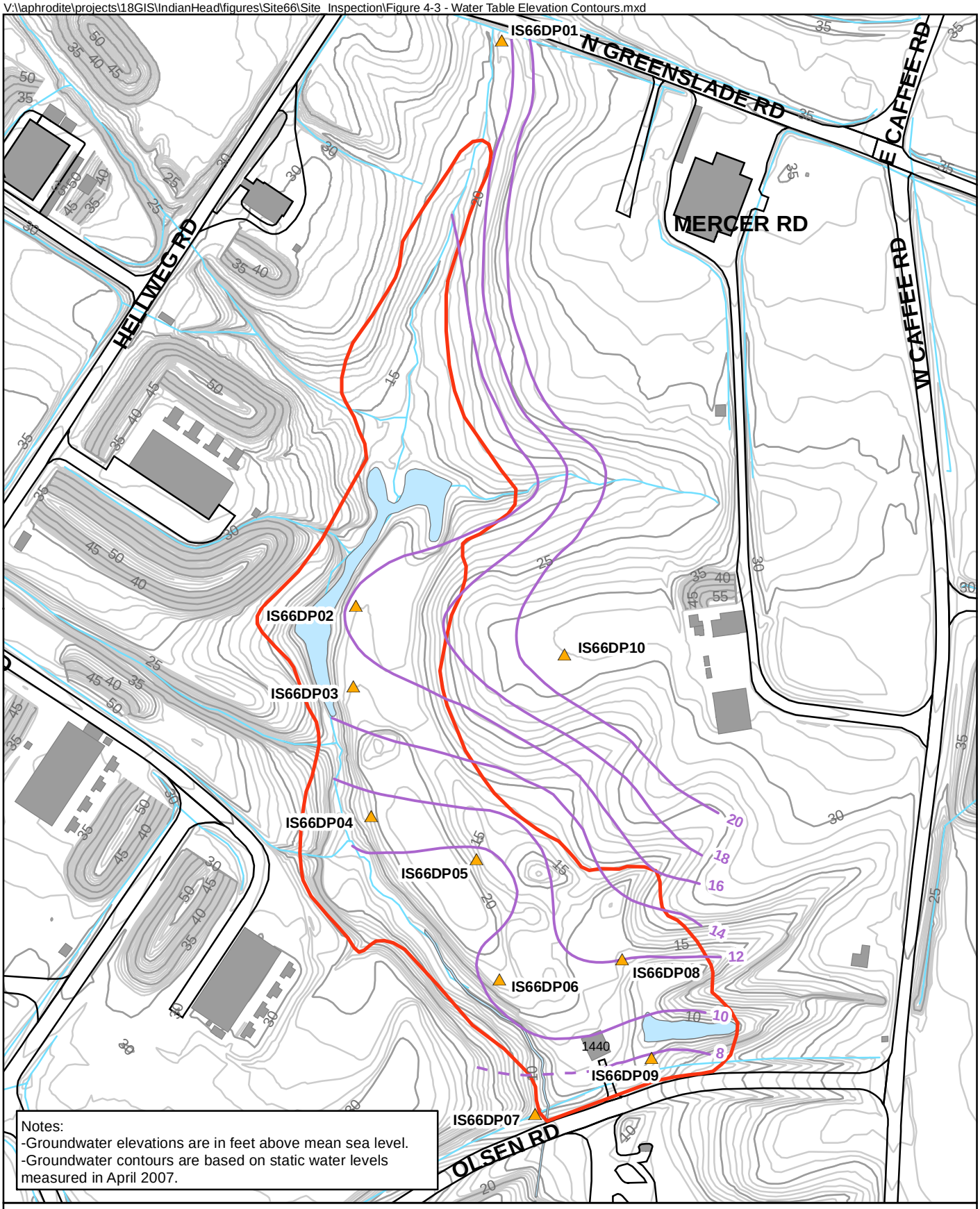
NOTES:

1. SOIL BORING LOCATIONS WERE SURVEYED WITH A GPS UNIT BY CH2M HILL.
2. STATIC WATER LEVELS WERE MEASURED APRIL 13, 16-17, 2007.
3. DESCRIPTION OF THE FILL OBTAINED FROM SOIL BORING LOGS.
4. SEE APPENDIX A IN THE SITE INSPECTION REPORT FOR SITE 66 TURKEY RUN DISPOSAL AREA (CH2M HILL, 2007) FOR SOIL BORING LOGS.
5. LOCATIONS OF UNIT BOUNDARIES SHOWN ON THE CROSS-SECTION ARE ESTIMATED AND ARE BASED ON INFORMATION AT SOIL BORINGS.

Figure 4-2
Geologic Cross Section A-A'
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

CH2MHILL

V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-3 - Water Table Elevation Contours.mxd



Legend

- Soil/In Situ Groundwater Sample
- Groundwater Contour, April 2007 (dashed where inferred)
- Site Boundary (Approximate Limit of Visible Waste Material)
- Roads
- Buildings
- Surface Waterbodies
- Surface Water
- 5 Foot Elevation Contour

N

0 130 260 Feet

1 INCH = 200'

Figure 4-3
Water Table Elevation Contours
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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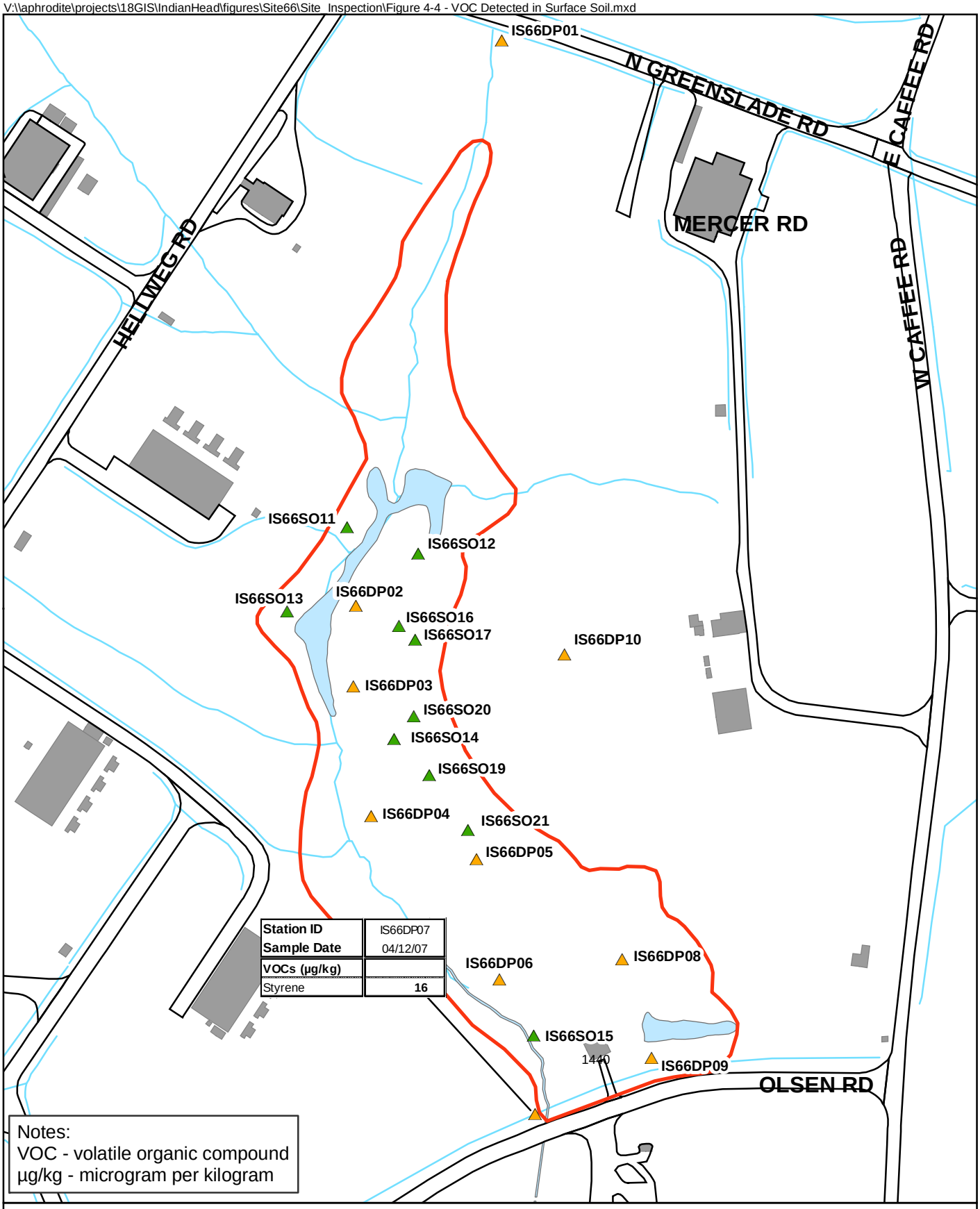
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-4 - VOC Detected in Surface Soil.mxd



Legend

- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-4
Volatile Organic Compounds Detected in Surface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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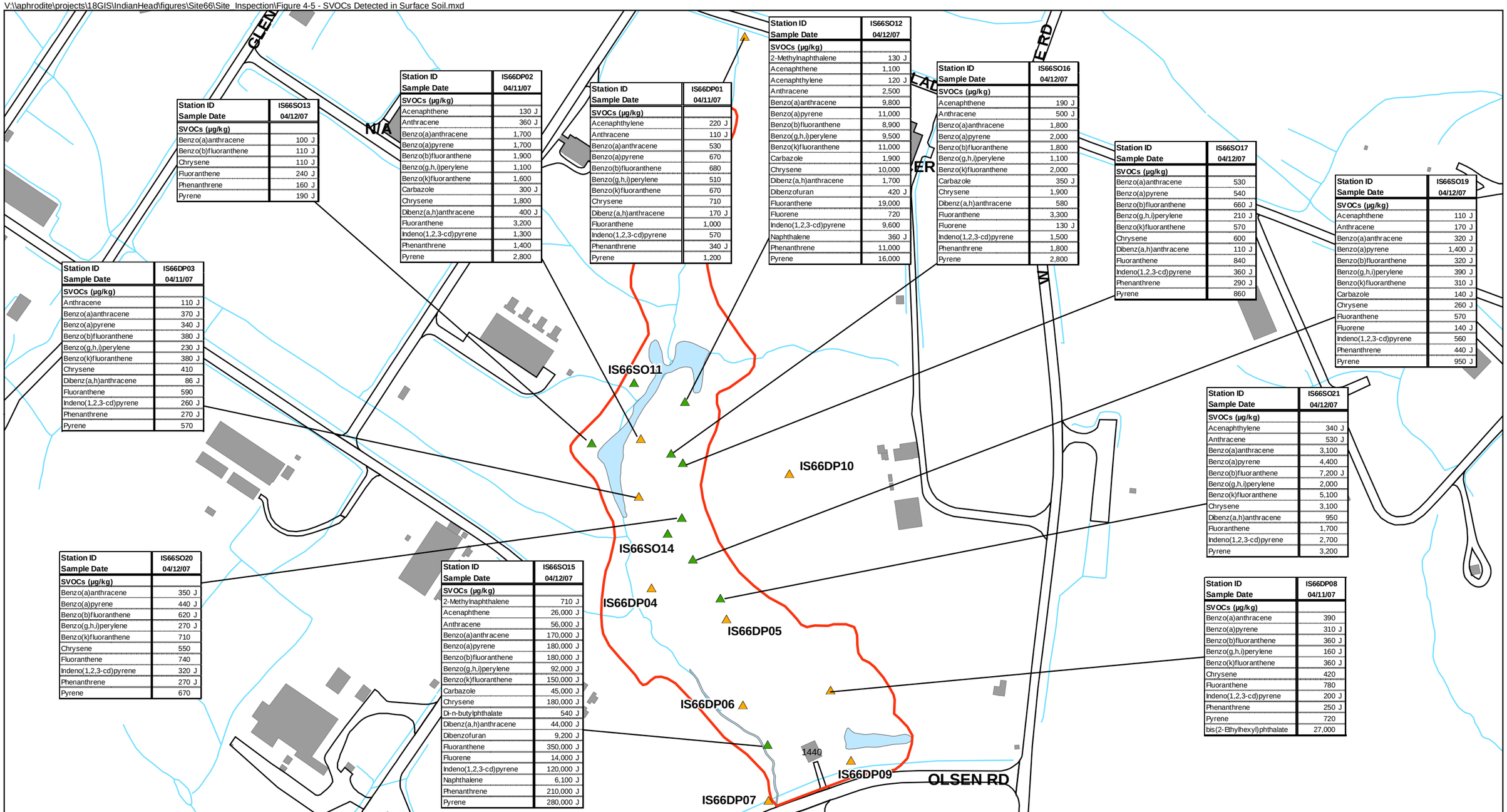
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-5 - SVOCs Detected in Surface Soil.mxd



Station ID Sample Date	IS66SO13 04/12/07
SVOCs (µg/kg)	
Benzo(a)anthracene	100 J
Benzo(b)fluoranthene	110 J
Chrysene	110 J
Fluoranthene	240 J
Phenanthrene	160 J
Pyrene	190 J

Station ID Sample Date	IS66DP02 04/11/07
SVOCs (µg/kg)	
Acenaphthene	130 J
Anthracene	360 J
Benzo(a)anthracene	1,700
Benzo(a)pyrene	1,700
Benzo(b)fluoranthene	1,900
Benzo(g,h,i)perylene	1,100
Benzo(k)fluoranthene	1,600
Carbazole	300 J
Chrysene	1,800
Dibenz(a,h)anthracene	400 J
Fluoranthene	3,200
Indeno(1,2,3-cd)pyrene	1,300
Phenanthrene	1,400
Pyrene	2,800

Station ID Sample Date	IS66DP01 04/11/07
SVOCs (µg/kg)	
Acenaphthylene	220 J
Anthracene	110 J
Benzo(a)anthracene	530
Benzo(a)pyrene	670
Benzo(b)fluoranthene	680
Benzo(g,h,i)perylene	510
Benzo(k)fluoranthene	670
Chrysene	710
Dibenz(a,h)anthracene	170 J
Fluoranthene	1,000
Indeno(1,2,3-cd)pyrene	570
Phenanthrene	340 J
Pyrene	1,200

Station ID Sample Date	IS66SO12 04/12/07
SVOCs (µg/kg)	
2-Methylnaphthalene	130 J
Acenaphthene	1,100
Acenaphthylene	120 J
Anthracene	2,500
Benzo(a)anthracene	9,800
Benzo(a)pyrene	11,000
Benzo(b)fluoranthene	8,900
Benzo(g,h,i)perylene	9,500
Benzo(k)fluoranthene	11,000
Carbazole	1,900
Chrysene	10,000
Dibenz(a,h)anthracene	1,700
Dibenzofuran	420 J
Fluoranthene	19,000
Fluorene	720
Indeno(1,2,3-cd)pyrene	9,600
Naphthalene	360 J
Phenanthrene	11,000
Pyrene	16,000

Station ID Sample Date	IS66SO16 04/12/07
SVOCs (µg/kg)	
Acenaphthene	190 J
Anthracene	500 J
Benzo(a)anthracene	1,800
Benzo(a)pyrene	2,000
Benzo(b)fluoranthene	1,800
Benzo(g,h,i)perylene	1,100
Benzo(k)fluoranthene	2,000
Carbazole	350 J
Chrysene	1,900
Dibenz(a,h)anthracene	580
Fluoranthene	3,300
Fluorene	130 J
Indeno(1,2,3-cd)pyrene	1,500
Phenanthrene	1,800
Pyrene	2,800

Station ID Sample Date	IS66SO17 04/12/07
SVOCs (µg/kg)	
Benzo(a)anthracene	530
Benzo(a)pyrene	540
Benzo(b)fluoranthene	660 J
Benzo(g,h,i)perylene	210 J
Benzo(k)fluoranthene	570
Chrysene	600
Dibenz(a,h)anthracene	110 J
Fluoranthene	840
Indeno(1,2,3-cd)pyrene	360 J
Phenanthrene	290 J
Pyrene	860

Station ID Sample Date	IS66SO19 04/12/07
SVOCs (µg/kg)	
Acenaphthene	110 J
Anthracene	170 J
Benzo(a)anthracene	320 J
Benzo(a)pyrene	1,400 J
Benzo(b)fluoranthene	320 J
Benzo(g,h,i)perylene	390 J
Benzo(k)fluoranthene	310 J
Carbazole	140 J
Chrysene	260 J
Fluoranthene	570
Fluorene	140 J
Indeno(1,2,3-cd)pyrene	560
Phenanthrene	440 J
Pyrene	950 J

Station ID Sample Date	IS66DP03 04/11/07
SVOCs (µg/kg)	
Anthracene	110 J
Benzo(a)anthracene	370 J
Benzo(a)pyrene	340 J
Benzo(b)fluoranthene	380 J
Benzo(g,h,i)perylene	230 J
Benzo(k)fluoranthene	380 J
Chrysene	410
Dibenz(a,h)anthracene	86 J
Fluoranthene	590
Indeno(1,2,3-cd)pyrene	260 J
Phenanthrene	270 J
Pyrene	570

Station ID Sample Date	IS66SO21 04/12/07
SVOCs (µg/kg)	
Acenaphthylene	340 J
Anthracene	530 J
Benzo(a)anthracene	3,100
Benzo(a)pyrene	4,400
Benzo(b)fluoranthene	7,200 J
Benzo(g,h,i)perylene	2,000
Benzo(k)fluoranthene	5,100
Chrysene	3,100
Dibenz(a,h)anthracene	950
Fluoranthene	1,700
Indeno(1,2,3-cd)pyrene	2,700
Pyrene	3,200

Station ID Sample Date	IS66SO20 04/12/07
SVOCs (µg/kg)	
Benzo(a)anthracene	350 J
Benzo(a)pyrene	440 J
Benzo(b)fluoranthene	620 J
Benzo(g,h,i)perylene	270 J
Benzo(k)fluoranthene	710
Chrysene	550
Fluoranthene	740
Indeno(1,2,3-cd)pyrene	320 J
Phenanthrene	270 J
Pyrene	670

Station ID Sample Date	IS66SO15 04/12/07
SVOCs (µg/kg)	
2-Methylnaphthalene	710 J
Acenaphthene	26,000 J
Anthracene	56,000 J
Benzo(a)anthracene	170,000 J
Benzo(a)pyrene	180,000 J
Benzo(b)fluoranthene	180,000 J
Benzo(g,h,i)perylene	92,000 J
Benzo(k)fluoranthene	150,000 J
Carbazole	45,000 J
Chrysene	180,000 J
Di-n-butylphthalate	540 J
Dibenz(a,h)anthracene	44,000 J
Dibenzofuran	9,200 J
Fluoranthene	350,000 J
Fluorene	14,000 J
Indeno(1,2,3-cd)pyrene	120,000 J
Naphthalene	6,100 J
Phenanthrene	210,000 J
Pyrene	280,000 J

Station ID Sample Date	IS66DP08 04/11/07
SVOCs (µg/kg)	
Benzo(a)anthracene	390
Benzo(a)pyrene	310 J
Benzo(b)fluoranthene	360 J
Benzo(g,h,i)perylene	160 J
Benzo(k)fluoranthene	360 J
Chrysene	420
Fluoranthene	780
Indeno(1,2,3-cd)pyrene	200 J
Phenanthrene	250 J
Pyrene	720
bis(2-Ethylhexyl)phthalate	27,000

Legend

- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 400 Feet

1 INCH = 200'

Figure 4-5
Semivolatile Organic Compounds
Detected in Surface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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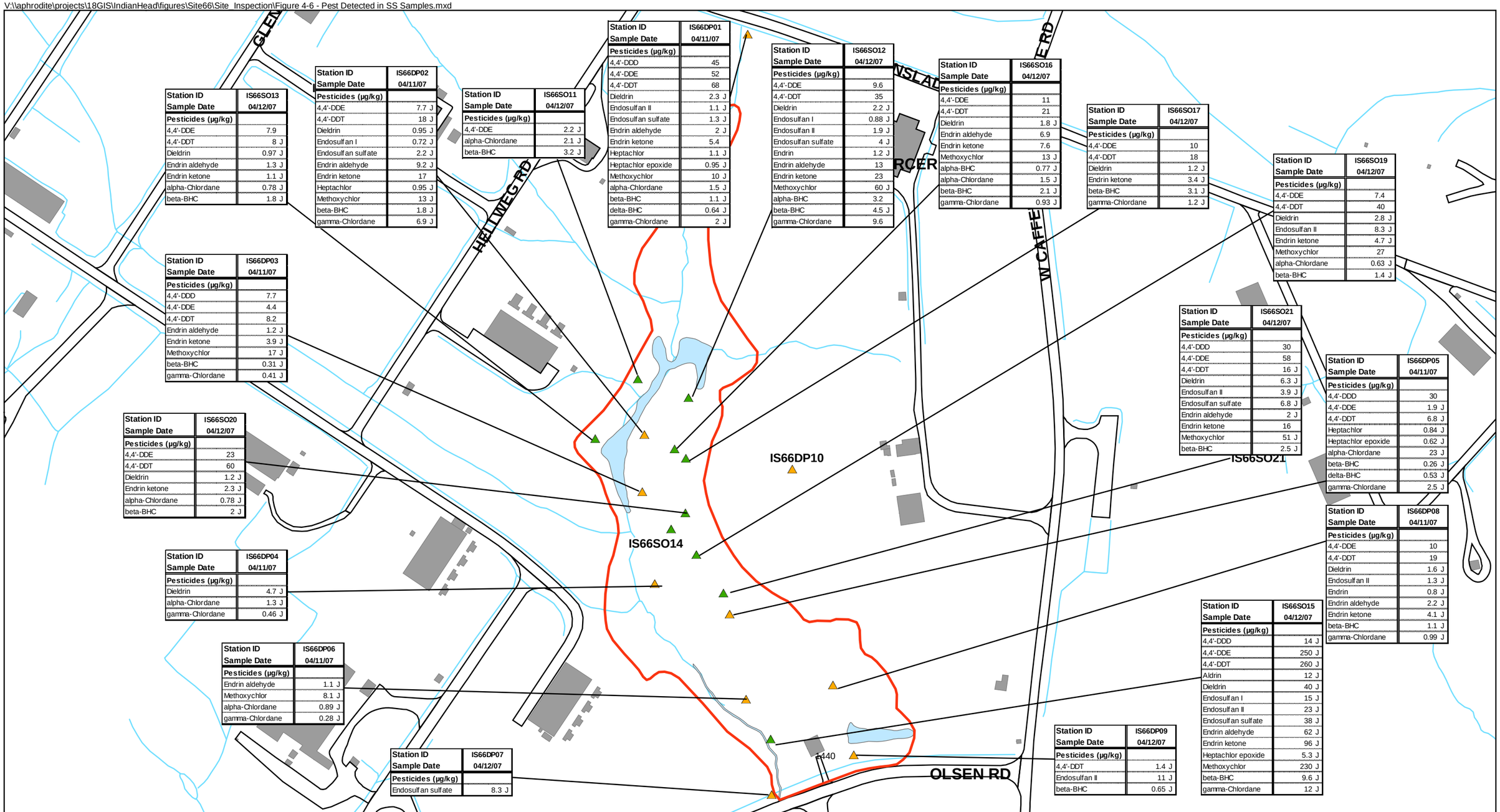
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-6 - Pest Detected in SS Samples.mxd



Station ID	IS66SO13
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	7.9
4,4'-DDT	8 J
Dieldrin	0.97 J
Endrin aldehyde	1.3 J
Endrin ketone	1.1 J
alpha-Chlordane	0.78 J
beta-BHC	1.8 J

Station ID	IS66DP02
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDE	7.7 J
4,4'-DDT	18 J
Dieldrin	0.95 J
Endosulfan I	0.72 J
Endosulfan sulfate	2.2 J
Endrin aldehyde	9.2 J
Endrin ketone	17
Heptachlor	0.95 J
Methoxychlor	13 J
beta-BHC	1.8 J
gamma-Chlordane	6.9 J

Station ID	IS66SO11
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	2.2 J
alpha-Chlordane	2.1 J
beta-BHC	3.2 J

Station ID	IS66DP01
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	45
4,4'-DDE	52
4,4'-DDT	68
Dieldrin	2.3 J
Endosulfan II	1.1 J
Endosulfan sulfate	1.3 J
Endrin aldehyde	2 J
Endrin ketone	5.4
Heptachlor	1.1 J
Heptachlor epoxide	0.95 J
Methoxychlor	10 J
alpha-Chlordane	1.5 J
beta-BHC	1.1 J
delta-BHC	0.64 J
gamma-Chlordane	2 J

Station ID	IS66SO12
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	9.6
4,4'-DDT	35
Dieldrin	2.2 J
Endosulfan I	0.88 J
Endosulfan II	1.9 J
Endosulfan sulfate	4 J
Endrin	1.2 J
Endrin aldehyde	13
Endrin ketone	23
Methoxychlor	60 J
alpha-BHC	3.2
beta-BHC	4.5 J
gamma-Chlordane	9.6

Station ID	IS66SO16
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	11
4,4'-DDT	21
Dieldrin	1.8 J
Endrin aldehyde	6.9
Endrin ketone	7.6
Methoxychlor	13 J
alpha-BHC	0.77 J
alpha-Chlordane	1.5 J
beta-BHC	2.1 J
gamma-Chlordane	0.93 J

Station ID	IS66SO17
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	10
4,4'-DDT	18
Dieldrin	1.2 J
Endrin ketone	3.4 J
beta-BHC	3.1 J
gamma-Chlordane	1.2 J

Station ID	IS66SO19
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	7.4
4,4'-DDT	40
Dieldrin	2.8 J
Endosulfan II	8.3 J
Endrin ketone	4.7 J
Methoxychlor	27
alpha-Chlordane	0.63 J
beta-BHC	1.4 J

Station ID	IS66DP03
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	7.7
4,4'-DDE	4.4
4,4'-DDT	8.2
Endrin aldehyde	1.2 J
Endrin ketone	3.9 J
Methoxychlor	17 J
beta-BHC	0.31 J
gamma-Chlordane	0.41 J

Station ID	IS66SO21
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDD	30
4,4'-DDE	58
4,4'-DDT	16 J
Dieldrin	6.3 J
Endosulfan II	3.9 J
Endosulfan sulfate	6.8 J
Endrin aldehyde	2 J
Endrin ketone	16
Methoxychlor	51 J
beta-BHC	2.5 J

Station ID	IS66DP05
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	30
4,4'-DDE	1.9 J
4,4'-DDT	6.8 J
Heptachlor	0.84 J
Heptachlor epoxide	0.62 J
alpha-Chlordane	23 J
beta-BHC	0.26 J
delta-BHC	0.53 J
gamma-Chlordane	2.5 J

Station ID	IS66SO20
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDE	23
4,4'-DDT	60
Dieldrin	1.2 J
Endrin ketone	2.3 J
alpha-Chlordane	0.78 J
beta-BHC	2 J

Station ID	IS66DP08
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDE	10
4,4'-DDT	19
Dieldrin	1.6 J
Endosulfan II	1.3 J
Endrin	0.8 J
Endrin aldehyde	2.2 J
Endrin ketone	4.1 J
beta-BHC	1.1 J
gamma-Chlordane	0.99 J

Station ID	IS66DP04
Sample Date	04/11/07
Pesticides (µg/kg)	
Dieldrin	4.7 J
alpha-Chlordane	1.3 J
gamma-Chlordane	0.46 J

Station ID	IS66SO15
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDD	14 J
4,4'-DDE	250 J
4,4'-DDT	260 J
Aldrin	12 J
Dieldrin	40 J
Endosulfan I	15 J
Endosulfan II	23 J
Endosulfan sulfate	38 J
Endrin aldehyde	62 J
Endrin ketone	96 J
Heptachlor epoxide	5.3 J
Methoxychlor	230 J
beta-BHC	9.6 J
gamma-Chlordane	12 J

Station ID	IS66DP06
Sample Date	04/11/07
Pesticides (µg/kg)	
Endrin aldehyde	1.1 J
Methoxychlor	8.1 J
alpha-Chlordane	0.89 J
gamma-Chlordane	0.28 J

Station ID	IS66DP09
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDT	1.4 J
Endosulfan II	11 J
beta-BHC	0.65 J

Station ID	IS66DP07
Sample Date	04/12/07
Pesticides (µg/kg)	
Endosulfan sulfate	8.3 J

Legend

- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 400 Feet

1 INCH = 200'

Figure 4-6
Pesticides Detected in Surface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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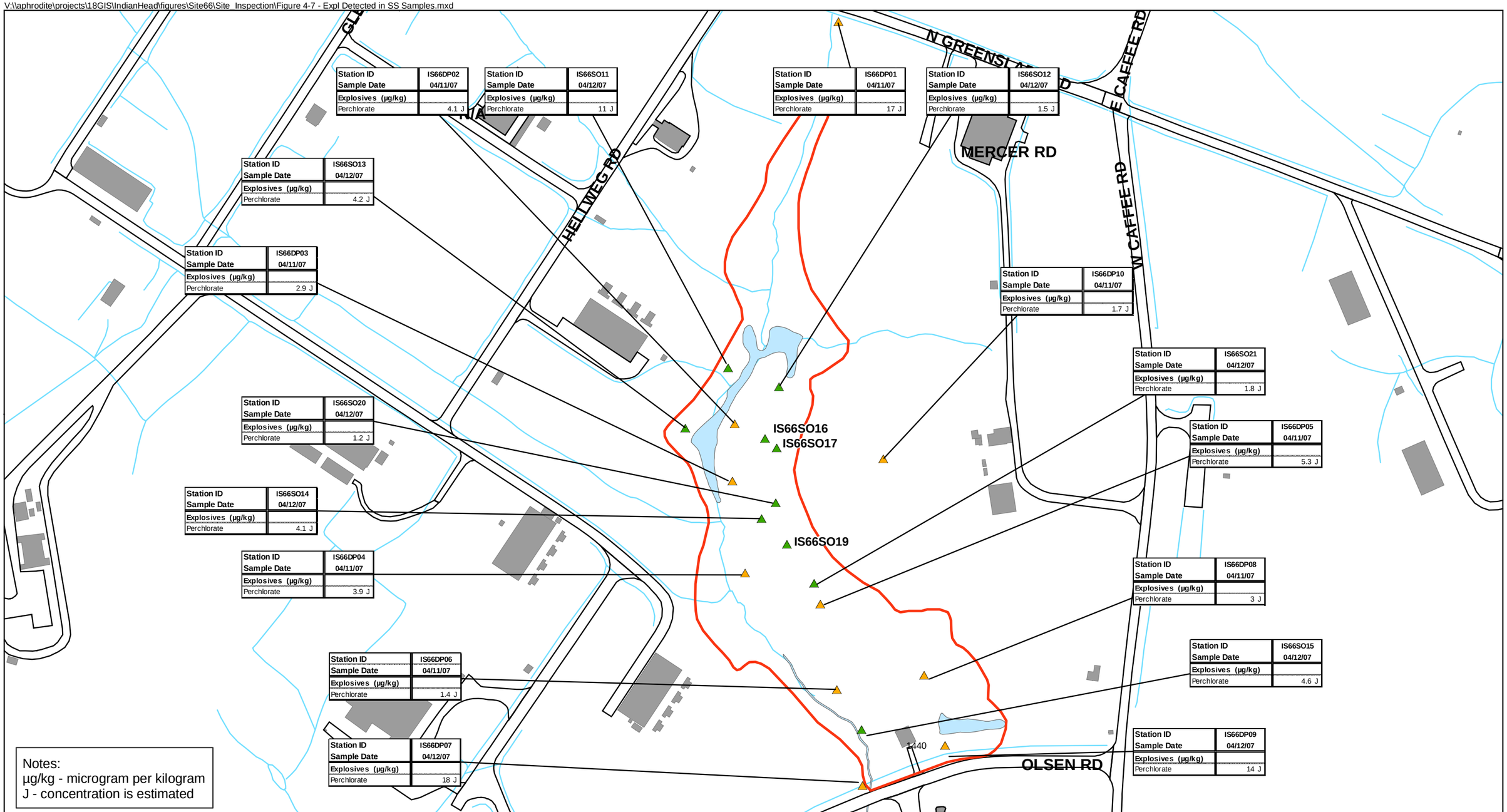
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-7 - Expl Detected in SS Samples.mxd



Legend

- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 400 Feet

1 INCH = 200'

Figure 4-7
Explosives Detected in Surface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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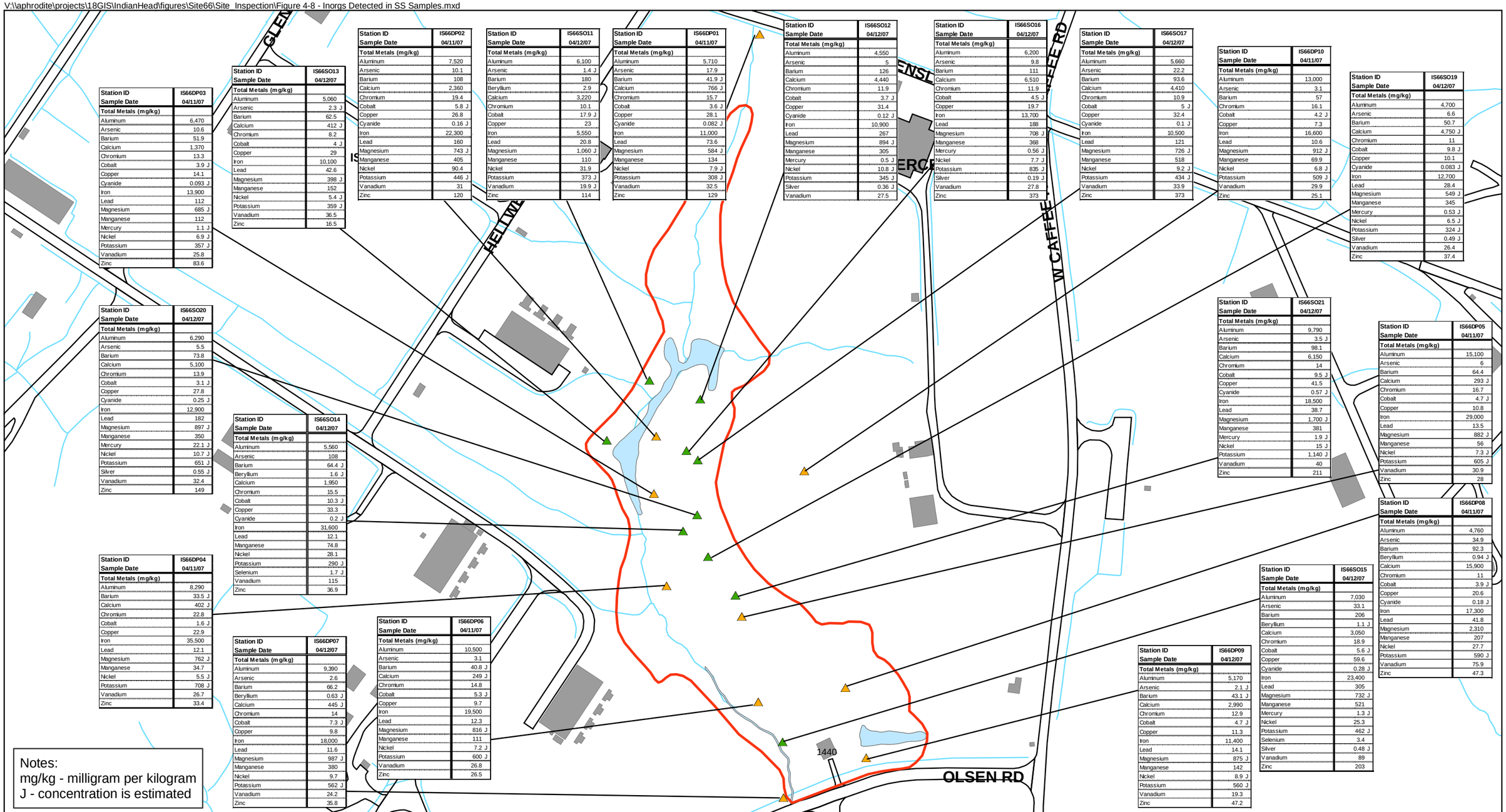
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-8 - Inorgs Detected in SS Samples.mxd



Station ID	IS66DP03
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	6,470
Arsenic	10.6
Barium	51.9
Calcium	1,370
Chromium	13.3
Cobalt	3.9 J
Copper	14.1
Cyanide	0.093 J
Iron	13,900
Lead	112
Magnesium	685 J
Manganese	112
Mercury	1.1 J
Nickel	6.9 J
Potassium	357 J
Vanadium	25.8
Zinc	83.6

Station ID	IS66SO13
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	5,060
Arsenic	2.3 J
Barium	62.5
Calcium	412 J
Chromium	8.2
Cobalt	4 J
Copper	29
Iron	10,100
Lead	42.6
Magnesium	398 J
Manganese	152
Nickel	5.4 J
Potassium	359 J
Vanadium	36.5
Zinc	16.5

Station ID	IS66DP02
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	7,520
Arsenic	10.1
Barium	108
Calcium	2,360
Chromium	19.4
Cobalt	5.8 J
Copper	26.8
Cyanide	0.16 J
Iron	22,300
Lead	160
Magnesium	743 J
Manganese	405
Nickel	90.4
Potassium	446 J
Vanadium	31
Zinc	120

Station ID	IS66SO11
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	6,100
Arsenic	1.4 J
Barium	180
Beryllium	2.9
Calcium	3,220
Chromium	10.1
Cobalt	17.9 J
Copper	23
Iron	5,550
Lead	20.8
Magnesium	1,060 J
Manganese	110
Nickel	31.9
Potassium	373 J
Vanadium	19.9 J
Zinc	114

Station ID	IS66DP01
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	5,710
Arsenic	17.9
Barium	41.9 J
Calcium	766 J
Chromium	15.7
Cobalt	3.6 J
Copper	28.1
Cyanide	0.082 J
Iron	11,000
Lead	73.6
Magnesium	584 J
Manganese	134
Nickel	7.9 J
Potassium	308 J
Vanadium	32.5
Zinc	129

Station ID	IS66SO12
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	4,550
Arsenic	5
Barium	126
Calcium	4,440
Chromium	11.9
Cobalt	3.7 J
Copper	31.4
Cyanide	0.12 J
Iron	10,900
Lead	267
Magnesium	894 J
Manganese	305
Mercury	0.5 J
Nickel	10.8 J
Potassium	345 J
Silver	0.36 J
Vanadium	27.5

Station ID	IS66SO16
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	6,200
Arsenic	9.8
Barium	111
Calcium	6,510
Chromium	11.9
Cobalt	4.5 J
Copper	19.7
Iron	13,700
Lead	188
Magnesium	708 J
Manganese	368
Mercury	0.56 J
Nickel	7.7 J
Potassium	835 J
Silver	0.19 J
Vanadium	27.8
Zinc	373

Station ID	IS66SO17
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	5,660
Arsenic	22.2
Barium	93.6
Calcium	4,410
Chromium	10.9
Cobalt	5 J
Copper	32.4
Cyanide	0.1 J
Iron	10,500
Lead	121
Magnesium	726 J
Manganese	518
Nickel	9.2 J
Potassium	434 J
Vanadium	33.9
Zinc	373

Station ID	IS66DP10
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	13,000
Arsenic	3.1
Barium	57
Chromium	16.1
Cobalt	4.2 J
Copper	7.3
Iron	16,600
Lead	10.6
Magnesium	912 J
Manganese	69.9
Nickel	6.8 J
Potassium	509 J
Vanadium	29.9
Zinc	25.1

Station ID	IS66SO19
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	4,700
Arsenic	6.6
Barium	50.7
Calcium	4,750 J
Chromium	11
Cobalt	9.8 J
Copper	10.1
Cyanide	0.083 J
Iron	12,700
Lead	28.4
Magnesium	549 J
Manganese	345
Mercury	0.53 J
Nickel	6.5 J
Potassium	324 J
Silver	0.49 J
Vanadium	26.4
Zinc	37.4

Station ID	IS66SO20
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	6,290
Arsenic	5.5
Barium	73.8
Calcium	5,100
Chromium	13.9
Cobalt	3.1 J
Copper	27.8
Cyanide	0.25 J
Iron	12,900
Lead	182
Magnesium	897 J
Manganese	350
Mercury	22.1 J
Nickel	10.7 J
Potassium	651 J
Silver	0.55 J
Vanadium	32.4
Zinc	149

Station ID	IS66SO14
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	5,560
Arsenic	108
Barium	64.4 J
Beryllium	1.6 J
Calcium	1,950
Chromium	15.5
Cobalt	10.3 J
Copper	33.3
Cyanide	0.2 J
Iron	31,600
Lead	12.1
Manganese	74.8
Nickel	28.1
Potassium	290 J
Selenium	1.7 J
Vanadium	115
Zinc	36.9

Station ID	IS66SO21
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	9,790
Arsenic	3.5 J
Barium	98.1
Calcium	6,150
Chromium	14
Cobalt	9.5 J
Copper	41.5
Cyanide	0.57 J
Iron	18,500
Lead	38.7
Magnesium	1,700 J
Manganese	381
Mercury	1.9 J
Nickel	15 J
Potassium	1,140 J
Vanadium	40
Zinc	211

Station ID	IS66DP05
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	15,100
Arsenic	6
Barium	64.4
Calcium	293 J
Chromium	16.7
Cobalt	4.7 J
Copper	10.8
Iron	29,000
Lead	13.5
Magnesium	882 J
Manganese	56
Nickel	7.3 J
Potassium	605 J
Vanadium	30.9
Zinc	28

Station ID	IS66DP08
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	4,760
Arsenic	34.9
Barium	92.3
Beryllium	0.94 J
Calcium	15,900
Chromium	11
Cobalt	3.9 J
Copper	20.6
Cyanide	0.18 J
Iron	17,300
Lead	41.8
Magnesium	2,310
Manganese	207
Nickel	27.7
Potassium	590 J
Vanadium	75.9
Zinc	47.3

Station ID	IS66DP04
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	8,290
Barium	33.5 J
Calcium	402 J
Chromium	22.8
Cobalt	1.6 J
Copper	22.9
Iron	35,500
Lead	12.1
Magnesium	762 J
Manganese	34.7
Nickel	5.5 J
Potassium	708 J
Vanadium	26.7
Zinc	33.4

Station ID	IS66DP07
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	9,390
Arsenic	2.6
Barium	66.2
Beryllium	0.63 J
Calcium	445 J
Chromium	14
Cobalt	7.3 J
Copper	9.8
Iron	18,000
Lead	11.6
Magnesium	987 J
Manganese	380
Nickel	9.7
Potassium	562 J
Vanadium	24.2
Zinc	35.8

Station ID	IS66DP06
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	10,500
Arsenic	3.1
Barium	40.8 J
Calcium	249 J
Chromium	14.8
Cobalt	5.3 J
Copper	9.7
Iron	19,500
Lead	12.3
Magnesium	816 J
Manganese	111
Nickel	7.2 J
Potassium	600 J
Vanadium	26.8
Zinc	26.5

Station ID	IS66DP09
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	5,170
Arsenic	2.1 J
Barium	43.1 J
Calcium	2,990
Chromium	12.9
Cobalt	4.7 J
Copper	11.3
Iron	11,400
Lead	14.1
Magnesium	875 J
Manganese	142
Nickel	8.9 J
Potassium	560 J
Vanadium	19.3
Zinc	47.2

Station ID	IS66SO15
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	7,030
Arsenic	33.1
Barium	206
Beryllium	1.1 J
Calcium	3,050
Chromium	18.9
Cobalt	5.6 J
Copper	59.6
Cyanide	0.28 J
Iron	23,400
Lead	305
Magnesium	732 J
Manganese	521
Mercury	1.3 J
Nickel	25.3
Potassium	462 J
Selenium	3.4
Silver	0.48 J
Vanadium	89
Zinc	203

Notes:
mg/kg - milligram per kilogram
J - concentration is estimated

Legend

- Soil/In Situ Groundwater Sample
- Surface Soil Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 400 Feet

1 INCH = 200'

Figure 4-8
Inorganics Detected in Surface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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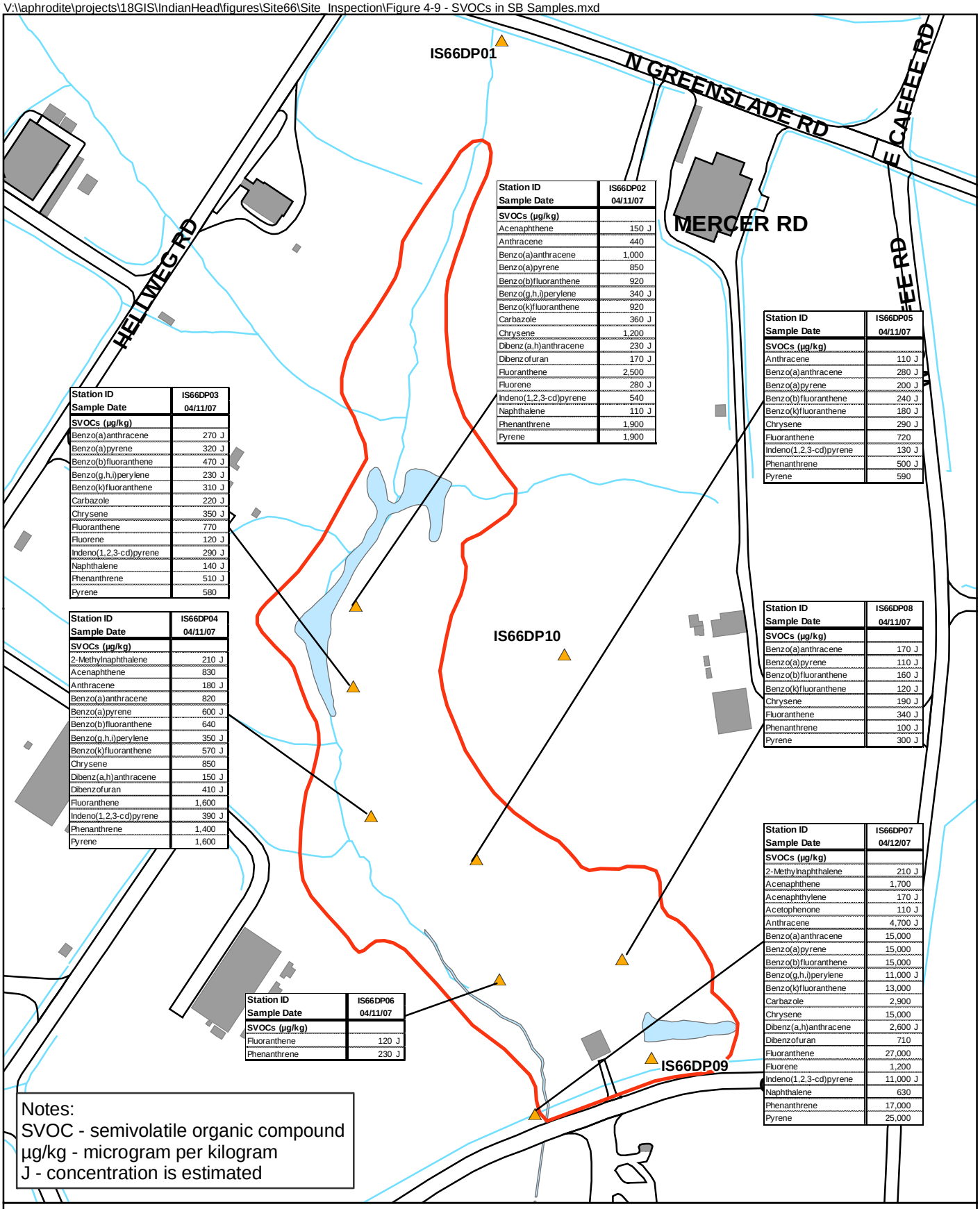
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-9 - SVOCs in SB Samples.mxd



Station ID Sample Date	IS66DP02 04/11/07
SVOCs (µg/kg)	
Acenaphthene	150 J
Anthracene	440
Benzo(a)anthracene	1,000
Benzo(a)pyrene	850
Benzo(b)fluoranthene	920
Benzo(g,h,i)perylene	340 J
Benzo(k)fluoranthene	920
Carbazole	360 J
Chrysene	1,200
Dibenz(a,h)anthracene	230 J
Dibenzofuran	170 J
Fluoranthene	2,500
Fluorene	280 J
Indeno(1,2,3-cd)pyrene	540
Naphthalene	110 J
Phenanthrene	1,900
Pyrene	1,900

Station ID Sample Date	IS66DP05 04/11/07
SVOCs (µg/kg)	
Anthracene	110 J
Benzo(a)anthracene	280 J
Benzo(a)pyrene	200 J
Benzo(b)fluoranthene	240 J
Benzo(k)fluoranthene	180 J
Chrysene	290 J
Fluoranthene	720
Indeno(1,2,3-cd)pyrene	130 J
Phenanthrene	500 J
Pyrene	590

Station ID Sample Date	IS66DP03 04/11/07
SVOCs (µg/kg)	
Benzo(a)anthracene	270 J
Benzo(a)pyrene	320 J
Benzo(b)fluoranthene	470 J
Benzo(g,h,i)perylene	230 J
Benzo(k)fluoranthene	310 J
Carbazole	220 J
Chrysene	350 J
Fluoranthene	770
Fluorene	120 J
Indeno(1,2,3-cd)pyrene	290 J
Naphthalene	140 J
Phenanthrene	510 J
Pyrene	580

Station ID Sample Date	IS66DP08 04/11/07
SVOCs (µg/kg)	
Benzo(a)anthracene	170 J
Benzo(a)pyrene	110 J
Benzo(b)fluoranthene	160 J
Benzo(k)fluoranthene	120 J
Chrysene	190 J
Fluoranthene	340 J
Phenanthrene	100 J
Pyrene	300 J

Station ID Sample Date	IS66DP04 04/11/07
SVOCs (µg/kg)	
2-Methylnaphthalene	210 J
Acenaphthene	830
Anthracene	180 J
Benzo(a)anthracene	820
Benzo(a)pyrene	600 J
Benzo(b)fluoranthene	640
Benzo(g,h,i)perylene	350 J
Benzo(k)fluoranthene	570 J
Chrysene	850
Dibenz(a,h)anthracene	150 J
Dibenzofuran	410 J
Fluoranthene	1,600
Indeno(1,2,3-cd)pyrene	390 J
Phenanthrene	1,400
Pyrene	1,600

Station ID Sample Date	IS66DP07 04/12/07
SVOCs (µg/kg)	
2-Methylnaphthalene	210 J
Acenaphthene	1,700
Acenaphthylene	170 J
Acetophenone	110 J
Anthracene	4,700 J
Benzo(a)anthracene	15,000
Benzo(a)pyrene	15,000
Benzo(b)fluoranthene	15,000
Benzo(g,h,i)perylene	11,000 J
Benzo(k)fluoranthene	13,000
Carbazole	2,900
Chrysene	15,000
Dibenz(a,h)anthracene	2,600 J
Dibenzofuran	710
Fluoranthene	27,000
Fluorene	1,200
Indeno(1,2,3-cd)pyrene	11,000 J
Naphthalene	630
Phenanthrene	17,000
Pyrene	25,000

Station ID Sample Date	IS66DP06 04/11/07
SVOCs (µg/kg)	
Fluoranthene	120 J
Phenanthrene	230 J

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-9
Semivolatile Organic Compounds Detected in Subsurface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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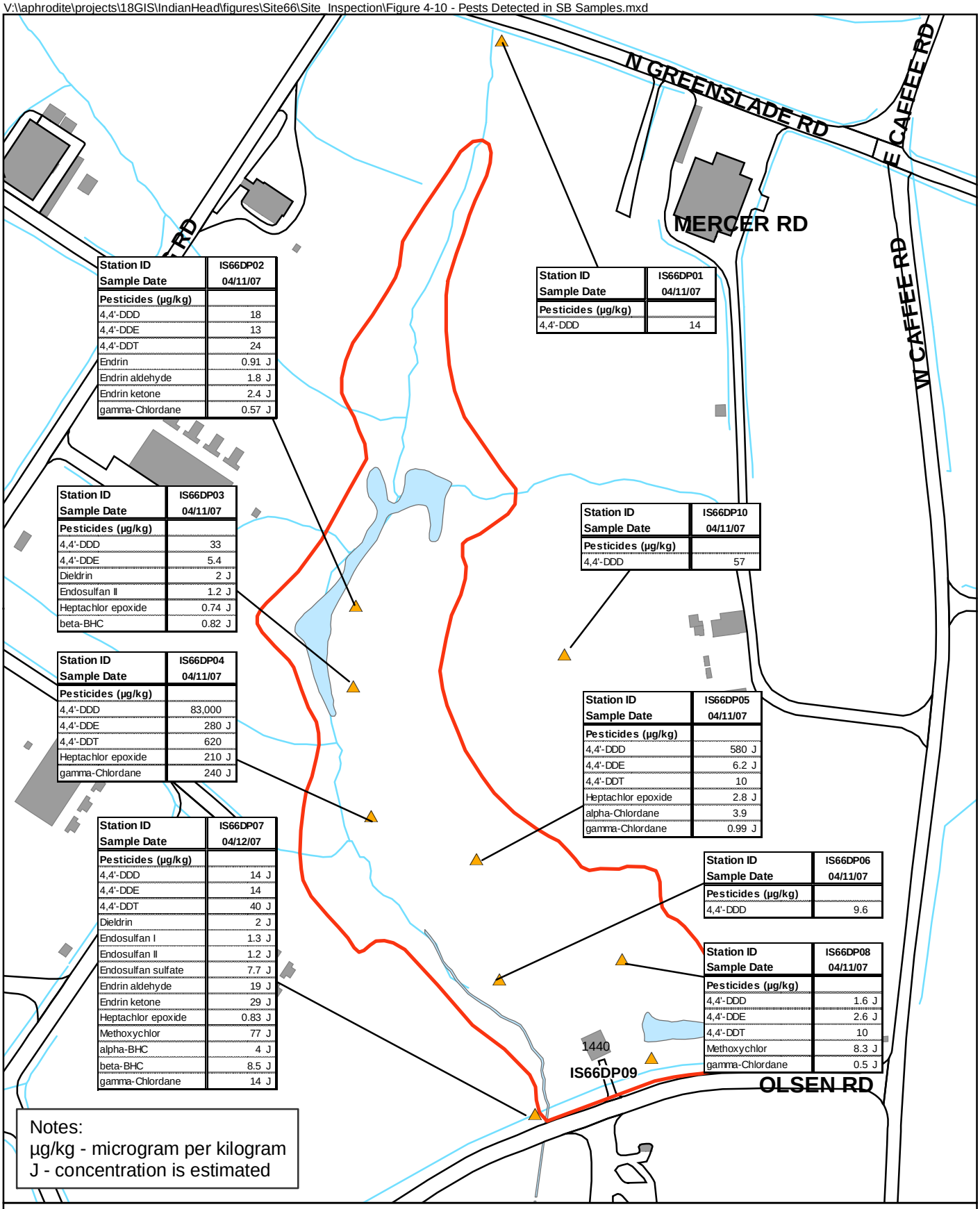
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-10 - Pests Detected in SB Samples.mxd



Station ID	IS66DP02
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	18
4,4'-DDE	13
4,4'-DDT	24
Endrin	0.91 J
Endrin aldehyde	1.8 J
Endrin ketone	2.4 J
gamma-Chlordane	0.57 J

Station ID	IS66DP01
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	14

Station ID	IS66DP03
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	33
4,4'-DDE	5.4
Dieldrin	2 J
Endosulfan II	1.2 J
Heptachlor epoxide	0.74 J
beta-BHC	0.82 J

Station ID	IS66DP10
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	57

Station ID	IS66DP04
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	83,000
4,4'-DDE	280 J
4,4'-DDT	620
Heptachlor epoxide	210 J
gamma-Chlordane	240 J

Station ID	IS66DP05
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	580 J
4,4'-DDE	6.2 J
4,4'-DDT	10
Heptachlor epoxide	2.8 J
alpha-Chlordane	3.9
gamma-Chlordane	0.99 J

Station ID	IS66DP07
Sample Date	04/12/07
Pesticides (µg/kg)	
4,4'-DDD	14 J
4,4'-DDE	14
4,4'-DDT	40 J
Dieldrin	2 J
Endosulfan I	1.3 J
Endosulfan II	1.2 J
Endosulfan sulfate	7.7 J
Endrin aldehyde	19 J
Endrin ketone	29 J
Heptachlor epoxide	0.83 J
Methoxychlor	77 J
alpha-BHC	4 J
beta-BHC	8.5 J
gamma-Chlordane	14 J

Station ID	IS66DP06
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	9.6

Station ID	IS66DP08
Sample Date	04/11/07
Pesticides (µg/kg)	
4,4'-DDD	1.6 J
4,4'-DDE	2.6 J
4,4'-DDT	10
Methoxychlor	8.3 J
gamma-Chlordane	0.5 J

Notes:
µg/kg - microgram per kilogram
J - concentration is estimated

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-10
Pesticides Detected in Subsurface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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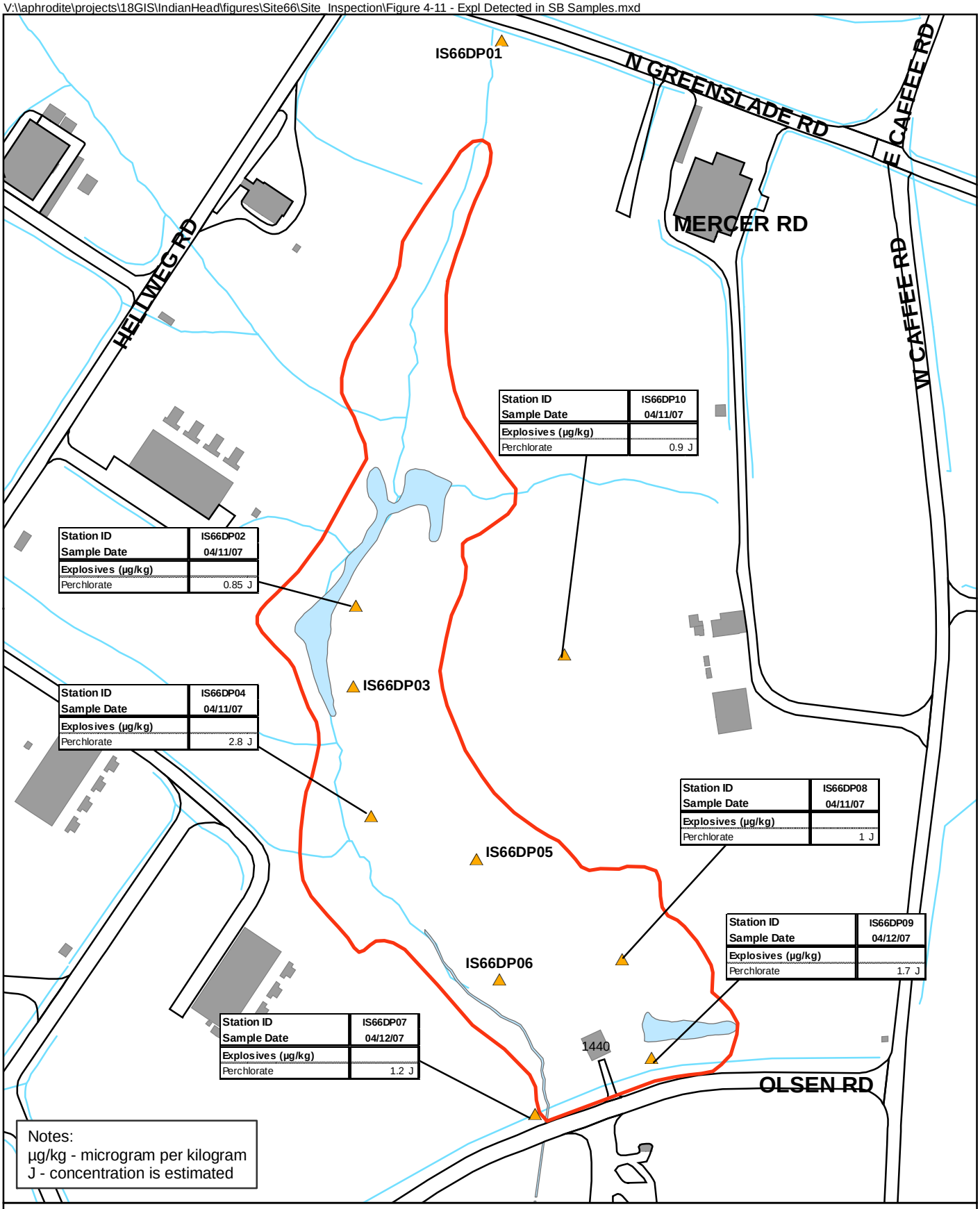
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-11 - Expl Detected in SB Samples.mxd



Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-11
Explosives Detected in Subsurface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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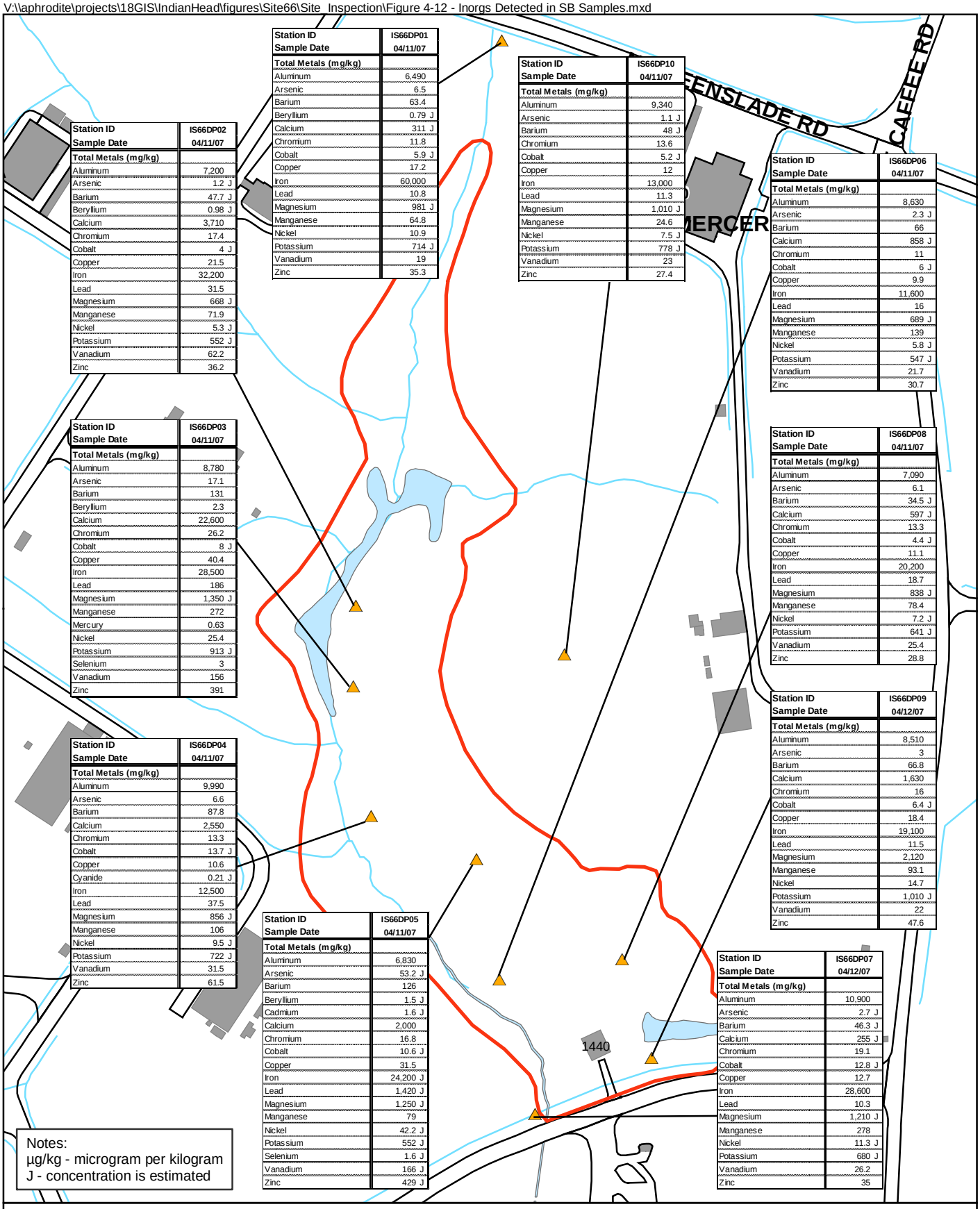
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-12 - Inorgs Detected in SB Samples.mxd



Station ID	IS66DP01
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	6,490
Arsenic	6.5
Barium	63.4
Beryllium	0.79 J
Calcium	311 J
Chromium	11.8
Cobalt	5.9 J
Copper	17.2
Iron	60,000
Lead	10.8
Magnesium	981 J
Manganese	64.8
Nickel	10.9
Potassium	714 J
Vanadium	19
Zinc	35.3

Station ID	IS66DP02
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	7,200
Arsenic	1.2 J
Barium	47.7 J
Beryllium	0.98 J
Calcium	3,710
Chromium	17.4
Cobalt	4 J
Copper	21.5
Iron	32,200
Lead	31.5
Magnesium	668 J
Manganese	71.9
Nickel	5.3 J
Potassium	552 J
Vanadium	62.2
Zinc	36.2

Station ID	IS66DP03
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	8,780
Arsenic	17.1
Barium	131
Beryllium	2.3
Calcium	22,600
Chromium	26.2
Cobalt	8 J
Copper	40.4
Iron	28,500
Lead	186
Magnesium	1,350 J
Manganese	272
Mercury	0.63
Nickel	25.4
Potassium	913 J
Selenium	3
Vanadium	156
Zinc	391

Station ID	IS66DP04
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	9,990
Arsenic	6.6
Barium	87.8
Calcium	2,550
Chromium	13.3
Cobalt	13.7 J
Copper	10.6
Cyanide	0.21 J
Iron	12,500
Lead	37.5
Magnesium	856 J
Manganese	106
Nickel	9.5 J
Potassium	722 J
Vanadium	31.5
Zinc	61.5

Station ID	IS66DP05
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	6,830
Arsenic	53.2 J
Barium	126
Beryllium	1.5 J
Cadmium	1.6 J
Calcium	2,000
Chromium	16.8
Cobalt	10.6 J
Copper	31.5
Iron	24,200 J
Lead	1,420 J
Magnesium	1,250 J
Manganese	79
Nickel	42.2 J
Potassium	552 J
Selenium	1.6 J
Vanadium	166 J
Zinc	429 J

Station ID	IS66DP10
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	9,340
Arsenic	1.1 J
Barium	48 J
Chromium	13.6
Cobalt	5.2 J
Copper	12
Iron	13,000
Lead	11.3
Magnesium	1,010 J
Manganese	24.6
Nickel	7.5 J
Potassium	778 J
Vanadium	23
Zinc	27.4

Station ID	IS66DP06
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	8,630
Arsenic	2.3 J
Barium	66
Calcium	858 J
Chromium	11
Cobalt	6 J
Copper	9.9
Iron	11,600
Lead	16
Magnesium	689 J
Manganese	139
Nickel	5.8 J
Potassium	547 J
Vanadium	21.7
Zinc	30.7

Station ID	IS66DP08
Sample Date	04/11/07
Total Metals (mg/kg)	
Aluminum	7,090
Arsenic	6.1
Barium	34.5 J
Calcium	597 J
Chromium	13.3
Cobalt	4.4 J
Copper	11.1
Iron	20,200
Lead	18.7
Magnesium	838 J
Manganese	78.4
Nickel	7.2 J
Potassium	641 J
Vanadium	25.4
Zinc	28.8

Station ID	IS66DP09
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	8,510
Arsenic	3
Barium	66.8
Calcium	1,630
Chromium	16
Cobalt	6.4 J
Copper	18.4
Iron	19,100
Lead	11.5
Magnesium	2,120
Manganese	93.1
Nickel	14.7
Potassium	1,010 J
Vanadium	22
Zinc	47.6

Station ID	IS66DP07
Sample Date	04/12/07
Total Metals (mg/kg)	
Aluminum	10,900
Arsenic	2.7 J
Barium	46.3 J
Calcium	255 J
Chromium	19.1
Cobalt	12.8 J
Copper	12.7
Iron	28,600
Lead	10.3
Magnesium	1,210 J
Manganese	278
Nickel	11.3 J
Potassium	680 J
Vanadium	26.2
Zinc	35

Notes:
µg/kg - microgram per kilogram
J - concentration is estimated

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-12
Inorganics Detected in Subsurface Soil Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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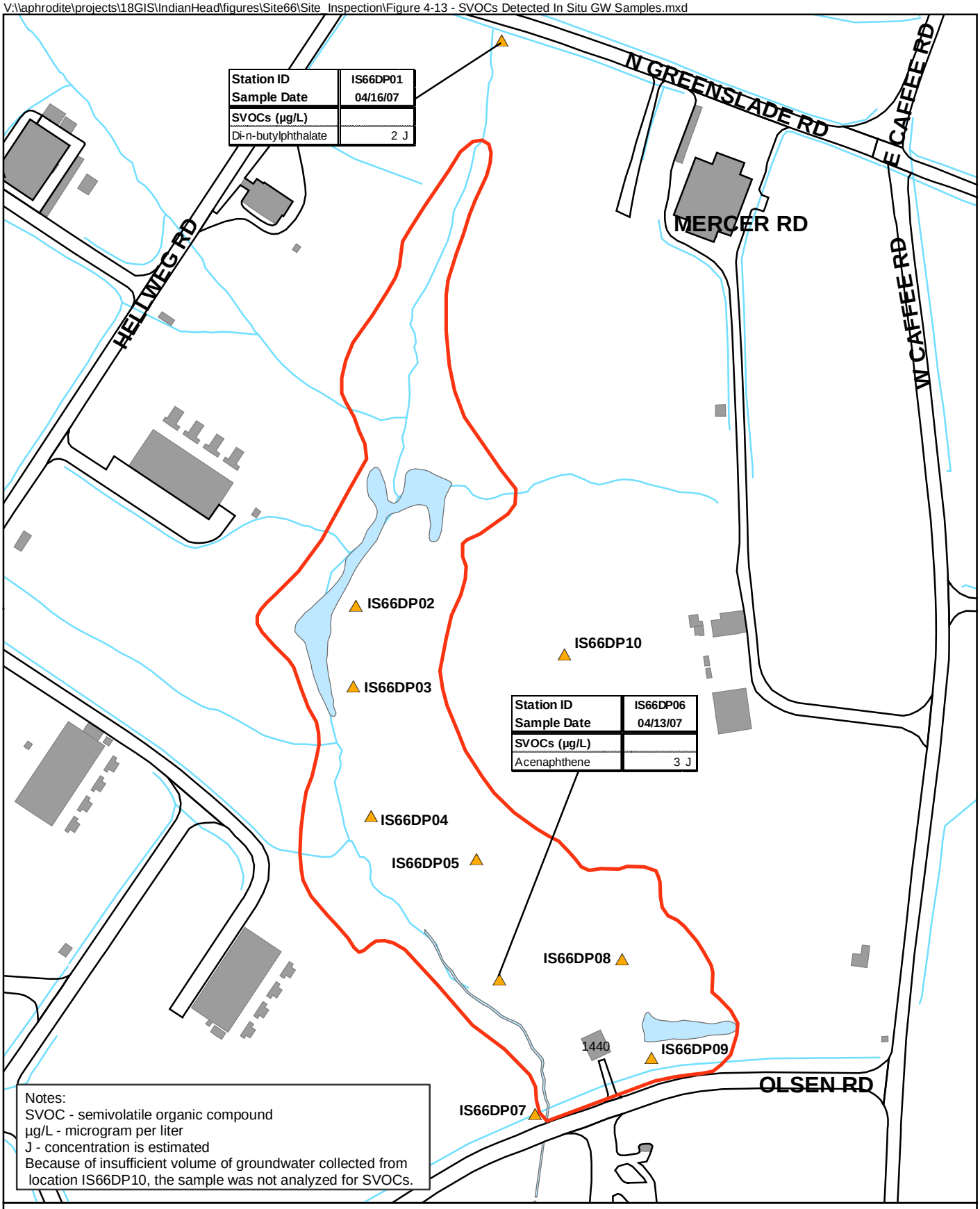
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-13 - SVOCs Detected In Situ GW Samples.mxd



Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-13
Semivolatile Organic Compounds Detected in *In Situ* Groundwater Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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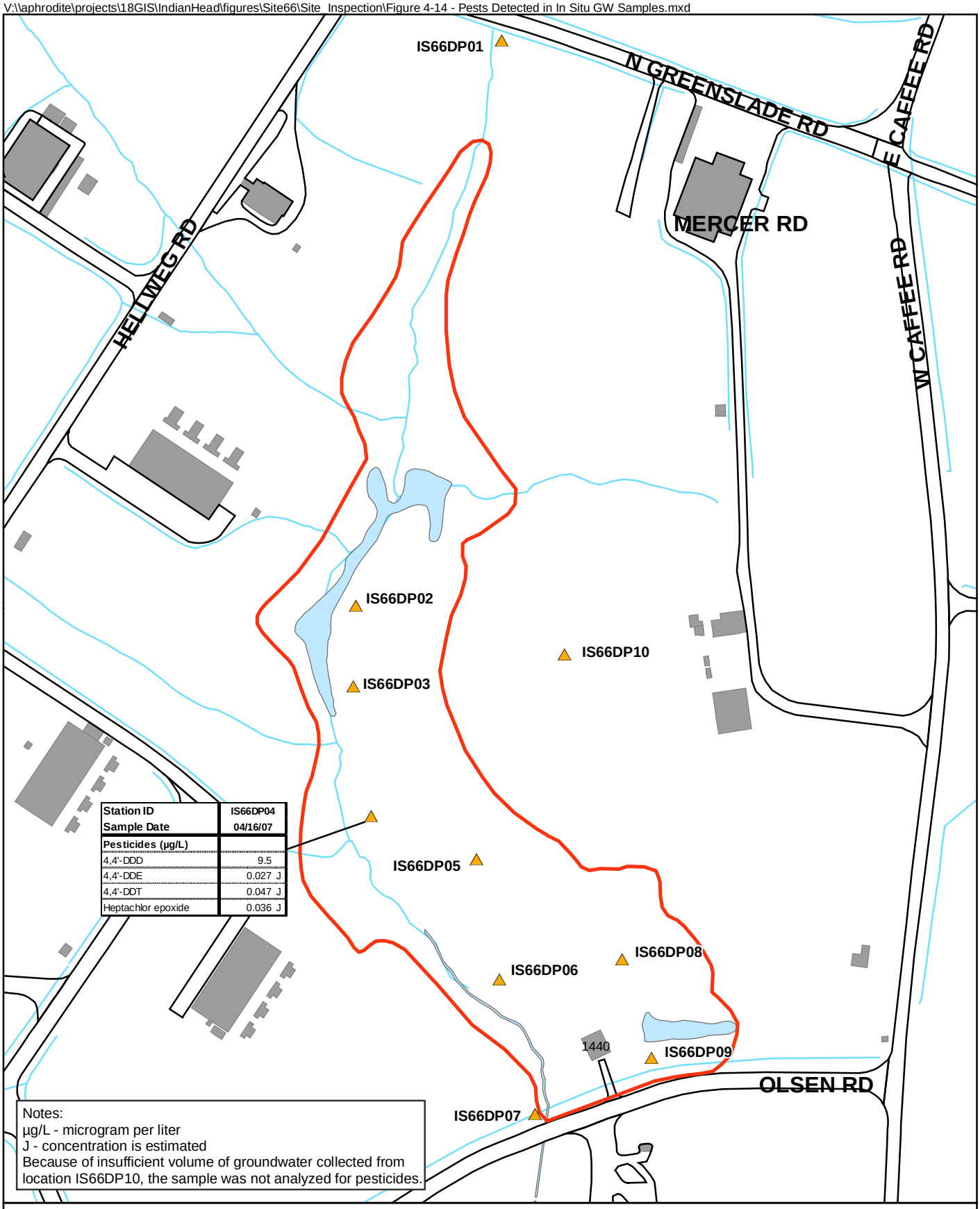
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-14 - Pests Detected in In Situ GW Samples.mxd



Station ID	IS66DP04
Sample Date	04/16/07
Pesticides (µg/L)	
4,4'-DDD	9.5
4,4'-DDE	0.027 J
4,4'-DDT	0.047 J
Heptachlor epoxide	0.036 J

Notes:
µg/L - microgram per liter
J - concentration is estimated
Because of insufficient volume of groundwater collected from location IS66DP10, the sample was not analyzed for pesticides.

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-14
Pesticides Detected in *In Situ* Groundwater Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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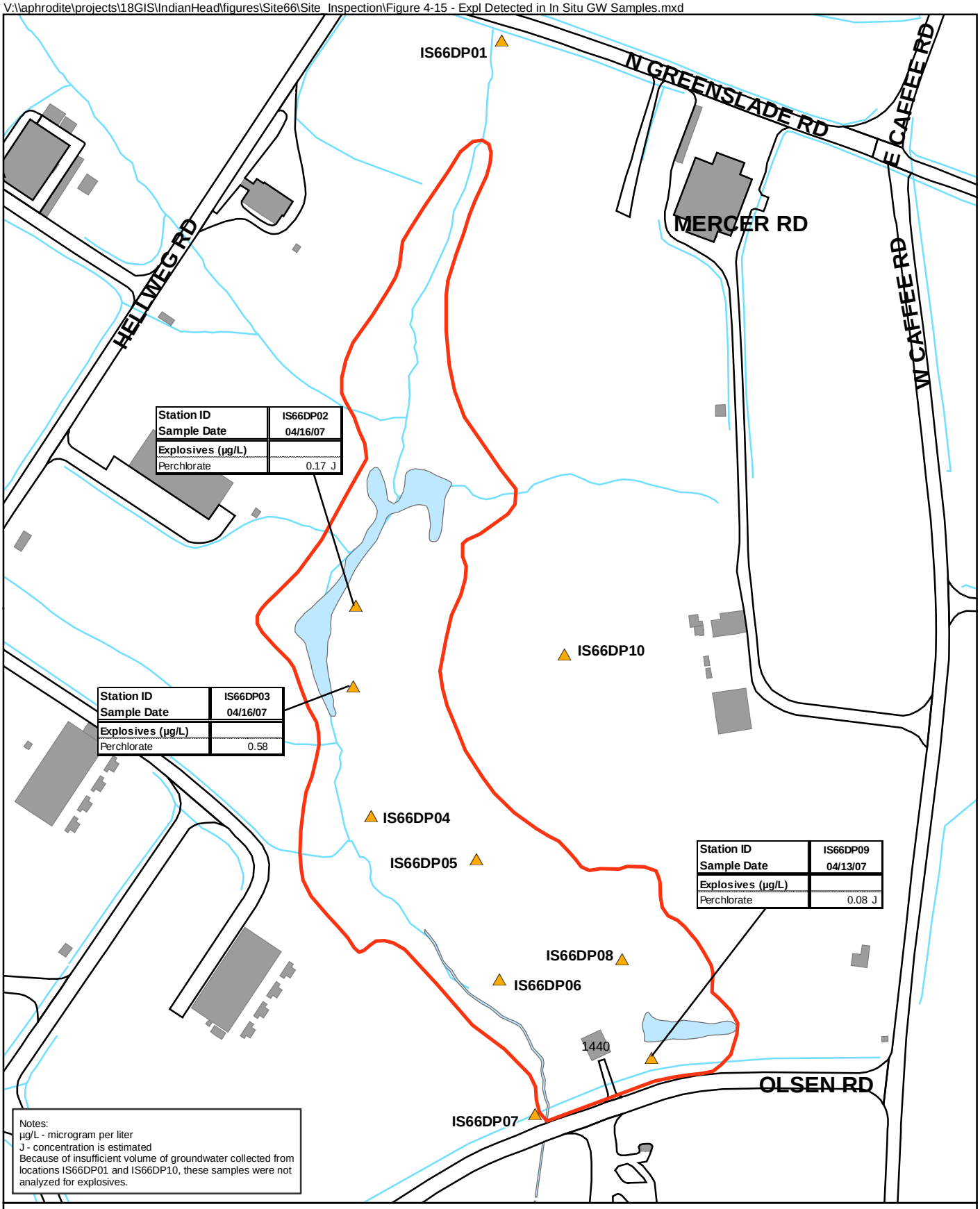
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-15 - Expl Detected in In Situ GW Samples.mxd



Station ID	IS66DP02
Sample Date	04/16/07
Explosives (µg/L)	
Perchlorate	0.17 J

Station ID	IS66DP03
Sample Date	04/16/07
Explosives (µg/L)	
Perchlorate	0.58

Station ID	IS66DP09
Sample Date	04/13/07
Explosives (µg/L)	
Perchlorate	0.08 J

Notes:
µg/L - microgram per liter
J - concentration is estimated
Because of insufficient volume of groundwater collected from locations IS66DP01 and IS66DP10, these samples were not analyzed for explosives.

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-15
Explosives Detected in *In Situ* Groundwater Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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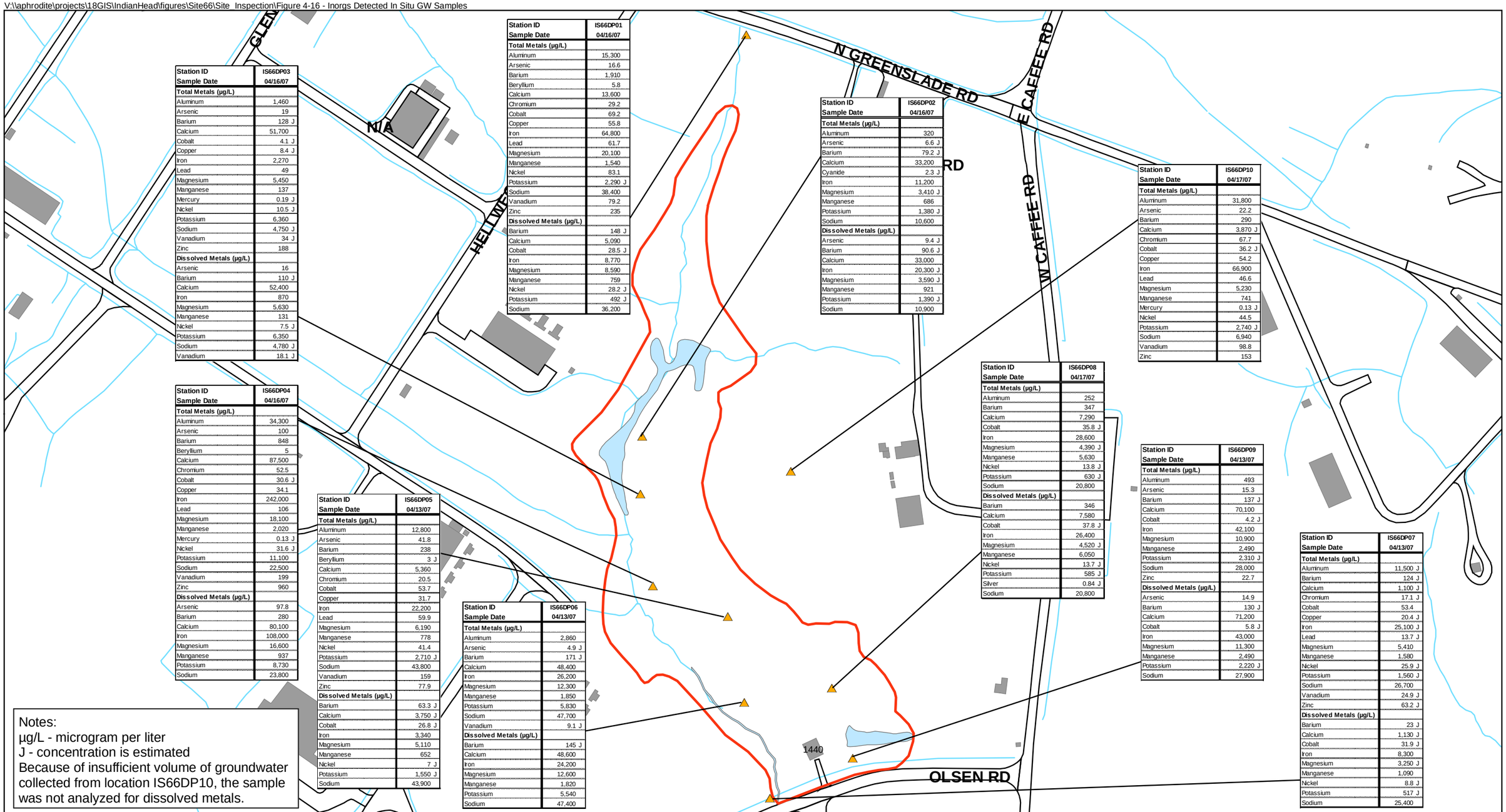
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-16 - Inorgs Detected In Situ GW Samples



Station ID	IS66DP03
Sample Date	04/16/07
Total Metals (µg/L)	
Aluminum	1,460
Arsenic	19
Barium	128 J
Calcium	51,700
Cobalt	4.1 J
Copper	8.4 J
Iron	2,270
Lead	49
Magnesium	5,450
Manganese	137
Mercury	0.19 J
Nickel	10.5 J
Potassium	6,360
Sodium	4,750 J
Vanadium	34 J
Zinc	188
Dissolved Metals (µg/L)	
Arsenic	16
Barium	110 J
Calcium	52,400
Iron	870
Magnesium	5,630
Manganese	131
Nickel	7.5 J
Potassium	6,350
Sodium	4,780 J
Vanadium	18.1 J

Station ID	IS66DP04
Sample Date	04/16/07
Total Metals (µg/L)	
Aluminum	34,300
Arsenic	100
Barium	848
Beryllium	5
Calcium	87,500
Chromium	52.5
Cobalt	30.6 J
Copper	34.1
Iron	242,000
Lead	106
Magnesium	18,100
Manganese	2,020
Mercury	0.13 J
Nickel	31.6 J
Potassium	11,100
Sodium	22,500
Vanadium	199
Zinc	960
Dissolved Metals (µg/L)	
Arsenic	97.8
Barium	280
Calcium	80,100
Iron	108,000
Magnesium	16,600
Manganese	937
Potassium	8,730
Sodium	23,800

Station ID	IS66DP05
Sample Date	04/13/07
Total Metals (µg/L)	
Aluminum	12,800
Arsenic	41.8
Barium	238
Beryllium	3 J
Calcium	5,360
Chromium	20.5
Cobalt	53.7
Copper	31.7
Iron	22,200
Lead	59.9
Magnesium	6,190
Manganese	778
Nickel	41.4
Potassium	2,710 J
Sodium	43,800
Vanadium	159
Zinc	77.9
Dissolved Metals (µg/L)	
Barium	63.3 J
Calcium	3,750 J
Cobalt	26.8 J
Iron	3,340
Magnesium	5,110
Manganese	652
Nickel	7 J
Potassium	1,550 J
Sodium	43,900

Station ID	IS66DP06
Sample Date	04/13/07
Total Metals (µg/L)	
Aluminum	2,860
Arsenic	4.9 J
Barium	171 J
Calcium	48,400
Iron	26,200
Magnesium	12,300
Manganese	1,850
Potassium	5,830
Sodium	47,700
Vanadium	9.1 J
Dissolved Metals (µg/L)	
Barium	145 J
Calcium	48,600
Iron	24,200
Magnesium	12,600
Manganese	1,820
Potassium	5,540
Sodium	47,400

Station ID	IS66DP01
Sample Date	04/16/07
Total Metals (µg/L)	
Aluminum	15,300
Arsenic	16.6
Barium	1,910
Beryllium	5.8
Calcium	13,600
Chromium	29.2
Cobalt	69.2
Copper	55.8
Iron	64,800
Lead	61.7
Magnesium	20,100
Manganese	1,540
Nickel	83.1
Potassium	2,290 J
Sodium	38,400
Vanadium	79.2
Zinc	235
Dissolved Metals (µg/L)	
Barium	148 J
Calcium	5,090
Cobalt	28.5 J
Iron	8,770
Magnesium	8,590
Manganese	759
Nickel	28.2 J
Potassium	492 J
Sodium	36,200

Station ID	IS66DP02
Sample Date	04/16/07
Total Metals (µg/L)	
Aluminum	320
Arsenic	6.6 J
Barium	79.2 J
Calcium	33,200
Cyanide	2.3 J
Iron	11,200
Magnesium	3,410 J
Manganese	686
Potassium	1,380 J
Sodium	10,600
Dissolved Metals (µg/L)	
Arsenic	9.4 J
Barium	90.6 J
Calcium	33,000
Iron	20,300 J
Magnesium	3,590 J
Manganese	921
Potassium	1,390 J
Sodium	10,900

Station ID	IS66DP08
Sample Date	04/17/07
Total Metals (µg/L)	
Aluminum	252
Barium	347
Calcium	7,290
Cobalt	35.8 J
Iron	28,600
Magnesium	4,390 J
Manganese	5,630
Nickel	13.8 J
Potassium	630 J
Sodium	20,800
Dissolved Metals (µg/L)	
Barium	346
Calcium	7,580
Cobalt	37.8 J
Iron	26,400
Magnesium	4,520 J
Manganese	6,050
Nickel	13.7 J
Potassium	585 J
Silver	0.84 J
Sodium	20,800

Station ID	IS66DP10
Sample Date	04/17/07
Total Metals (µg/L)	
Aluminum	31,800
Arsenic	22.2
Barium	290
Calcium	3,870 J
Chromium	67.7
Cobalt	36.2 J
Copper	54.2
Iron	66,900
Lead	46.6
Magnesium	5,230
Manganese	741
Mercury	0.13 J
Nickel	44.5
Potassium	2,740 J
Sodium	6,940
Vanadium	98.8
Zinc	153

Station ID	IS66DP09
Sample Date	04/13/07
Total Metals (µg/L)	
Aluminum	493
Arsenic	15.3
Barium	137 J
Calcium	70,100
Cobalt	4.2 J
Iron	42,100
Magnesium	10,900
Manganese	2,490
Potassium	2,310 J
Sodium	28,000
Zinc	22.7
Dissolved Metals (µg/L)	
Arsenic	14.9
Barium	130 J
Calcium	71,200
Cobalt	5.8 J
Iron	43,000
Magnesium	11,300
Manganese	2,490
Potassium	2,220 J
Sodium	27,900

Station ID	IS66DP07
Sample Date	04/13/07
Total Metals (µg/L)	
Aluminum	11,500 J
Barium	124 J
Calcium	1,100 J
Chromium	17.1 J
Cobalt	53.4
Copper	20.4 J
Iron	25,100 J
Lead	13.7 J
Magnesium	5,410
Manganese	1,580
Nickel	25.9 J
Potassium	1,560 J
Sodium	26,700
Vanadium	24.9 J
Zinc	63.2 J
Dissolved Metals (µg/L)	
Barium	23 J
Calcium	1,130 J
Cobalt	31.9 J
Iron	8,300
Magnesium	3,250 J
Manganese	1,090
Nickel	8.8 J
Potassium	517 J
Sodium	25,400

Notes:
µg/L - microgram per liter
J - concentration is estimated
Because of insufficient volume of groundwater collected from location IS66DP10, the sample was not analyzed for dissolved metals.

Legend

- Soil/In Situ Groundwater Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 400 Feet

1 INCH = 200'

Figure 4-16
Inorganics Detected in *In Situ* Groundwater Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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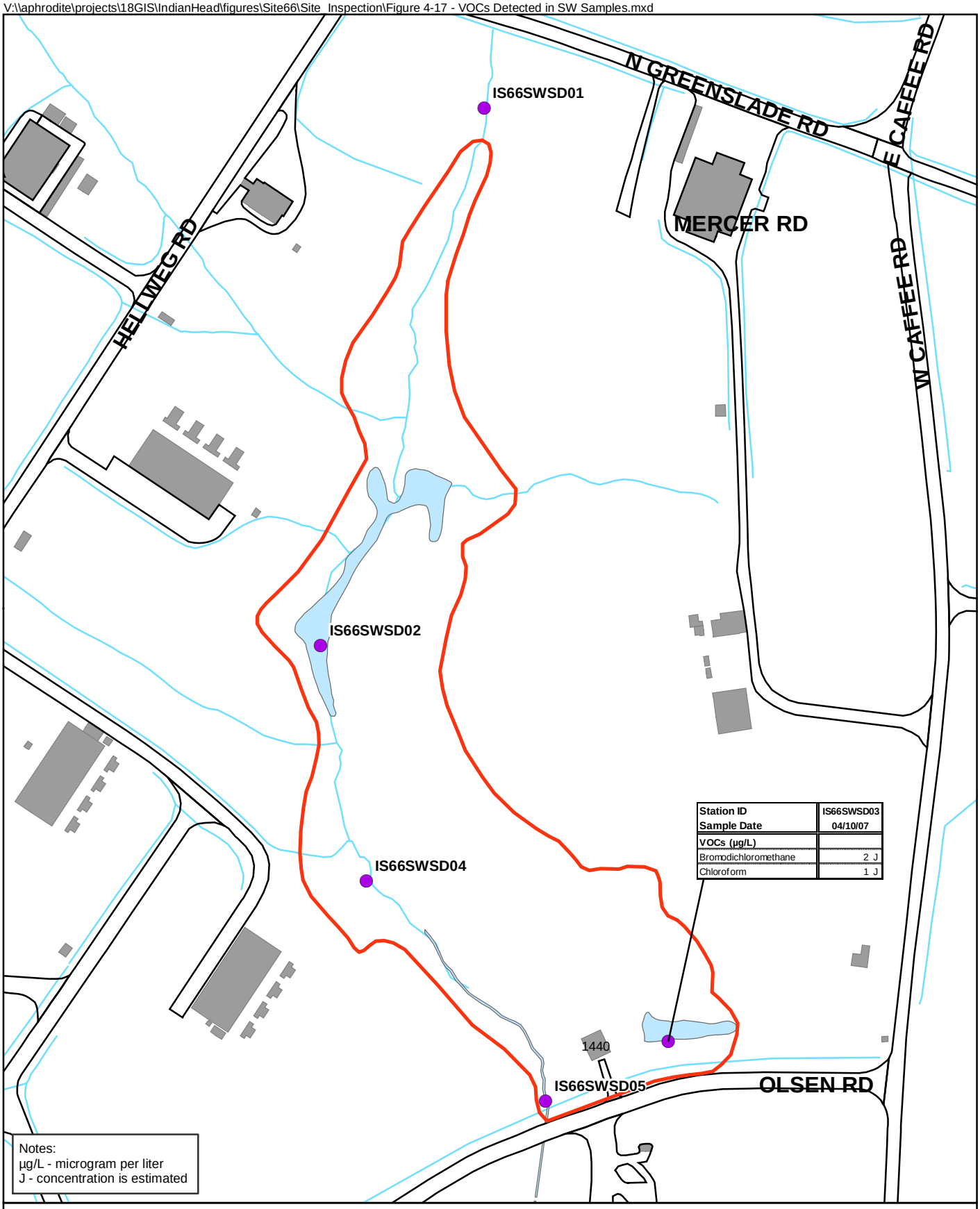
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-17 - VOCs Detected in SW Samples.mxd



Legend

- Surface Water/Sediment Sample Location
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-17
Volatile Organic Compounds Detected in Surface Water Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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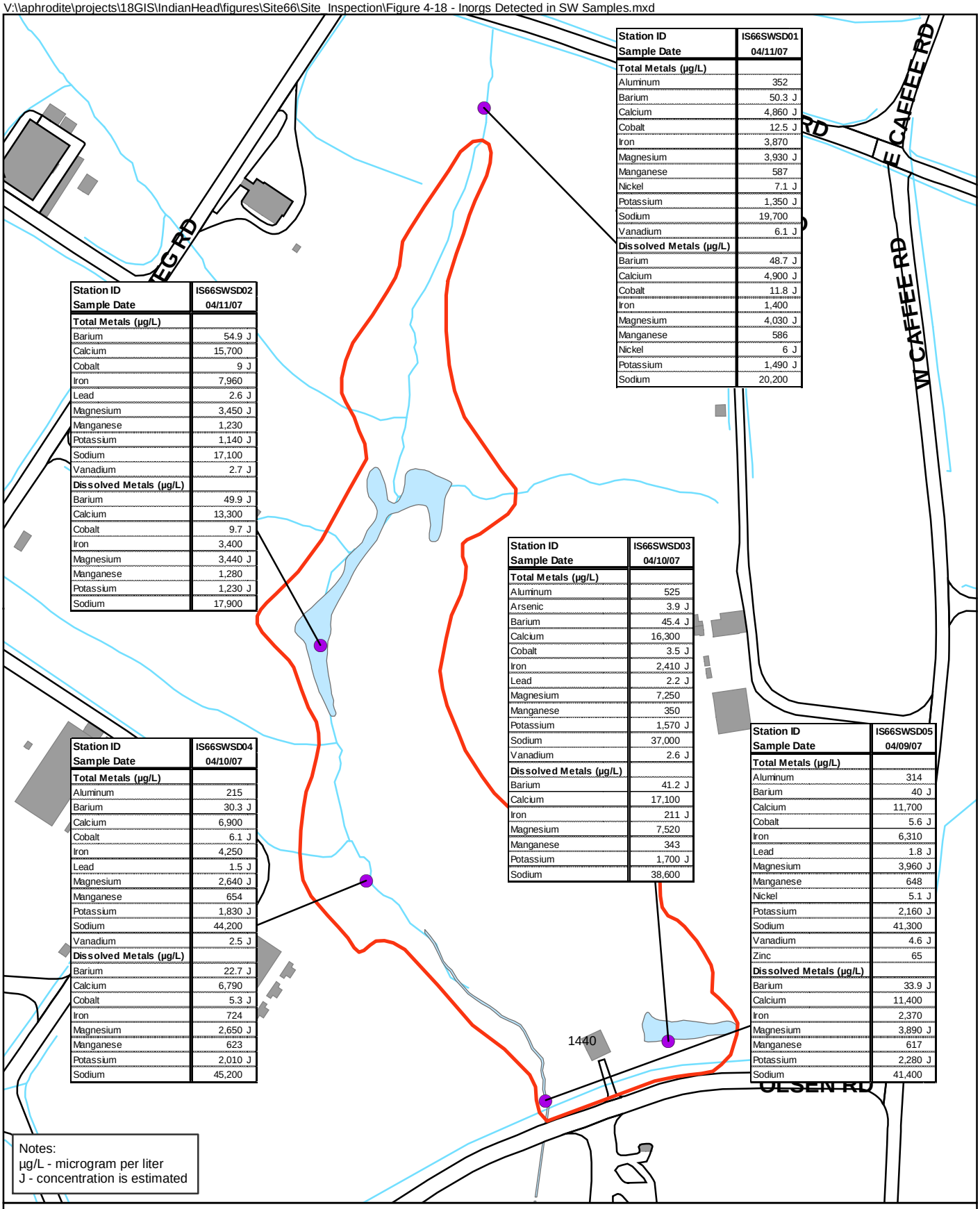
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-18 - Inorgs Detected in SW Samples.mxd



Station ID Sample Date	IS66SWSD01 04/11/07
Total Metals (µg/L)	
Aluminum	352
Barium	50.3 J
Calcium	4,860 J
Cobalt	12.5 J
Iron	3,870
Magnesium	3,930 J
Manganese	587
Nickel	7.1 J
Potassium	1,350 J
Sodium	19,700
Vanadium	6.1 J
Dissolved Metals (µg/L)	
Barium	48.7 J
Calcium	4,900 J
Cobalt	11.8 J
Iron	1,400
Magnesium	4,030 J
Manganese	586
Nickel	6 J
Potassium	1,490 J
Sodium	20,200

Station ID Sample Date	IS66SWSD02 04/11/07
Total Metals (µg/L)	
Barium	54.9 J
Calcium	15,700
Cobalt	9 J
Iron	7,960
Lead	2.6 J
Magnesium	3,450 J
Manganese	1,230
Potassium	1,140 J
Sodium	17,100
Vanadium	2.7 J
Dissolved Metals (µg/L)	
Barium	49.9 J
Calcium	13,300
Cobalt	9.7 J
Iron	3,400
Magnesium	3,440 J
Manganese	1,280
Potassium	1,230 J
Sodium	17,900

Station ID Sample Date	IS66SWSD03 04/10/07
Total Metals (µg/L)	
Aluminum	525
Arsenic	3.9 J
Barium	45.4 J
Calcium	16,300
Cobalt	3.5 J
Iron	2,410 J
Lead	2.2 J
Magnesium	7,250
Manganese	350
Potassium	1,570 J
Sodium	37,000
Vanadium	2.6 J
Dissolved Metals (µg/L)	
Barium	41.2 J
Calcium	17,100
Iron	211 J
Magnesium	7,520
Manganese	343
Potassium	1,700 J
Sodium	38,600

Station ID Sample Date	IS66SWSD04 04/10/07
Total Metals (µg/L)	
Aluminum	215
Barium	30.3 J
Calcium	6,900
Cobalt	6.1 J
Iron	4,250
Lead	1.5 J
Magnesium	2,640 J
Manganese	654
Potassium	1,830 J
Sodium	44,200
Vanadium	2.5 J
Dissolved Metals (µg/L)	
Barium	22.7 J
Calcium	6,790
Cobalt	5.3 J
Iron	724
Magnesium	2,650 J
Manganese	623
Potassium	2,010 J
Sodium	45,200

Station ID Sample Date	IS66SWSD05 04/09/07
Total Metals (µg/L)	
Aluminum	314
Barium	40 J
Calcium	11,700
Cobalt	5.6 J
Iron	6,310
Lead	1.8 J
Magnesium	3,960 J
Manganese	648
Nickel	5.1 J
Potassium	2,160 J
Sodium	41,300
Vanadium	4.6 J
Zinc	65
Dissolved Metals (µg/L)	
Barium	33.9 J
Calcium	11,400
Iron	2,370
Magnesium	3,890 J
Manganese	617
Potassium	2,280 J
Sodium	41,400

Notes:
µg/L - microgram per liter
J - concentration is estimated

Legend

- Surface Water/Sediment Sample Location
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-18
Inorganics Detected in Surface Water Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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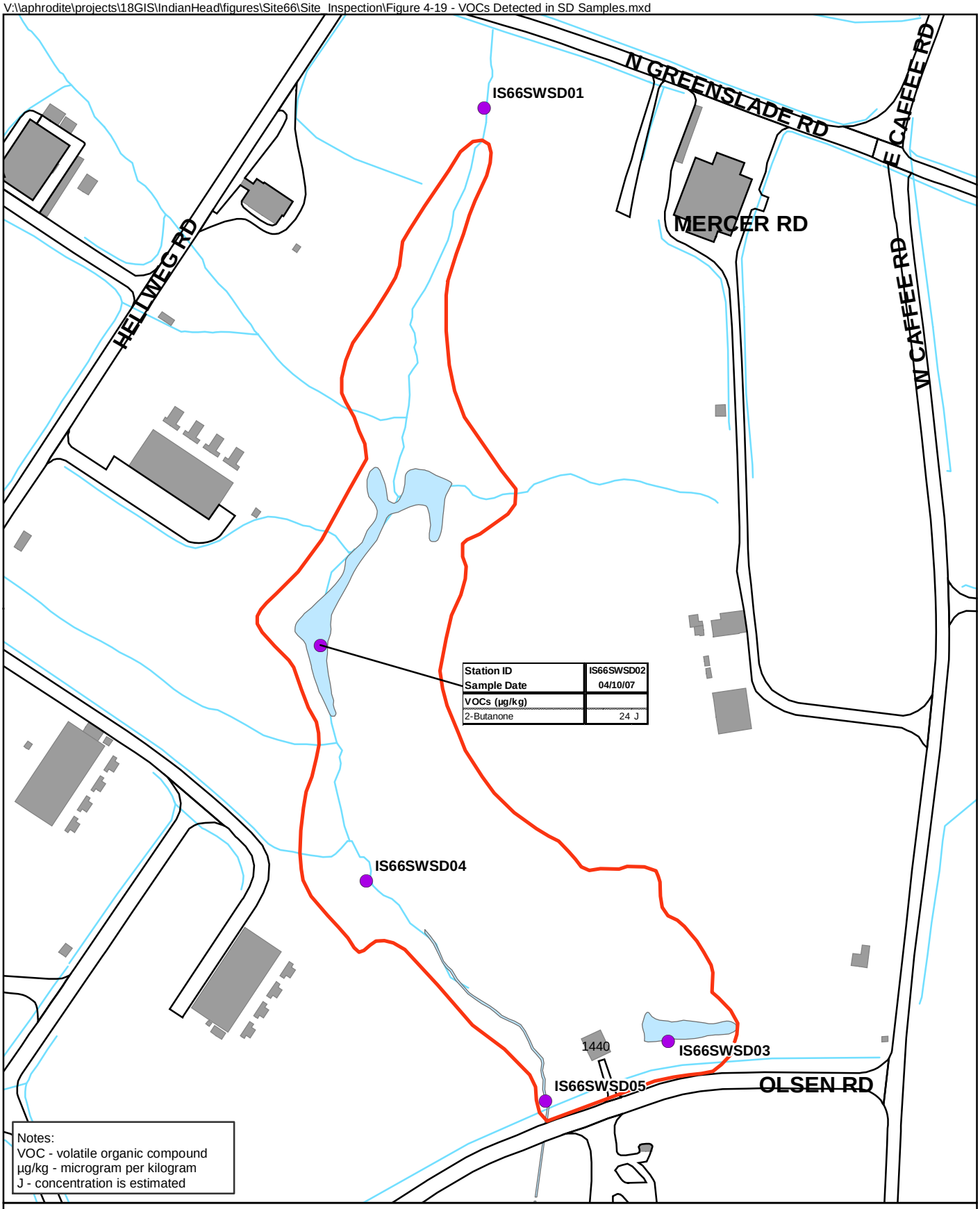
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-19 - VOCs Detected in SD Samples.mxd



Legend

- Surface Water/Sediment Sample Location
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-19
Volatile Organic Compounds Detected in Sediment Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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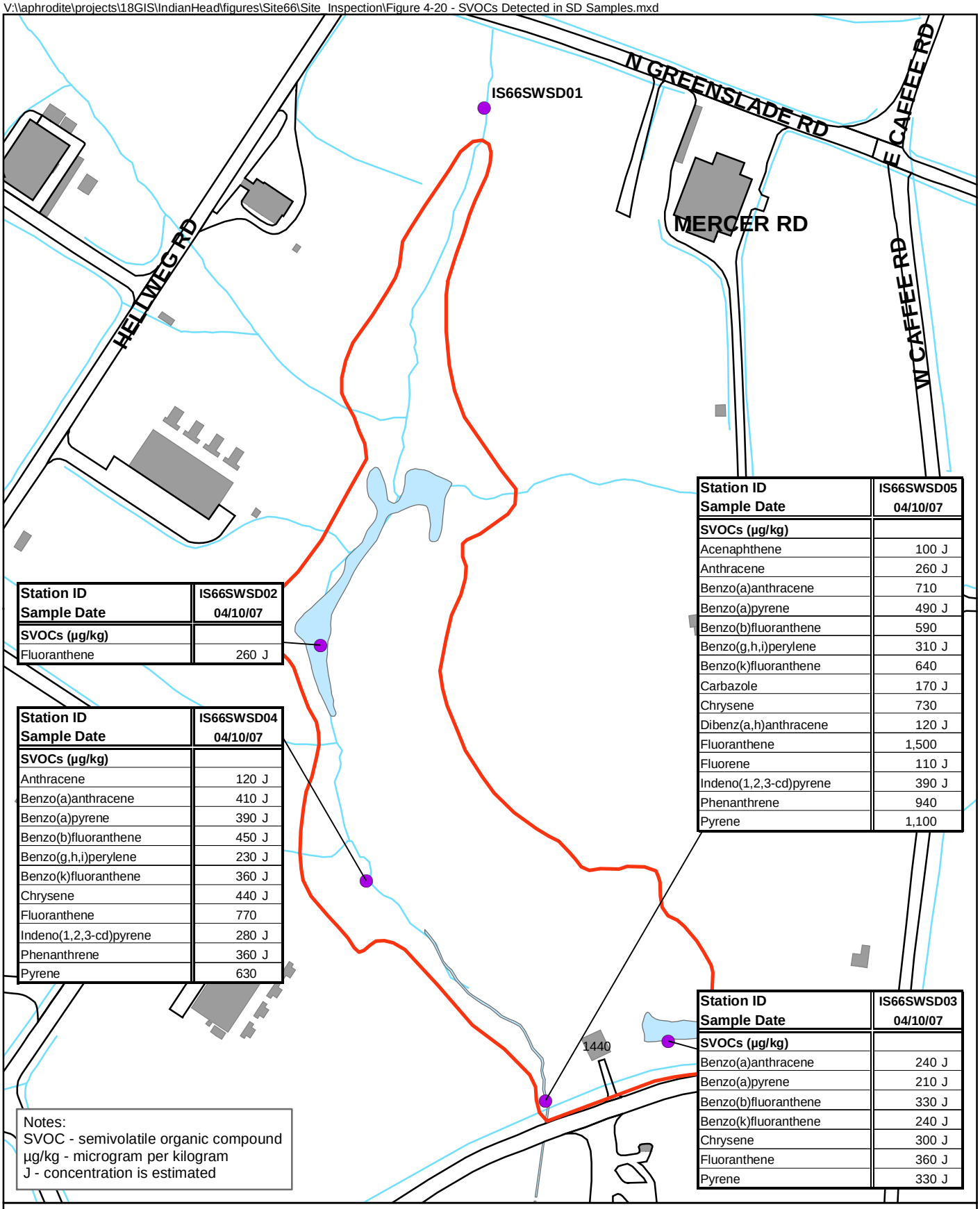
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-20 - SVOCs Detected in SD Samples.mxd



Station ID Sample Date	IS66SWSD02 04/10/07
SVOCs (µg/kg)	
Fluoranthene	260 J

Station ID Sample Date	IS66SWSD04 04/10/07
SVOCs (µg/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

Station ID Sample Date	IS66SWSD05 04/10/07
SVOCs (µg/kg)	
Acenaphthene	100 J
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
Carbazole	170 J
Chrysene	730
Dibenz(a,h)anthracene	120 J
Fluoranthene	1,500
Fluorene	110 J
Indeno(1,2,3-cd)pyrene	390 J
Phenanthrene	940
Pyrene	1,100

Station ID Sample Date	IS66SWSD03 04/10/07
SVOCs (µg/kg)	
Benzo(a)anthracene	240 J
Benzo(a)pyrene	210 J
Benzo(b)fluoranthene	330 J
Benzo(k)fluoranthene	240 J
Chrysene	300 J
Fluoranthene	360 J
Pyrene	330 J

Notes:
SVOC - semivolatile organic compound
µg/kg - microgram per kilogram
J - concentration is estimated

Legend

- Surface Water/ Sediment Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-20
Semivolatile Organic Compounds Detected in Sediment Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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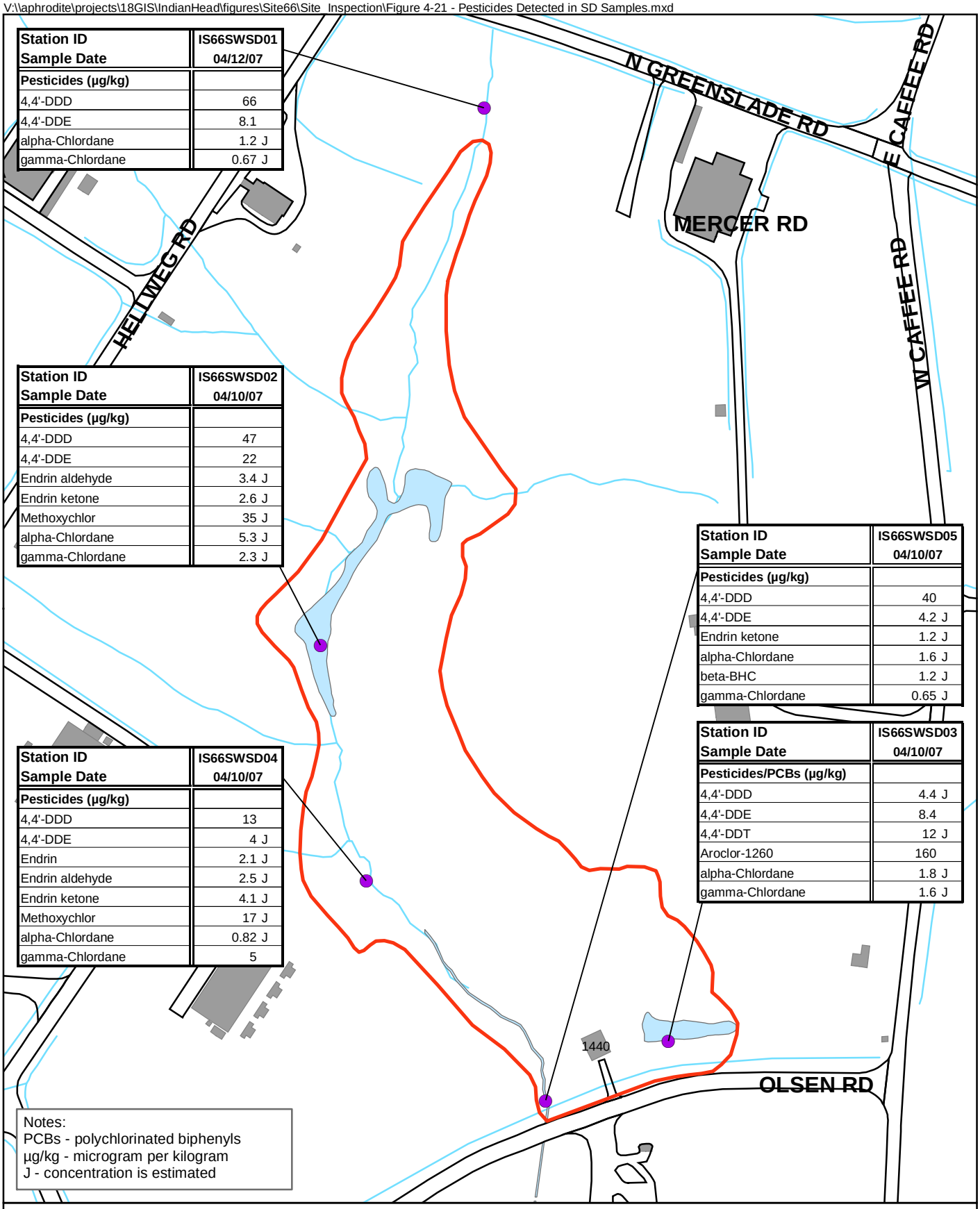
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-21 - Pesticides Detected in SD Samples.mxd



Station ID Sample Date	IS66SWSD01 04/12/07
Pesticides (µg/kg)	
4,4'-DDD	66
4,4'-DDE	8.1
alpha-Chlordane	1.2 J
gamma-Chlordane	0.67 J

Station ID Sample Date	IS66SWSD02 04/10/07
Pesticides (µg/kg)	
4,4'-DDD	47
4,4'-DDE	22
Endrin aldehyde	3.4 J
Endrin ketone	2.6 J
Methoxychlor	35 J
alpha-Chlordane	5.3 J
gamma-Chlordane	2.3 J

Station ID Sample Date	IS66SWSD05 04/10/07
Pesticides (µg/kg)	
4,4'-DDD	40
4,4'-DDE	4.2 J
Endrin ketone	1.2 J
alpha-Chlordane	1.6 J
beta-BHC	1.2 J
gamma-Chlordane	0.65 J

Station ID Sample Date	IS66SWSD03 04/10/07
Pesticides/PCBs (µg/kg)	
4,4'-DDD	4.4 J
4,4'-DDE	8.4
4,4'-DDT	12 J
Aroclor-1260	160
alpha-Chlordane	1.8 J
gamma-Chlordane	1.6 J

Station ID Sample Date	IS66SWSD04 04/10/07
Pesticides (µg/kg)	
4,4'-DDD	13
4,4'-DDE	4 J
Endrin	2.1 J
Endrin aldehyde	2.5 J
Endrin ketone	4.1 J
Methoxychlor	17 J
alpha-Chlordane	0.82 J
gamma-Chlordane	5

Notes:
PCBs - polychlorinated biphenyls
µg/kg - microgram per kilogram
J - concentration is estimated

Legend

- Surface Water/ Sediment Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-21
Pesticides/PCBs Detected in Sediment Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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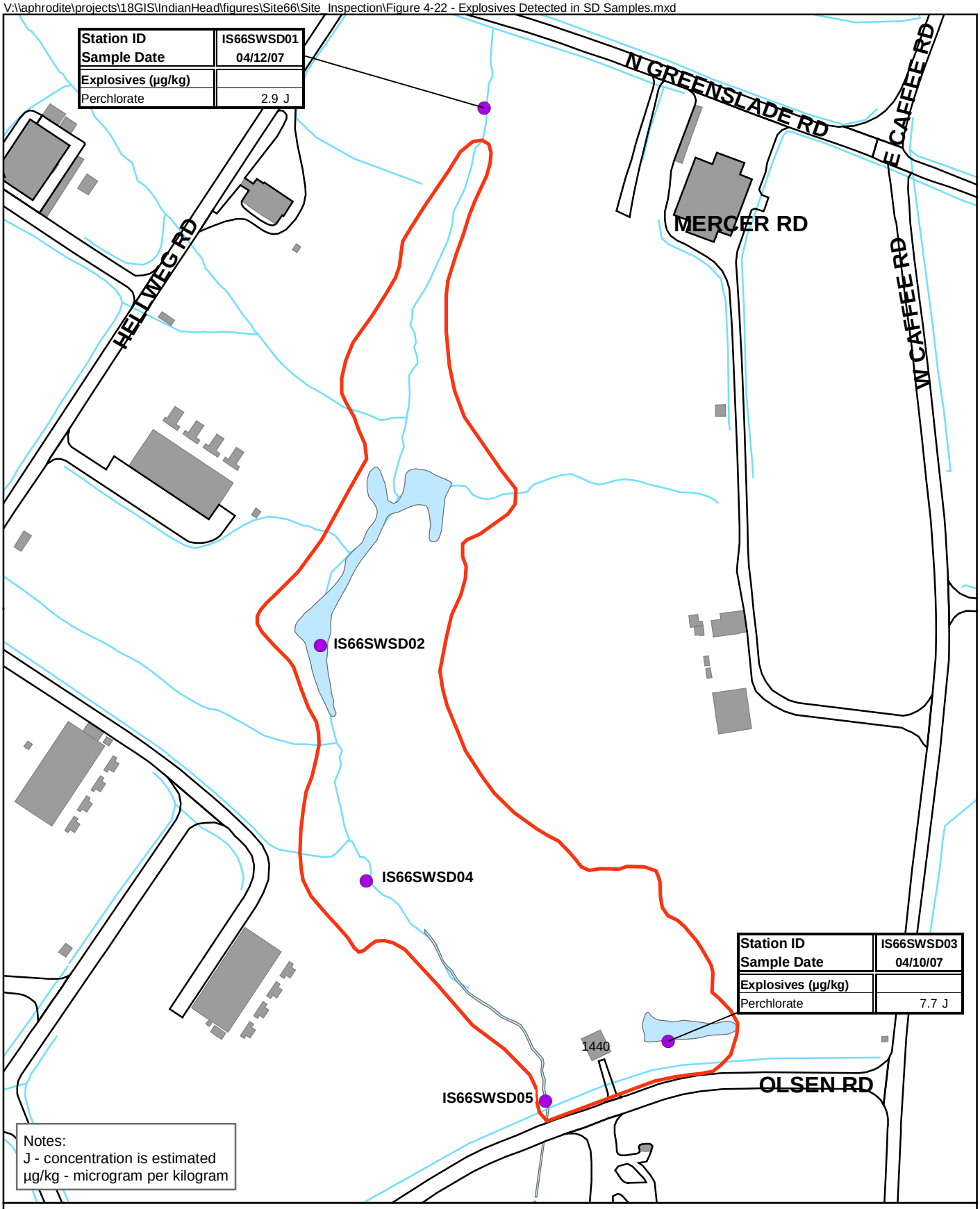
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-22 - Explosives Detected in SD Samples.mxd



Legend

- Surface Water/ Sediment Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-22
Explosives Detected in Sediment Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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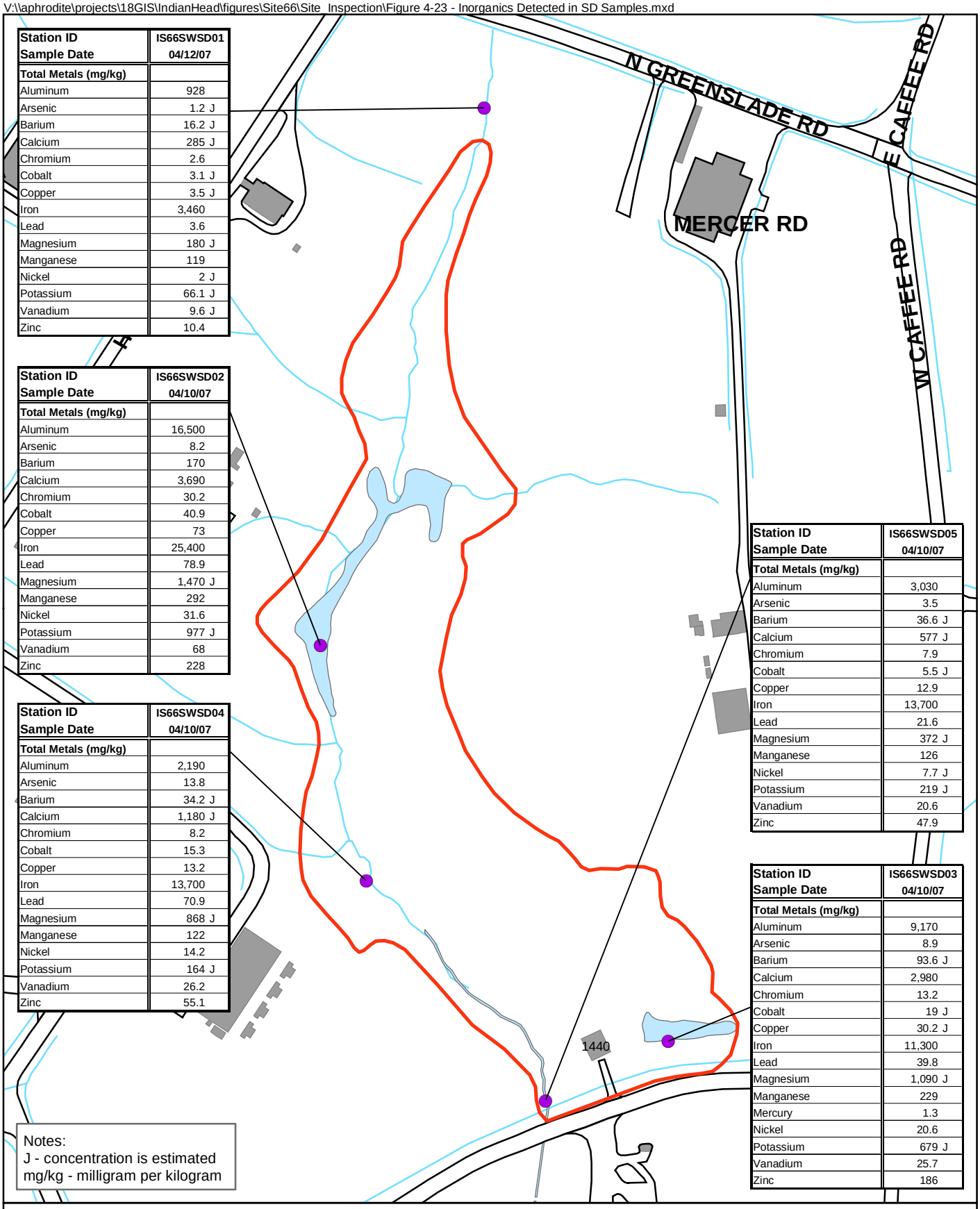
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-23 - Inorganics Detected in SD Samples.mxd



Station ID Sample Date	IS66SWSD01 04/12/07
Total Metals (mg/kg)	
Aluminum	928
Arsenic	1.2 J
Barium	16.2 J
Calcium	285 J
Chromium	2.6
Cobalt	3.1 J
Copper	3.5 J
Iron	3,460
Lead	3.6
Magnesium	180 J
Manganese	119
Nickel	2 J
Potassium	66.1 J
Vanadium	9.6 J
Zinc	10.4

Station ID Sample Date	IS66SWSD02 04/10/07
Total Metals (mg/kg)	
Aluminum	16,500
Arsenic	8.2
Barium	170
Calcium	3,690
Chromium	30.2
Cobalt	40.9
Copper	73
Iron	25,400
Lead	78.9
Magnesium	1,470 J
Manganese	292
Nickel	31.6
Potassium	977 J
Vanadium	68
Zinc	228

Station ID Sample Date	IS66SWSD04 04/10/07
Total Metals (mg/kg)	
Aluminum	2,190
Arsenic	13.8
Barium	34.2 J
Calcium	1,180 J
Chromium	8.2
Cobalt	15.3
Copper	13.2
Iron	13,700
Lead	70.9
Magnesium	868 J
Manganese	122
Nickel	14.2
Potassium	164 J
Vanadium	26.2
Zinc	55.1

Station ID Sample Date	IS66SWSD05 04/10/07
Total Metals (mg/kg)	
Aluminum	3,030
Arsenic	3.5
Barium	36.6 J
Calcium	577 J
Chromium	7.9
Cobalt	5.5 J
Copper	12.9
Iron	13,700
Lead	21.6
Magnesium	372 J
Manganese	126
Nickel	7.7 J
Potassium	219 J
Vanadium	20.6
Zinc	47.9

Station ID Sample Date	IS66SWSD03 04/10/07
Total Metals (mg/kg)	
Aluminum	9,170
Arsenic	8.9
Barium	93.6 J
Calcium	2,980
Chromium	13.2
Cobalt	19 J
Copper	30.2 J
Iron	11,300
Lead	39.8
Magnesium	1,090 J
Manganese	229
Mercury	1.3
Nickel	20.6
Potassium	679 J
Vanadium	25.7
Zinc	186

Notes:
J - concentration is estimated
mg/kg - milligram per kilogram

Legend

- Surface Water/ Sediment Sample
- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-23
Inorganics Detected in Sediment Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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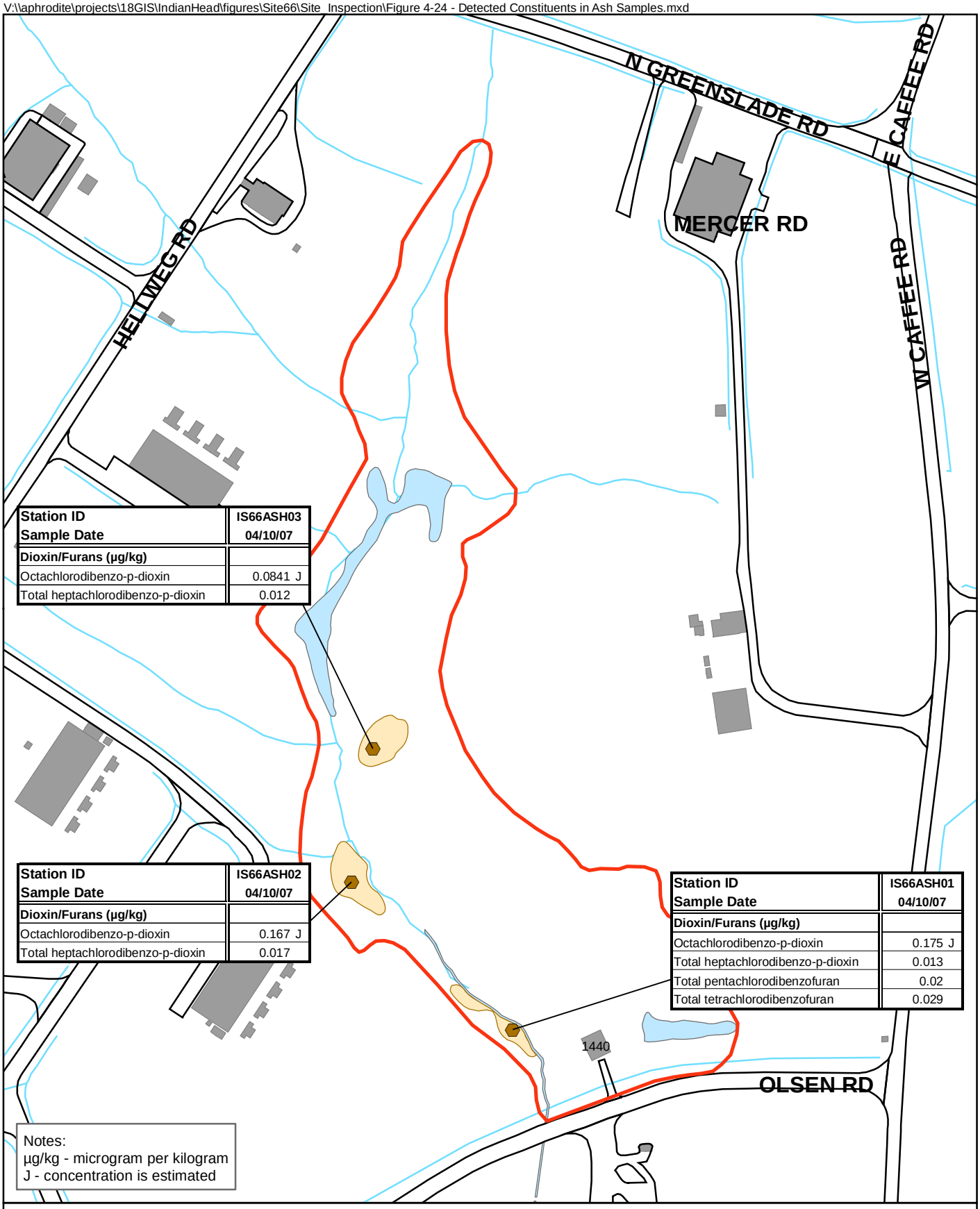
V:\\aphrodite\projects\18GIS\IndianHead\figures\Site66\Site_Inspection\Figure 4-24 - Detected Constituents in Ash Samples.mxd



Station ID Sample Date	IS66ASH03 04/10/07
Dioxin/Furans (µg/kg)	
Octachlorodibenzo-p-dioxin	0.0841 J
Total heptachlorodibenzo-p-dioxin	0.012

Station ID Sample Date	IS66ASH02 04/10/07
Dioxin/Furans (µg/kg)	
Octachlorodibenzo-p-dioxin	0.167 J
Total heptachlorodibenzo-p-dioxin	0.017

Station ID Sample Date	IS66ASH01 04/10/07
Dioxin/Furans (µg/kg)	
Octachlorodibenzo-p-dioxin	0.175 J
Total heptachlorodibenzo-p-dioxin	0.013
Total pentachlorodibenzofuran	0.02
Total tetrachlorodibenzofuran	0.029

Notes:
µg/kg - microgram per kilogram
J - concentration is estimated

Legend

- Site Boundary (Approximate Limit of Visible Waste Material)
- Surface Water
- Ash Pile
- Roads
- Buildings
- Surface Waterbodies

N

0 100 200 Feet

1 INCH = 200'

Figure 4-24
Detected Constituents in Ash Samples
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

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SECTION 5

Risk Characterization

5.1 Human Health Risk Screening

A human health risk-based screening was performed to determine whether the chemicals detected in site media pose a potential risk to human receptors that may come in contact with these media.

5.1.1 Methods

For surface soil, subsurface soil, *in situ* groundwater, surface water, and sediment, a two-step process was used to determine if there are any chemicals of potential concern (COPCs) based on potential human exposure for the media evaluated at Site 66. During the Step 1 screening, the maximum detected concentrations of compounds in each medium were compared to the appropriate risk-based concentrations (RBCs) from the current EPA Region III RBC table (April 6, 2007). Surface and subsurface soil data were compared to residential soil RBCs (Tables 5-1 and 5-4, respectively), *in situ* groundwater data were compared to tap water RBCs (Table 5-7), surface water data were compared to 10 times the tap water RBCs (Table 5-10), sediment data were compared to 10 times the residential soil RBCs (Table 5-13), and ash data were compared to residential soil RBCs (Table 5-16).

Those RBCs that are based on noncarcinogenic effects were divided by 10 (to adjust to a hazard index of 0.1) to account for potential exposure to multiple compounds. RBCs associated with carcinogenic effects are based on an excess lifetime cancer risk of 1×10^{-6} and were not adjusted from the values in the RBC table. For the ash data (Table 5-16), the RBC value for 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD; i.e., dioxin) was adjusted using the toxicity equivalency factors (TEFs) from the World Health Organization (WHO) for the individual congeners.

If the maximum detected concentration of a chemical exceeded the applicable screening value, the chemical was carried forward to Step 2 of the screening process. During the Step 2 screening, chemical concentrations in surface soil, subsurface soil, *in situ* groundwater, and sediment that exceeded risk-based screening levels were further evaluated by comparing the maximum detected concentrations to site background concentrations provided in the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). Surface water was not carried forward to the Step 2 process in the same manner as the other media, because background concentrations are not available from the background study. Following the Step 1 process, surface water data were further evaluated by screening the analytical results against the site-specific background data. Ash results were not carried forward to the Step 2 process because basewide and site-specific background data are not available.

Surface soil concentrations were compared against the 95 percent upper tolerance limit (95 percent UTL) background concentrations for non-clay-like surface soils shown in Table 4-2 in the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002).

Subsurface soil concentrations were compared against the 95 percent UTLs for non-clay-like subsurface soils provided in Table 4-4 of the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). Non-clay-like soil concentrations, as opposed to those for clay-like soils, were used in the comparison because they were generally more conservative (i.e., lower) than the clay-like soils, and because they were more representative of site soil conditions that were observed during the SI. *In situ* groundwater concentrations were compared against the 95 percent UTL background concentrations in Table A-6 for filtered inorganic chemicals and Table A-8 for nonfiltered samples in Appendix A of the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). Sediment concentrations were compared against the 95 percent UTL sediment background concentration in Table A-12 in Appendix A of the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002).

5.1.2 Results

The results of the human health risk-based screening are presented in Tables 5-1 through 5-16. The results are summarized by media below.

5.1.2.1 Surface Soil

Step 1 (Comparison against Risk-based Criteria). The comparison of maximum detected concentrations in surface soil to RBCs is presented in Table 5-1. Table 5-2 shows a list of the constituents that exceed their respective screening values and hence, are identified as COPCs. A total of 11 SVOCs, 1 pesticide, and 6 inorganics were identified as COPCs (Table 5-2). There were no VOCs or explosives detected at maximum concentrations greater than the screening values.

Step 2 (Comparison against Background Concentrations). The comparison of maximum detected concentrations in surface soil to the 95 percent UTLs (taken from Table 4-2 in the Background Soil Investigation Report [Tetra Tech NUS, Inc., 2002]) is presented in Table 5-1. Potential COPCs identified in the Step 1 screening (Table 5-2) were carried forward into Step 2, which compared the identified chemicals with the 95 percent UTLs. A summary of the COPCs retained after the Step 2 process is shown in Table 5-3.

All of the SVOCs and pesticides, and three inorganic (arsenic, mercury, and vanadium) COPCs from Step 1, exceeded the 95 percent UTL and are retained as COPCs (Table 5-3). The maximum detected concentrations of aluminum, iron, and manganese identified in Step 1 were less than the 95 percent UTL.

5.1.2.2 Subsurface Soil

Step 1 (Comparison against Risk-based Criteria). The comparison of maximum detected concentrations in subsurface soil to RBCs is presented in Table 5-4. Six SVOCs, two pesticides, and seven inorganics were detected at maximum concentrations greater than the screening values (Table 5-5). There were no VOCs or explosives detected at maximum concentrations greater than the screening values.

Step 2 (Comparison against Background Concentrations). The comparison of maximum detected concentrations in subsurface soil to the 95 percent UTLs is presented in Table 5-4. Potential COPCs identified in the Step 1 screening (Table 5-5) were carried forward into Step 2, which compared the identified chemicals with the 95 percent UTL background concentrations. A summary of the COPCs retained after the Step 2 process is shown in Table 5-6.

All of the SVOCs and pesticides, and five inorganic (arsenic, iron, lead, manganese, and vanadium) COPCs from Step 1 exceeded the 95 percent UTL and are retained as COPCs after Step 2 (Table 5-6). The maximum detected concentrations of two (aluminum and chromium) of the seven inorganic chemicals identified in Step 1 were less than the 95 percent UTLs.

5.1.2.3 *In situ* Groundwater

Step 1 (Comparison against Risk-based Criteria). The results of the comparison of maximum detected concentrations in *in situ* groundwater to RBCs are presented in Table 5-7. Two pesticides, nine total inorganics, and four dissolved inorganics were detected at maximum concentrations greater than the screening values and identified as COPCs (Table 5-8). There were no SVOCs, PCBs, or explosives detected at maximum concentrations greater than the screening values. VOCs were not detected in any of the groundwater samples.

Step 2 (Comparison against Background Concentrations). Although the groundwater samples were not collected from monitoring wells, the potential COPCs identified in the Step 1 screening were carried forward into Step 2, which compared the identified chemicals with the 95 percent UTL background concentrations obtained from monitoring well groundwater samples provided in Tables A-6 and A-8 in Appendix A of the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). The comparison of maximum detected concentrations in *in situ* groundwater to the 95 percent UTLs is presented in Table 5-7. A summary of the COPCs retained after the Step 2 process is shown in Table 5-9.

The maximum detected concentrations of aluminum and manganese in the unfiltered samples and iron in the filtered samples were below the 95 percent UTL background values. Therefore, these metals were not identified as COPCs after the Step 2 screening. There were no background concentrations available for the pesticide compounds; therefore, these compounds were retained as COPCs.

5.1.2.4 Surface Water

Step 1 (Comparison against Risk-based Criteria). The comparison of maximum detected concentrations in surface water to risk-based criteria is presented in Table 5-10. One VOC, two total inorganics, and one dissolved inorganic were detected at maximum concentrations greater than the screening values and identified as COPCs (Table 5-11). SVOCs, pesticides, PCBs, and explosives were not detected in any of the surface water samples.

Step 2 (Comparison against Background Concentrations). Because surface water samples were not collected and analyzed as part of the background study, the surface water sample from location IS66SWSD01 was used as a site-specific background location for a qualitative comparison to the other samples, referred to as site samples (IS66SWSD02 through IS66SWSD05). Results of the COPCs identified in Step 1 (Table 5-11) were compared to those for sample IS66SWSD01. A summary of the COPCs retained after the Step 2 process is shown in Table 5-12.

Bromodichloromethane was not detected in sample IS66SWSD01. It was only detected in the duplicate sample from location IS66SWSD03 at a concentration that was "J" qualified, indicating the result is estimated. The concentration of bromodichloromethane in the primary sample IS66SWSD03 was nondetect. Total arsenic was not detected in sample IS66SWSD01. It was only detected at the same concentration (3.9 J µg/L) in the primary and duplicate samples from location IS66SWSD03. The samples from the other three locations were nondetect. Dissolved arsenic was not detected in any of the samples. Total and dissolved manganese were detected in the site-specific background sample and site samples. The concentration of manganese in three of the four site samples exceeded the concentration in the background sample (587 µg/L for total manganese and 586 µg/L for dissolved manganese). Manganese is a required human nutrient and the detected concentrations (ranging from 350 to 1,230 µg/L for total manganese and from 343 to 1,280 µg/L for dissolved manganese) most likely would not cause a risk to potential receptors. The COPCs retained from the Step 1 process (Table 5-11) are also retained after the Step 2 process (Table 5-12). Based on the discussion above, all four of the constituents identified as COPCs in Table 5-12 could potentially be eliminated as COPCs.

5.1.2.5 Sediment

Step 1 (Comparison against Risk-based Criteria). The comparison of maximum detected concentrations in sediment to risk-based criteria is presented in Table 5-13. One SVOC and one inorganic were detected at maximum concentrations greater than the screening values and identified as COPCs (Table 5-14). VOCs, pesticides, PCBs, and explosives were not detected in any of the sediment samples at concentrations above the screening criteria.

Step 2 (Comparison against Background Concentrations). The potential inorganic COPC arsenic, identified in the Step 1 screening, was carried forward into Step 2, and its concentration was compared to the 95 percent UTL provided in Table A-12 in Appendix A of the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). The background sediment investigation did not include analysis of the samples for SVOCs; therefore, a comparison to background for the one SVOC, benzo(a)pyrene, retained after Step 1 was not performed. The comparison of maximum detected concentrations in sediment to the 95 percent UTLs is presented in Table 5-13. A summary of the COPCs retained after the Step 2 process is shown in Table 5-15.

The maximum detected concentration of arsenic was less than the 95 percent UTL; therefore, it is not retained as a COPC after Step 2. As mentioned above, SVOCs were not analyzed in sediment samples in the background study. A qualitative comparison of the concentrations of benzo(a)pyrene in site samples (IS66SWSD02, IS66SWSD03, IS66SWSD04, and IS66SWSD05) to the site-specific background sample, IS66SWSD01 (which was nondetect) shows that benzo(a)pyrene was detected in three (IS66SWSD03, IS66SWSD04, and

IS66SWSD05) of the four site samples. As a result, benzo(a)pyrene is retained as a COPC after Step 2 (Table 5-15).

5.1.2.6 Ash Samples

In Step 1, ash data were compared to residential soil RBCs. A residential soil RBC is only available for 2,3,7,8-TCDD (dioxin) and not any of the other dioxin/furan congeners analyzed in the ash samples. 2,3,7,8-TCDD was not detected in any of the ash samples; however, two dioxin congeners (octachlorodibenzo-p-dioxin and total heptachlorodibenzo-p-dioxin) and two furan congeners (total pentachlorodibenzofuran and total tetrachlorodibenzofuran) were each detected in at least one of the three ash samples. Therefore, the 2,3,7,8-TCDD RBC was adjusted to an appropriate RBC for each of these congeners using TEFs from the WHO, and presented in the WHO Re-evaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds (van den Berg, et al., 2006). Since there are no TEFs for total congener groups (i.e., total heptachlorodibenzo-p-dioxin), the highest TEF for a dioxin congener within the group (i.e., 1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin) was used to calculate the 2,3,7,8-TCDD equivalent screening value.

The maximum detected concentrations for all of the total congener group concentrations were below the screening value except for total pentachlorodibenzofuran (Table 5-16). However, it is unlikely that there would be a risk associated with exposure to this compound, as the most toxic individual furan congeners that make up this compound (1,2,3,7,8-pentachlorodibenzofuran and 2,3,4,7,8-pentachlorodibenzofuran) were not detected, and the total value is composed of congeners that are less toxic, were not reported individually, and have no TEFs due to the lower toxicity. Therefore, it can be assumed that there would be no unacceptable risks associated with exposure to dioxins/furans in the ash at Site 66.

5.1.3 Summary

Based on the results of the human health risk-based screening, surface soil, subsurface soil, and groundwater warrant further assessment of human health risk. Surface water, sediment, and ash, however, do not warrant further human health risk assessment.

Three compounds were retained as COPCs for surface water: bromodichloromethane, total arsenic, and manganese (total and dissolved). Bromodichloromethane and arsenic were only detected in one of the five surface water samples and at concentrations that are within an order-of-magnitude of the screening criteria. Arsenic was only detected in the unfiltered sample, and was not detected in any of the filtered samples. Manganese is a human nutrient and also may be associated with background conditions. However, a full set of background data were not available for the surface water. Only one site-specific upgradient surface water sample was available. Therefore, further evaluation of surface water may not be necessary.

Only one compound, benzo(a)pyrene, was retained as a COPC for sediment. Because the maximum detected concentration of benzo(a)pyrene is within an order-of-magnitude of the screening criteria, it is unlikely that exposure to sediment would result in any human health risks; therefore, further evaluation of the sediment is not necessary.

Two dioxin congeners and two furan congeners were each detected in at least one of the three ash samples. The maximum detected concentrations for all of the total congener group concentrations were below the screening value except for total pentachlorodibenzofuran. However, because the most toxic individual furan congeners that make up this compound were not detected, and the total value is composed of congeners that are less toxic, were not reported individually, and have no TEFs due to the lower toxicity, it is unlikely that there would be a risk associated with exposure to this compound.

5.2 Ecological Risk Screening

5.2.1 Methods

An ecological risk screening was performed to determine whether the chemicals detected in site media might pose a potential risk to ecological receptors. There is viable habitat at the site and ecological receptors could be exposed to chemicals in surface soil, sediment, and surface water at the site. Although ecological receptors cannot come in direct contact with groundwater, the *in situ* groundwater data also were evaluated for potential ecological risk because chemicals in the groundwater can discharge to surface water at the site. Subsurface soil and subsurface ash were not evaluated because complete exposure pathways to ecological receptors do not exist for these media.

In Step 1 of the risk screening, chemical concentrations were compared against applicable ecological risk-based screening criteria. EPA Ecological Soil Screening Levels (Eco-SSLs) and EPA Region III soil-screening values for compounds without Eco-SSLs (EPA, 2007) were used for screening soil sample results. The lowest Eco-SSL available for each chemical was used for this initial site screening. EPA Region III surface water ecological screening values were used to screen the groundwater data. EPA Region III sediment and surface water ecological screening values were used to evaluate the sediment and surface water data. If the maximum detected chemical concentration, or maximum detection limit for nondetected chemicals, exceeded the applicable screening value, the compound was carried forward to Step 2 of the screening process.

Step 2 of the screening process involved comparing the maximum detected chemical concentrations, or maximum detection limit for nondetected chemicals, that exceeded the screening values in Step 1 to the 95 percent UTLs in the Background Soil Investigation Report (Tetra Tech NUS, Inc., 2002). The 95 percent UTL is an estimate of the highest concentration likely found in the background data with a 95 percent level of certainty.

The ash samples were evaluated in a different manner than the other media because ecological screening levels are not available for most of the dioxin and furan compounds, and background data are not available for these compounds. Potential risks from dioxin and furan compounds in the ash samples were determined using the 2,3,7,8-TCDD (dioxin) toxicity equivalents (TEQ) approach (van den Berg, et al., 2006; WHO, 1997). The 17 congeners of polychlorinated dibenzo(p)dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs) containing chlorine substituents in at least the 2-, 3-, 7-, and 8-ring positions have been found to display dioxin-like toxicity. The concentration of individual congeners were converted to 2,3,7,8-TCDD TEQs, which were then summed to assess the risk of the dioxin and furan compounds. The procedure is based on the relative toxicity of

2,3,7,8-TCDD, which is assumed to be the most toxic dioxin compound. Each congener is assigned a TEF relative to its toxicity in relation to 2,3,7,8-TCDD. The TEFs for total congener groups (i.e., total heptachlorodibenzo-p-dioxin) were obtained from EPA (1989). This approach is conservative, since the TEFs for total congener groups take into account the TEFs for the individual congeners. The most recent TEFs published by WHO do not include TEFs for the total congeners groups. This approach was used to ensure that a conservative assessment was conducted at this stage of the assessment. The maximum reporting limit was used as a conservative surrogate concentration for nondetected compounds.

5.2.2 Results

The results of the ecological risk screening are presented in Tables 5-17 through 5-29 for the media sampled at the site. The results are summarized by medium below.

5.2.2.1 Surface Soil

Step 1 (Comparison against Risk-based Criteria). A total of 16 inorganic compounds, 3 pesticides, 1 PCB, 40 SVOCs (primarily PAHs), and 2 explosives were retained as COPCs in Step 1 (Table 5-17). They were retained because their maximum concentrations were greater than the screening values, their maximum detection limits exceeded the screening values (for those compounds that were not detected), or no screening value was available for the compound. No VOCs were identified as COPCs for surface soil.

Step 2 (Comparison against Background Concentrations). Potential COPCs identified in the Step 1 screening were carried forward into Step 2. Results of the Step 2 screening are presented in Table 5-18. A summary of the COPCs retained after the Step 2 process is shown in Table 5-19. In general, the COPCs are those compounds that were detected in the surface soil at concentrations greater than the screening values and background concentrations, and greater than the screening values if 95 percent UTLs are not available. Compounds that were not detected, but whose maximum detection limit exceeded the screening values, were not retained in Step 2 because they were assumed to not be present at environmentally significant concentrations, although there is uncertainty in this assumption because of the detection limits.

The maximum detected concentrations of 8 of the 16 inorganic chemicals identified in Step 1 also exceeded the 95 percent UTLs. Two pesticide compounds (4,4′-DDE and 4,4′-DDT) and all SVOC compounds identified in Step 1 exceeded their respective 95 percent UTLs. Although bis(2-ethylhexyl)phthalate exceeded the 95 percent UTL value, it was detected in 1 of 20 samples. Methoxychlor, acenaphthylene, dibenz(a,h)anthracene, and perchlorate were retained as COPCs because they did not have 95 percent UTLs.

5.2.2.2 *In situ* Groundwater

Step 1 (Comparison against Risk-based Criteria). A total of 16 total inorganics, 8 dissolved inorganics, 21 pesticides/PCBs, 21 SVOCs, 1 explosive, and 6 VOCs were retained as COPCs in Step 1 (Table 5-20). They were retained because their maximum concentrations were greater than the screening values, their maximum detection limits exceeded the screening values (for those compounds that were not detected), or there was no screening value available for the compound.

Thirteen of the 16 total inorganic compounds were detected at maximum concentrations greater than the screening values. Antimony, cadmium, selenium, silver, and thallium were not detected, but their maximum detection limits exceeded the screening values, so they also were retained as COPCs. Five (arsenic, barium, cobalt, iron, and manganese) of the eight dissolved inorganics were detected at concentrations greater than the screening values, whereas the other three compounds (list) were not detected, but are retained as COPCs because their maximum detection limits exceeded the screening values.

Three pesticide compounds (4,4′-DDD, 4,4′-DDT, and heptachlor epoxide) were detected at maximum concentrations greater than the screening values and identified as COPCs, although they were detected in only one of nine groundwater samples. The other pesticides and PCBs, SVOCs, and VOCs were not detected in the *in situ* groundwater samples, but were retained as COPCs because their maximum detection limits exceeded the screening values. One explosive compound, perchlorate, was detected in the groundwater samples. No screening value was available for this compound, so it was retained as a COPC.

Step 2 (Comparison against Background Concentrations). Results of the Step 2 screening for *in situ* groundwater are presented in Table 5-21. A summary of the COPCs retained after the Step 2 process is shown in Table 5-22. The *in situ* groundwater data were compared to the 95 percent UTLs. Three of the total inorganic chemicals identified as COPCs in Step 1 exceeded the 95 percent UTLs. Therefore, these metals were identified as COPCs after the Step 2 screening, in addition to arsenic for which a 95 percent UTL was not available. There were no background concentrations available for the pesticide and explosive compounds; thus, these compounds were retained as COPCs. This evaluation does not account for dilution upon discharge to surface water; therefore, the potential risk is likely overestimated.

5.2.2.3 Surface Water

Step 1 (Comparison against Risk-based Criteria). Nine total inorganics, nine dissolved inorganics, 20 pesticides/PCBs, 22 SVOCs, and 5 VOCs were retained as COPCs in Step 1 (Table 5-23). They were retained because their maximum concentrations were greater than the screening values, their maximum detection limits exceeded the screening values (for those compounds that were not detected), or there was no screening value available for the compound.

Five of the nine total inorganic chemicals were detected at a maximum total concentration greater than the screening values. However, only barium, iron, and manganese were detected in the dissolved fraction at concentrations greater than the screening values. The ecological screening values are based on dissolved metals concentrations; therefore, the dissolved concentrations are the most relevant for evaluating potential ecological risk. Aluminum, cadmium, lead, mercury, selenium, and thallium were not detected in any of the samples, but the maximum detection limits for these metals exceeded the screening values; therefore, they also were retained as COPCs.

No pesticides, PCBs, or SVOCs were detected in the surface water samples. However, the maximum detection limits of several of these compounds exceeded the screening values; therefore, they were retained as COPCs. Two VOCs, bromodichloromethane and chloroform, were detected in one of the surface water samples, but at concentrations less

than the screening values. Five other VOCs were not detected, but had maximum detection limits greater than the screening values.

Step 2 (Comparison against Background Concentrations). Because surface water samples were not collected and analyzed as part of the background study, the surface water sample from location IS66SWSD01 was used as a site-specific background location for a qualitative comparison to the other samples, referred to as site samples (IS66SWSD02 through IS66SWSD05). Results of the COPCs identified in Step 1 were compared to concentrations in sample IS66SWSD01. Results of the Step 2 screening for surface water are presented in Table 5-24. A summary of the COPCs retained after the Step 2 process is shown in Table 5-25. Three of the dissolved inorganics identified as COPCs in Step 1 exceeded the background concentration (barium, iron, and manganese). However, the average dissolved concentrations of barium and iron were below the background concentrations. The average concentration of barium was 36.9 µg/L and the background concentration was 48.7 µg/L. The average concentration of iron was 1,676 µg/L and the background concentration was 3,870 µg/L. The average concentration of manganese (716 µg/L) exceeded the background concentration of 587 µg/L; however, considering the limited background data, it is likely that the manganese levels found in the stream are consistent with background conditions.

5.2.2.4 Sediment

Step 1 (Comparison against Risk-based Criteria). A total of 12 inorganic compounds, 22 pesticides/PCBs, 35 SVOCs, 3 explosives, and 6 VOCs were retained as COPCs in Step 1 (Table 5-26). They were retained because their maximum concentrations were greater than the screening values, their maximum detection limits exceeded the screening values (for those compounds that were not detected), or there was no screening value available for the compound.

Step 2 (Comparison against Background Concentrations). Potential COPCs identified in Step 1 were carried forward into Step 2. Results of the Step 2 screening are presented in Table 5-27. A summary of the COPCs retained after the Step 2 process is shown in Table 5-28. In general, the COPCs are those compounds that were detected in sediment at concentrations greater than the screening values and background concentrations, and greater than the screening values if 95 percent UTLs are not available. Compounds that were not detected, but whose maximum detection limit exceeded the screening values are not retained even though they were retained in Step 1.

Of the detected inorganic chemicals identified in Step 1, only mercury exceeded the 95 percent UTL concentration. Background concentrations were only available for the DDT family of pesticides, and none of the DDT family of compounds exceeded the 95 percent UTLs.

5.2.2.5 Ash Samples

Two dioxin compounds (octachlorodibenzo-p-dioxin and total heptachlorodibenzo-p-dioxin) and two furan compounds (total pentachlorodibenzofuran and total tetrachlorodibenzofuran) were detected in the ash samples collected at the site (Table 5-29). A screening value is available only for 2,3,7,8-TCDD (dioxin). Therefore, the individual congener group concentrations were converted to a 2,3,7,8-TCDD TEQ concentration using the TEFs listed in EPA (1989), van den Berg et al. (2006), and WHO (1997) to screen for

potential risk. This evaluation revealed that the total 2,3,7,8-TCDD equivalent concentration exceeds the screening value for mammals, but not for birds, when using the maximum detection limit for nondetected congeners. However, the sum of the detected congeners alone does not exceed the screening value for mammals.

Dioxin/furans were retained as COPCs, but the risk estimate is driven by high detection limits that are used as surrogate values for nondetected compounds. The sum of the detected congeners does not exceed the screening value for mammals. Therefore, the risk is probably overestimated for dioxin and furan compounds in the ash, and an unacceptable risk to mammals in unlikely.

5.2.2 Summary

The results of the ecological risk screening indicate that the chemicals in the surface soil and sediment at the site warrant further consideration for ecological risk. The risk screening results suggest that the inorganic chemicals detected in the surface water at the site are likely related to background conditions and do 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 samples. 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.

A potential risk to mammals from dioxin and furan compounds in the ash at the site was identified. However, the risk estimate was driven by high detection limits, which were used as surrogate values for nondetected compounds and the sum of the detected congeners did not exceed the screening value. Therefore, the risk is probably overestimated for dioxin and furan compounds in the ash, and an unacceptable risk to mammals in unlikely.

Table 5-1
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Surface Soil
Site 66 Site Inspection Report
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	100-42-5	Styrene	1.60E-02	1.60E-02	MG_KG	IS66SS070001	1/20	0.01 - 0.032	1.60E-02	1.30E-03	1.60E+03 N			NO	BSL
	91-57-6	2-Methylnaphthalene	1.30E-01 J	7.10E-01 J	MG_KG	IS66SS150001	2/20	0.37 - 18	7.10E-01	7.30E-02	3.10E+01 N			NO	BSL
	83-32-9	Acenaphthene	1.10E-01 J	2.60E+01 J	MG_KG	IS66SS15P0001	5/20	0.37 - 18	2.60E+01	1.40E-01	4.70E+02 N			NO	BSL
	208-96-8	Acenaphthylene	1.20E-01 J	3.40E-01 J	MG_KG	IS66SS210001	3/20	0.37 - 18	3.40E-01	ND	1.60E+02 N			NO	BSL
	120-12-7	Anthracene	1.10E-01 J	5.60E+01 J	MG_KG	IS66SS15P0001	8/20	0.37 - 18	5.60E+01	2.60E-01	2.30E+03 N			NO	BSL
	56-55-3	Benzo(a)anthracene	1.00E-01 J	1.70E+02 J	MG_KG	IS66SS15P0001	12/20	0.37 - 110	1.70E+02	4.80E-01	2.20E-01 C			YES	ASL
	50-32-8	Benzo(a)pyrene	3.10E-01 J	1.80E+02 J	MG_KG	IS66SS15P0001	11/20	0.37 - 110	1.80E+02	3.90E-01	2.20E-02 C			YES	ASL
	205-99-2	Benzo(b)fluoranthene	1.10E-01 J	1.80E+02 J	MG_KG	IS66SS15P0001	12/20	0.37 - 110	1.80E+02	4.20E-01	2.20E-01 C			YES	ASL
	191-24-2	Benzo(g,h,i)perylene	1.60E-01 J	9.20E+01 J	MG_KG	IS66SS15P0001	11/20	0.37 - 18	9.20E+01	1.30E-01	2.30E+02 N			NO	BSL
	207-08-9	Benzo(k)fluoranthene	3.10E-01 J	1.50E+02 J	MG_KG	IS66SS15P0001	11/20	0.37 - 110	1.50E+02	3.60E-01	2.20E+00 C			YES	ASL
	86-74-8	Carbazole	1.40E-01 J	4.50E+01 J	MG_KG	IS66SS15P0001	5/20	0.37 - 18	4.50E+01	1.30E-01	3.20E+01 C			YES	ASL
	218-01-9	Chrysene	1.10E-01 J	1.80E+02 J	MG_KG	IS66SS15P0001	12/20	0.37 - 110	1.80E+02	4.40E-01	2.20E+01 C			YES	ASL
	84-74-2	Di-n-butylphthalate	5.40E-01 J	5.40E-01 J	MG_KG	IS66SS150001	1/20	0.37 - 18	5.40E-01	ND	7.80E+02 N			NO	BSL
	53-70-3	Dibenz(a,h)anthracene	8.60E-02 J	4.40E+01 J	MG_KG	IS66SS15P0001	8/20	0.37 - 18	4.40E+01	ND	2.20E-02 C			YES	ASL
	132-64-9	Dibenzofuran	4.20E-01 J	9.20E+00 J	MG_KG	IS66SS15P0001	2/20	0.37 - 18	9.20E+00	6.50E-02	7.80E+00 N			YES	ASL
	206-44-0	Fluoranthene	2.40E-01 J	3.50E+02 J	MG_KG	IS66SS15P0001	12/20	0.37 - 110	3.50E+02	1.10E+00	3.10E+02 N			YES	ASL
	86-73-7	Fluorene	1.30E-01 J	1.40E+01 J	MG_KG	IS66SS15P0001	4/20	0.37 - 18	1.40E+01	1.50E-01	3.10E+02 N			NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	2.00E-01 J	1.20E+02 J	MG_KG	IS66SS15P0001	11/20	0.37 - 18	1.20E+02	1.00E-01	2.20E-01 C			YES	ASL
	91-20-3	Naphthalene	3.60E-01 J	6.10E+00 J	MG_KG	IS66SS15P0001	2/20	0.37 - 18	6.10E+00	1.10E-01	1.60E+02 N			NO	BSL
	85-01-8	Phenanthrene	1.60E-01 J	2.10E+02 J	MG_KG	IS66SS15P0001	11/20	0.37 - 110	2.10E+02	1.10E+00	2.30E+02 N			NO	BSL
	129-00-0	Pyrene	1.90E-01 J	2.80E+02 J	MG_KG	IS66SS15P0001	12/20	0.37 - 110	2.80E+02	8.80E-01	2.30E+02 N			YES	ASL
	117-81-7	bis(2-Ethylhexyl)phthalate	2.70E+01	2.70E+01	MG_KG	IS66SS080001	1/20	0.39 - 18	2.70E+01	7.50E+00	4.60E+01 C			NO	BSL
	72-54-8	4,4'-DDD	7.70E-03	4.50E-02	MG_KG	IS66SS010001	5/20	0.0037 - 0.021	4.50E-02	ND	2.70E+00 C			NO	BSL
	72-55-9	4,4'-DDE	1.90E-03 J	2.50E-01 J	MG_KG	IS66SS150001	14/20	0.0037 - 0.029	2.50E-01	1.00E-02	1.90E+00 C			NO	BSL
	50-29-3	4,4'-DDT	1.40E-03 J	2.60E-01 J	MG_KG	IS66SS15P0001	14/20	0.0037 - 0.029	2.60E-01	9.40E-03	1.90E+00 C			NO	BSL
	309-00-2	Aldrin	1.20E-02 J	1.20E-02 J	MG_KG	IS66SS15P0001	1/20	0.0019 - 0.0041	1.20E-02	ND	3.80E-02 C			NO	BSL
	60-57-1	Dieldrin	9.50E-04 J	4.00E-02 J	MG_KG	IS66SS15P0001	12/20	0.0037 - 0.008	4.00E-02	ND	4.00E-02 C			YES	ASL
	959-98-8	Endosulfan I	7.20E-04 J	1.50E-02 J	MG_KG	IS66SS15P0001	3/20	0.0019 - 0.0041	1.50E-02	ND	4.70E+01 N			NO	BSL
	33213-65-9	Endosulfan II	1.10E-03 J	2.30E-02 J	MG_KG	IS66SS150001	7/20	0.0037 - 0.008	2.30E-02	ND	4.70E+01 N			NO	BSL
	1031-07-8	Endosulfan sulfate	1.30E-03 J	3.80E-02 J	MG_KG	IS66SS150001	6/20	0.0037 - 0.029	3.80E-02	ND	4.70E+01 N			NO	BSL
	72-20-8	Endrin	8.00E-04 J	1.20E-03 J	MG_KG	IS66SS120001	2/20	0.0037 - 0.008	1.20E-03	ND	2.30E+00 N			NO	BSL
	7421-93-4	Endrin aldehyde	1.10E-03 J	6.20E-02 J	MG_KG	IS66SS15P0001	10/20	0.0037 - 0.008	6.20E-02	ND	2.30E+00 N			NO	BSL
	53494-70-5	Endrin ketone	1.10E-03 J	9.60E-02 J	MG_KG	IS66SS15P0001	12/20	0.0037 - 0.029	9.60E-02	ND	2.30E+00 N			NO	BSL
	76-44-8	Heptachlor	8.40E-04 J	1.10E-03 J	MG_KG	IS66SS010001	3/20	0.0019 - 0.0041	1.10E-03	ND	1.40E-01 C			NO	BSL
	1024-57-3	Heptachlor epoxide	6.20E-04 J	5.30E-03 J	MG_KG	IS66SS15P0001	3/20	0.0019 - 0.0041	5.30E-03	ND	7.00E-02 C			NO	BSL
	72-43-5	Methoxychlor	8.10E-03 J	2.30E-01 J	MG_KG	IS66SS150001	9/20	0.019 - 0.041	2.30E-01	ND	3.90E+01 N			NO	BSL

Table 5-1
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Surface Soil
Site 66 Site Inspection Report
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
	319-84-6	alpha-BHC	7.70E-04 J	3.20E-03	MG_KG	IS66SS120001	2/20	0.0019 - 0.0041	3.20E-03	ND	1.00E-01 C			NO	BSL
	5103-71-9	alpha-Chlordane	6.30E-04 J	2.30E-02 J	MG_KG	IS66SS050001	9/20	0.0019 - 0.0041	2.30E-02	ND	1.80E+00 C			NO	BSL
	319-85-7	beta-BHC	2.60E-04 J	9.60E-03 J	MG_KG	IS66SS150001	15/20	0.0019 - 0.0041	9.60E-03	ND	3.50E-01 C			NO	BSL
	319-86-8	delta-BHC	5.30E-04 J	6.40E-04 J	MG_KG	IS66SS010001	2/20	0.0019 - 0.0041	6.40E-04	ND	3.50E-01 C			NO	BSL
	5103-74-2	gamma-Chlordane	2.80E-04 J	1.20E-02 J	MG_KG	IS66SS150001	11/20	0.0019 - 0.0041	1.20E-02	ND	1.80E+00 C			NO	BSL
	14797-73-0	Perchlorate	1.20E-03 J	1.80E-02 J	MG_KG	IS66SS070001	17/20	0.0023 - 0.005	1.80E-02	ND	5.50E+00 N			NO	BSL
	7429-90-5	Aluminum	4.55E+03	1.51E+04	MG_KG	IS66SS050001	20/20	43.7 - 97.1	1.51E+04	1.97E+04	7.80E+03 N			NO	BBK
	7440-38-2	Arsenic	1.40E+00 J	1.08E+02	MG_KG	IS66SS140001	19/20	2.2 - 4.9	1.08E+02	1.49E+01	4.30E-01 C			YES	ASL
	7440-39-3	Barium	3.35E+01 J	2.06E+02	MG_KG	IS66SS15P0001	20/20	43.7 - 97.1	2.06E+02	8.04E+01	1.60E+03 N			NO	BSL
	7440-41-7	Beryllium	6.30E-01 J	2.90E+00	MG_KG	IS66SS110001	5/20	1.1 - 2.4	2.90E+00	1.10E+00	1.60E+01 N			NO	BSL
	7440-70-2	Calcium	2.49E+02 J	1.59E+04	MG_KG	IS66SS080001	19/20	1090 - 2430	1.59E+04	2.06E+03	N/A			NO	NUT
	7440-47-3	Chromium	8.20E+00	2.28E+01	MG_KG	IS66SS040001	20/20	2.2 - 4.9	2.28E+01	3.34E+01	2.30E+01 N			NO	BSL
	7440-48-4	Cobalt	1.60E+00 J	1.79E+01 J	MG_KG	IS66SS110001	20/20	10.9 - 24.3	1.79E+01	2.23E+01	1.60E+02 N			NO	BSL
	7440-50-8	Copper	7.30E+00	5.96E+01	MG_KG	IS66SS15P0001	20/20	5.5 - 12.1	5.96E+01	2.03E+01	3.10E+02 N			NO	BSL
	57-12-5	Cyanide	8.20E-02 J	5.70E-01 J	MG_KG	IS66SS210001	11/20	0.55 - 1.2	5.70E-01	7.30E-01	1.60E+02 N			NO	BSL
	7439-89-6	Iron	5.55E+03	3.55E+04	MG_KG	IS66SS040001	20/20	21.9 - 48.5	3.55E+04	3.85E+04	5.50E+03 N			NO	BBK
	7439-92-1	Lead	1.06E+01	3.05E+02	MG_KG	IS66SS150001	20/20	0.66 - 1.5	3.05E+02	6.25E+01	4.00E+02			NO	BSL
	7439-95-4	Magnesium	3.98E+02 J	2.31E+03	MG_KG	IS66SS080001	19/20	1090 - 2430	2.31E+03	1.62E+03	N/A			NO	NUT
	7439-96-5	Manganese	3.47E+01	5.21E+02	MG_KG	IS66SS150001	20/20	3.3 - 7.3	5.21E+02	1.39E+03	1.60E+02 N			NO	BBK
	7439-97-6	Mercury	5.00E-01 J	2.21E+01 J	MG_KG	IS66SS200001	7/20	0.095 - 0.48	2.21E+01	1.60E-01	2.30E+00 N			YES	ASL
	7440-02-0	Nickel	5.40E+00 J	9.04E+01	MG_KG	IS66SS020001	20/20	8.7 - 19.4	9.04E+01	1.54E+01	1.60E+02 N			NO	BSL
	7440-09-7	Potassium	2.90E+02 J	1.14E+03 J	MG_KG	IS66SS210001	20/20	1090 - 2430	1.14E+03	1.47E+03	N/A			NO	NUT
	7782-49-2	Selenium	1.70E+00 J	3.40E+00	MG_KG	IS66SS150001	2/20	1.1 - 2.4	3.40E+00	1.20E+00	3.90E+01 N			NO	BSL
	7440-22-4	Silver	1.90E-01 J	5.50E-01 J	MG_KG	IS66SS200001	5/20	2.2 - 4.9	5.50E-01	ND	3.90E+01 N			NO	BSL
	7440-62-2	Vanadium	1.93E+01	1.15E+02	MG_KG	IS66SS140001	20/20	10.9 - 24.3	1.15E+02	5.33E+01	7.80E+00 N			YES	ASL
	7440-66-6	Zinc	1.65E+01	3.73E+02	MG_KG	IS66SS160001 IS66SS170001	20/20	4.4 - 9.7	3.73E+02	3.75E+01	2.30E+03 N			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] Residential soil RBC from Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC for noncarcinogens divided by 10 to account for exposure to multiple constituents.
RBC value for technical-BCH used as surrogate for delta-BHC.
RBC value for hexavalent chromium used for total chromium.
Cobalt was withdrawn from October 2005 RBC Table due to expiration of NCEA provisional toxicity values. Value is from the April 2005 RBC table.
The soil value of 400 mg/kg for lead is from the Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action

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
ND = Not detected

Table 5-1
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Surface Soil
Site 66 Site Inspection Report
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

Facilities, USEPA, July 14, 1994.

N/A = Not available

RBC value for manganese-nonfood used for manganese.

RBC value for mercuric chloride used as surrogate for mercury.

RBC value for endosulfan used as surrogate for endosulfan I, endosulfan II, and endosulfan sulfate.

RBC value for endrin used as surrogate for endrin aldehyde and endrin ketone.

RBC value for pyrene used as surrogate for phenanthrene and benzo(g,h,i)perylene.

[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)

Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)
Below Background (BBK)

Table 5-2
Step 1 Human Health Risk Screening Summary for Surface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs	Pesticides	Inorganics
Benzo(a)anthracene	Dieldrin	Aluminum
Benzo(a)pyrene		Arsenic
Benzo(b)fluoranthene		Iron
Benzo(k)fluoranthene		Manganese
Carbazole		Mercury
Chrysene		Vanadium
Dibenz(a,h)anthracene		
Dibenzofuran		
Fluoranthene		
Indeno(1,2,3-cd)pyrene		
Pyrene		

SVOC - semivolatile organic compound

Table 5-3
Step 2 Human Health Risk Screening Summary for Surface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs	Pesticides	Inorganics
Benzo(a)anthracene	Dieldrin	Arsenic
Benzo(a)pyrene		Mercury
Benzo(b)fluoranthene		Vanadium
Benzo(k)fluoranthene		
Carbazole		
Chrysene		
Dibenz(a,h)anthracene		
Dibenzofuran		
Fluoranthene		
Indeno(1,2,3-cd)pyrene		
Pyrene		

SVOC - semivolatile organic compound

Table 5-4
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: future
Medium: Subsurface Soil
Exposure Medium: Subsurface 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
Subsurface Soil	91-57-6	2-Methylnaphthalene	2.10E-01 J	2.10E-01 J	MG_KG	IS66SB040912, IS66SB070103	2/10	0.41 - 0.65	2.10E-01	ND	3.10E+01 N			NO	BSL
	83-32-9	Acenaphthene	1.50E-01 J	1.70E+00	MG_KG	IS66SB070103	3/10	0.41 - 0.65	1.70E+00	ND	4.70E+02 N			NO	BSL
	208-96-8	Acenaphthylene	1.70E-01 J	1.70E-01 J	MG_KG	IS66SB070103	1/10	0.41 - 0.65	1.70E-01	ND	1.60E+02 N			NO	BSL
	98-86-2	Acetophenone	1.10E-01 J	1.10E-01 J	MG_KG	IS66SB070103	1/10	0.41 - 0.65	1.10E-01	ND	7.80E+02 N			NO	BSL
	120-12-7	Anthracene	1.10E-01 J	4.70E+00 J	MG_KG	IS66SB070103	4/10	0.41 - 9.1	4.70E+00	ND	2.30E+03 N			NO	BSL
	56-55-3	Benzo(a)anthracene	1.70E-01 J	1.50E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	1.50E+01	ND	2.20E-01 C			YES	ASL
	50-32-8	Benzo(a)pyrene	1.10E-01 J	1.50E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	1.50E+01	ND	2.20E-02 C			YES	ASL
	205-99-2	Benzo(b)fluoranthene	1.60E-01 J	1.50E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	1.50E+01	ND	2.20E-01 C			YES	ASL
	191-24-2	Benzo(g,h,i)perylene	2.30E-01 J	1.10E+01 J	MG_KG	IS66SB070103	4/10	0.41 - 9.1	1.10E+01	ND	2.30E+02 N			NO	BSL
	207-08-9	Benzo(k)fluoranthene	1.20E-01 J	1.30E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	1.30E+01	ND	2.20E+00 C			YES	ASL
	86-74-8	Carbazole	2.20E-01 J	2.90E+00	MG_KG	IS66SB070103	3/10	0.41 - 0.65	2.90E+00	ND	3.20E+01 C			NO	BSL
	218-01-9	Chrysene	1.90E-01 J	1.50E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	1.50E+01	ND	2.20E+01 C			NO	BSL
	53-70-3	Dibenz(a,h)anthracene	1.50E-01 J	2.60E+00 J	MG_KG	IS66SB070103	3/10	0.41 - 0.65	2.60E+00	ND	2.20E-02 C			YES	ASL
	132-64-9	Dibenzofuran	1.70E-01 J	7.10E-01	MG_KG	IS66SB070103	3/10	0.41 - 0.65	7.10E-01	ND	7.80E+00 N			NO	BSL
	206-44-0	Fluoranthene	1.20E-01 J	2.70E+01	MG_KG	IS66SB070103	7/10	0.41 - 9.1	2.70E+01	ND	3.10E+02 N			NO	BSL
	86-73-7	Fluorene	1.20E-01 J	1.20E+00	MG_KG	IS66SB070103	3/10	0.41 - 0.65	1.20E+00	ND	3.10E+02 N			NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	1.30E-01 J	1.10E+01 J	MG_KG	IS66SB070103	5/10	0.41 - 9.1	1.10E+01	ND	2.20E-01 C			YES	ASL
	91-20-3	Naphthalene	1.10E-01 J	6.30E-01	MG_KG	IS66SB070103	3/10	0.41 - 0.65	6.30E-01	ND	1.60E+02 N			NO	BSL
	85-01-8	Phenanthrene	1.00E-01 J	1.70E+01	MG_KG	IS66SB070103	7/10	0.41 - 9.1	1.70E+01	ND	2.30E+02 N			NO	BSL
	129-00-0	Pyrene	3.00E-01 J	2.50E+01	MG_KG	IS66SB070103	6/10	0.41 - 9.1	2.50E+01	ND	2.30E+02 N			NO	BSL
	72-54-8	4,4'-DDD	1.60E-03 J	8.30E+01	MG_KG	IS66SB040912	9/10	0.0041 - 6.1	8.30E+01	ND	2.70E+00 C			YES	ASL
	72-55-9	4,4'-DDE	2.60E-03 J	2.80E-01 J	MG_KG	IS66SB040912	6/10	0.0041 - 0.31	2.80E-01	7.70E-03	1.90E+00 C			NO	BSL
	50-29-3	4,4'-DDT	1.00E-02	6.20E-01	MG_KG	IS66SB040912	5/10	0.0041 - 0.31	6.20E-01	2.40E-03	1.90E+00 C			NO	BSL
	60-57-1	Dieldrin	2.00E-03 J	2.00E-03 J	MG_KG	IS66SB030306 IS66SB070103	2/10	0.0041 - 0.31	2.00E-03	ND	4.00E-02 C			NO	BSL
	959-98-8	Endosulfan I	1.30E-03 J	1.30E-03 J	MG_KG	IS66SB070103	1/10	0.0021 - 0.16	1.30E-03	ND	4.70E+01 N			NO	BSL
	33213-65-9	Endosulfan II	1.20E-03 J	1.20E-03 J	MG_KG	IS66SB030306 IS66SB070103	2/10	0.0041 - 0.31	1.20E-03	ND	4.70E+01 N			NO	BSL
	1031-07-8	Endosulfan sulfate	7.70E-03 J	7.70E-03 J	MG_KG	IS66SB070103	1/10	0.0041 - 0.31	7.70E-03	ND	4.70E+01 N			NO	BSL
	72-20-8	Endrin	9.10E-04 J	9.10E-04 J	MG_KG	IS66SB020205	1/10	0.0041 - 0.31	9.10E-04	ND	2.30E+00 N			NO	BSL
	7421-93-4	Endrin aldehyde	1.80E-03 J	1.90E-02 J	MG_KG	IS66SB070103	2/10	0.0041 - 0.31	1.90E-02	ND	2.30E+00 N			NO	BSL
	53494-70-5	Endrin ketone	2.40E-03 J	2.90E-02 J	MG_KG	IS66SB070103	2/10	0.0041 - 0.31	2.90E-02	ND	2.30E+00 N			NO	BSL
	1024-57-3	Heptachlor epoxide	7.40E-04 J	2.10E-01 J	MG_KG	IS66SB040912	4/10	0.0021 - 0.16	2.10E-01	ND	7.00E-02 C			YES	ASL
	72-43-5	Methoxychlor	8.30E-03 J	7.70E-02 J	MG_KG	IS66SB070103	2/10	0.021 - 1.6	7.70E-02	ND	3.90E+01 N			NO	BSL
	319-84-6	alpha-BHC	4.00E-03 J	4.00E-03 J	MG_KG	IS66SB070103	1/10	0.0021 - 0.16	4.00E-03	ND	1.00E-01 C			NO	BSL
	5103-71-9	alpha-Chlordane	3.90E-03	3.90E-03	MG_KG	IS66SB050812	1/10	0.0021 - 0.16	3.90E-03	ND	1.80E+00 C			NO	BSL
	319-85-7	beta-BHC	8.20E-04 J	8.50E-03 J	MG_KG	IS66SB070103	2/10	0.0021 - 0.16	8.50E-03	ND	3.50E-01 C			NO	BSL
	5103-74-2	gamma-Chlordane	5.00E-04 J	2.40E-01 J	MG_KG	IS66SB040912	5/10	0.0021 - 0.16	2.40E-01	ND	1.80E+00 C			NO	BSL

Table 5-4
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: future
Medium: Subsurface Soil
Exposure Medium: Subsurface 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
	14797-73-0	Perchlorate	8.50E-04 J	2.80E-03 J	MG_KG	IS66SB040912	6/10	0.0024 - 0.0039	2.80E-03	ND	5.50E+00 N			NO	BSL
	7429-90-5	Aluminum	6.49E+03	1.09E+04	MG_KG	IS66SB070103	10/10	49.1 - 76.1	1.09E+04	2.14E+04	7.80E+03 N			NO	BBK
	7440-38-2	Arsenic	1.10E+00 J	5.32E+01 J	MG_KG	IS66SB050812	10/10	2.5 - 3.8	5.32E+01	2.87E+01	4.30E-01 C			YES	ASL
	7440-39-3	Barium	3.45E+01 J	1.31E+02	MG_KG	IS66SB030306	10/10	49.1 - 76.1	1.31E+02	6.65E+01	1.60E+03 N			NO	BSL
	7440-41-7	Beryllium	7.90E-01 J	2.30E+00	MG_KG	IS66SB030306	4/10	1.2 - 1.9	2.30E+00	1.50E+00	1.60E+01 N			NO	BSL
	7440-43-9	Cadmium	1.60E+00 J	1.60E+00 J	MG_KG	IS66SB05P0812	1/10	1.2 - 1.9	1.60E+00	6.10E-01	7.80E+00 N			NO	BSL
	7440-70-2	Calcium	2.55E+02 J	2.26E+04	MG_KG	IS66SB030306	9/10	1230 - 1900	2.26E+04	1.27E+03	N/A			NO	NUT
	7440-47-3	Chromium	1.10E+01	2.62E+01	MG_KG	IS66SB030306	10/10	2.5 - 3.8	2.62E+01	5.91E+01	2.30E+01 N			NO	BBK
	7440-48-4	Cobalt	4.00E+00 J	1.37E+01 J	MG_KG	IS66SB040912	10/10	12.3 - 19	1.37E+01	1.47E+01	1.60E+02 N			NO	BSL
	7440-50-8	Copper	9.90E+00	4.04E+01	MG_KG	IS66SB030306	10/10	6.1 - 9.5	4.04E+01	4.76E+01	3.10E+02 N			NO	BSL
	57-12-5	Cyanide	2.10E-01 J	2.10E-01 J	MG_KG	IS66SB040912	1/10	0.6 - 0.95	2.10E-01	5.90E-01	1.60E+02 N			NO	BSL
	7439-89-6	Iron	1.16E+04	6.00E+04	MG_KG	IS66SB010710	10/10	24.5 - 38.1	6.00E+04	3.52E+04	5.50E+03 N			YES	ASL
	7439-92-1	Lead	1.03E+01	1.42E+03 J	MG_KG	IS66SB05P0812	10/10	0.74 - 1.1	1.42E+03	3.86E+01	4.00E+02			YES	ASL
	7439-95-4	Magnesium	6.68E+02 J	2.12E+03	MG_KG	IS66SB090104	10/10	1230 - 1900	2.12E+03	2.94E+03	N/A			NO	NUT
	7439-96-5	Manganese	2.46E+01	2.78E+02	MG_KG	IS66SB070103	10/10	3.7 - 5.7	2.78E+02	1.55E+02	1.60E+02 N			YES	ASL
	7439-97-6	Mercury	6.30E-01	6.30E-01	MG_KG	IS66SB030306	1/10	0.11 - 0.19	6.30E-01	1.40E-01	2.30E+00 N			NO	BSL
	7440-02-0	Nickel	5.30E+00 J	4.22E+01 J	MG_KG	IS66SB050812	10/10	9.8 - 15.2	4.22E+01	1.59E+01	1.60E+02 N			NO	BSL
	7440-09-7	Potassium	5.47E+02 J	1.01E+03 J	MG_KG	IS66SB090104	10/10	1230 - 1900	1.01E+03	3.44E+03	N/A			NO	NUT
	7782-49-2	Selenium	1.60E+00 J	3.00E+00	MG_KG	IS66SB030306	2/10	1.2 - 1.9	3.00E+00	3.80E+00	3.90E+01 N			NO	BSL
	7440-62-2	Vanadium	1.90E+01	1.66E+02 J	MG_KG	IS66SB050812	10/10	12.3 - 19	1.66E+02	1.02E+02	7.80E+00 N			YES	ASL
	7440-66-6	Zinc	2.74E+01	4.29E+02 J	MG_KG	IS66SB05P0812	10/10	4.9 - 7.6	4.29E+02	4.97E+01	2.30E+03 N			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 4-4.
[4] Residential soil RBC from Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC for noncarcinogens divided by 10 to account for exposure to multiple constituents.
RBC value for cadmium-food used for cadmium.
RBC value for hexavalent chromium used for total chromium.
Cobalt was withdrawn from October 2005 RBC Table due to expiration of NCEA provisional toxicity values. Value is from the April 2005 RBC table.
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.
RBC value for manganese-nonfood used for manganese.
RBC value for mercuric chloride used as surrogate for mercury.
RBC value for endosulfan used as surrogate for endosulfan I, endosulfan II, and endosulfan sulfate.
RBC value for endrin used as surrogate for endrin aldehyde and endrin ketone.

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
ND = Not detected
N/A = Not available

Table 5-4
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: future
Medium: Subsurface Soil
Exposure Medium: Subsurface 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

RBC value for pyrene used as surrogate for phenanthrene and benzo(g,h,i)perylene.

[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)

Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)
Below Background (BBK)

Table 5-5
Step 1 Human Health Risk Screening Summary for Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs	Pesticides	Inorganics
Benzo(a)anthracene	4,4'-DDD	Aluminum
Benzo(a)pyrene	Heptachlor epoxide	Arsenic
Benzo(b)fluoranthene		Chromium
Benzo(k)fluoranthene		Iron
Dibenz(a,h)anthracene		Lead
Indeno(1,2,3-cd)pyrene		Manganese
		Vanadium

SVOC - semivolatile organic compound

Table 5-6
Step 2 Human Health Risk Screening Summary for Subsurface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs	Pesticides	Inorganics
Benzo(a)anthracene	4,4'-DDD	Arsenic
Benzo(a)pyrene	Heptachlor epoxide	Iron
Benzo(b)fluoranthene		Lead
Benzo(k)fluoranthene		Manganese
Dibenz(a,h)anthracene		Vanadium
Indeno(1,2,3-cd)pyrene		

SVOC - semivolatile organic compound

Table 5-7
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in In Situ Groundwater
Site 66 Site Inspection 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
Groundwater	83-32-9	Acenaphthene	3.00E+00	J	3.00E+00	J	UG_L	IS66GW060407	1/9	10 - 11	3.00E+00	ND	3.70E+01	N			NO	BSL
	84-74-2	Di-n-butylphthalate	2.00E+00	J	2.00E+00	J	UG_L	IS66GW010407	1/9	10 - 11	2.00E+00	1.00E+00	3.70E+02	N			NO	BSL
	72-54-8	4,4'-DDD	9.50E+00		9.50E+00		UG_L	IS66GW040407	1/9	0.1 - 1.1	9.50E+00	ND	2.80E-01	C			YES	ASL
	72-55-9	4,4'-DDE	2.70E-02	J	2.70E-02	J	UG_L	IS66GW040407	1/9	0.1 - 0.11	2.70E-02	ND	2.00E-01	C			NO	BSL
	50-29-3	4,4'-DDT	4.70E-02	J	4.70E-02	J	UG_L	IS66GW040407	1/9	0.1 - 0.11	4.70E-02	ND	2.00E-01	C			NO	BSL
	1024-57-3	Heptachlor epoxide	3.60E-02	J	3.60E-02	J	UG_L	IS66GW040407	1/9	0.05 - 0.054	3.60E-02	ND	7.40E-03	C			YES	ASL
	14797-73-0	Perchlorate	8.00E-02	J	5.80E-01		UG_L	IS66GW030407	3/8	0.2 - 0.2	5.80E-01	ND	2.60E+00	N			NO	BSL
Total Metals	7429-90-5	Aluminum	2.52E+02		3.43E+04		UG_L	IS66GW040407	10/10	200 - 200	3.43E+04	2.87E+08	3.70E+03	N			NO	BBK
	7440-38-2	Arsenic	4.90E+00	J	1.00E+02		UG_L	IS66GW040407	8/10	10 - 10	1.00E+02	ND	4.50E-02	C			YES	ASL
	7440-39-3	Barium	7.92E+01	J	1.91E+03		UG_L	IS66GW010407	10/10	200 - 200	1.91E+03	2.54E+02	7.30E+02	N			YES	ASL
	7440-41-7	Beryllium	3.00E+00	J	5.80E+00		UG_L	IS66GW010407	3/10	5 - 5	5.80E+00	2.80E+00	7.30E+00	N			NO	BSL
	7440-70-2	Calcium	1.10E+03	J	8.75E+04		UG_L	IS66GW040407	10/10	5000 - 5000	8.75E+04	5.99E+05	N/A				NO	NUT
	7440-47-3	Chromium	1.71E+01	J	6.77E+01		UG_L	IS66GW100407	5/10	10 - 10	6.77E+01	2.09E+01	1.10E+01	N			YES	ASL
	7440-48-4	Cobalt	4.10E+00	J	6.92E+01		UG_L	IS66GW010407	8/10	50 - 50	6.92E+01	3.96E+01	7.30E+01	N			NO	BSL
	7440-50-8	Copper	8.40E+00	J	5.58E+01		UG_L	IS66GW010407	6/10	25 - 25	5.58E+01	2.24E+01	1.50E+02	N			NO	BSL
	57-12-5	Cyanide	2.30E+00	J	2.30E+00	J	UG_L	IS66GW020407P	1/8	10 - 10	2.30E+00	ND	7.30E+01	N			NO	BSL
	7439-89-6	Iron	2.27E+03		2.42E+05		UG_L	IS66GW040407	10/10	100 - 100	2.42E+05	5.72E+04	2.60E+03	N			YES	ASL
	7439-92-1	Lead	1.37E+01	J	1.06E+02		UG_L	IS66GW040407	6/10	3 - 3	1.06E+02	ND	1.50E+01				YES	ASL
	7439-95-4	Magnesium	3.41E+03	J	2.01E+04		UG_L	IS66GW010407	10/10	5000 - 5000	2.01E+04	3.13E+04	N/A				NO	NUT
	7439-96-5	Manganese	1.37E+02		5.63E+03		UG_L	IS66GW080407	10/10	15 - 15	5.63E+03	2.82E+04	7.30E+01	N			NO	BBK
	7439-97-6	Mercury	1.30E-01	J	1.90E-01	J	UG_L	IS66GW030407	3/10	0.2 - 0.2	1.90E-01	1.30E-01	1.10E+00	N			NO	BSL
	7440-02-0	Nickel	1.05E+01	J	8.31E+01		UG_L	IS66GW010407	7/10	40 - 40	8.31E+01	3.90E+01	7.30E+01	N			YES	ASL
	7440-09-7	Potassium	6.30E+02	J	1.11E+04		UG_L	IS66GW040407	10/10	5000 - 5000	1.11E+04	8.31E+04	N/A				NO	NUT
	7440-23-5	Sodium	4.75E+03	J	4.77E+04		UG_L	IS66GW060407	10/10	5000 - 5000	4.77E+04	7.96E+04	N/A				NO	NUT
	7440-62-2	Vanadium	9.10E+00	J	1.99E+02		UG_L	IS66GW040407	7/10	50 - 50	1.99E+02	2.41E+01	3.70E+00	N			YES	ASL
	7440-66-6	Zinc	2.27E+01		9.60E+02		UG_L	IS66GW040407	7/10	20 - 20	9.60E+02	4.52E+01	1.10E+03	N			NO	BSL
Dissolved Metals	7440-38-2	Arsenic-dissolved	9.40E+00	J	9.78E+01		UG_L	IS66GW040407	4/9	10 - 10	9.78E+01	ND	4.50E-02	C			YES	ASL
	7440-39-3	Barium-dissolved	2.30E+01	J	3.46E+02		UG_L	IS66GW080407	9/9	200 - 200	3.46E+02	1.14E+02	7.30E+02	N			NO	BSL
	7440-70-2	Calcium-dissolved	1.13E+03	J	8.01E+04		UG_L	IS66GW040407	9/9	5000 - 5000	8.01E+04	1.02E+05	N/A				NO	NUT
	7440-48-4	Cobalt-dissolved	5.80E+00	J	3.78E+01	J	UG_L	IS66GW080407	5/9	50 - 50	3.78E+01	1.30E+01	7.30E+01	N			NO	BSL
	7439-89-6	Iron-dissolved	8.70E+02		1.08E+05		UG_L	IS66GW040407	9/9	100 - 100	1.08E+05	4.17E+06	2.60E+03	N			NO	BBK
	7439-95-4	Magnesium-dissolved	3.25E+03	J	1.66E+04		UG_L	IS66GW040407	9/9	5000 - 5000	1.66E+04	1.40E+04	N/A				NO	NUT

Table 5-7
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in In Situ Groundwater
Site 66 Site Inspection 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
	7439-96-5	Manganese-dissolved	1.31E+02	6.05E+03	UG_L	IS66GW080407	9/9	15 - 15	6.05E+03	2.26E+03	7.30E+01 N			YES	ASL
	7440-02-0	Nickel-dissolved	7.00E+00 J	2.82E+01 J	UG_L	IS66GW010407	5/9	40 - 40	2.82E+01	4.14E+01	7.30E+01 N			NO	BSL
	7440-09-7	Potassium-dissolved	4.92E+02 J	8.73E+03	UG_L	IS66GW040407	9/9	5000 - 5000	8.73E+03	3.26E+04	N/A			NO	NUT
	7440-22-4	Silver-dissolved	8.40E-01 J	8.40E-01 J	UG_L	IS66GW080407	1/9	10 - 10	8.40E-01	ND	1.80E+01 N			NO	BSL
	7440-23-5	Sodium-dissolved	4.78E+03 J	4.74E+04	UG_L	IS66GW060407	9/9	5000 - 5000	4.74E+04	1.36E+05	N/A			NO	NUT
	7440-62-2	Vanadium-dissolved	1.81E+01 J	1.81E+01 J	UG_L	IS66GW030407	1/9	50 - 50	1.81E+01	ND	3.70E+00 N			YES	ASL

[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] Tap water RBC from Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC for noncarcinogens divided by 10 to account for exposure to multiple constituents.
RBC value for hexavalent chromium used for total chromium.
Cobalt was withdrawn from October 2005 RBC Table due to expiration of NCEA provisional toxicity values. Value is from the April 2005 RBC table.
The tap water value of 15 ug/L for lead is the action level provided in the Drinking Water Regulations and Health Advisories.
RBC value for manganese-nonfood used as surrogate for manganese.
RBC value for mercuric chloride 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)
Below Background (BBK)

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
ND = Not detected
N/A = Not available

Table 5-8
Step 1 Human Health Risk Screening Summary for *In Situ* Groundwater
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Pesticides	Inorganics (Total)	Inorganics (Dissolved)
4,4'-DDD	Aluminum	Arsenic
Heptachlor epoxide	Arsenic	Iron
	Barium	Manganese
	Chromium	Vanadium
	Iron	
	Lead	
	Manganese	
	Nickel	
	Vanadium	

Table 5-9
Step 2 Human Health Risk Screening Summary for *In Situ* Groundwater
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Pesticides	Inorganics (Total)	Inorganics (Dissolved)
4,4'-DDD	Arsenic	Arsenic
Heptachlor epoxide	Barium	Manganese
	Chromium	Vanadium
	Iron	
	Lead	
	Nickel	
	Vanadium	

Table 5-10
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Surface Water
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: current/future
Medium: Surface Water
Exposure Medium: Surface Water

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 Water	75-27-4	Bromodichloromethane	2.00E+00 J	2.00E+00 J	UG_L	IS66SW03P	1/4	10 - 10	2.00E+00	ND	1.70E+00 C			YES	ASL
	67-66-3	Chloroform	1.00E+00 J	1.00E+00 J	UG_L	IS66SW03P	1/4	10 - 10	1.00E+00	ND	1.50E+00 C			NO	BSL
Total Metals	7429-90-5	Aluminum	2.15E+02	5.25E+02	UG_L	IS66SW03	3/4	200 - 200	5.25E+02	3.52E+02	3.70E+04 N			NO	BSL
	7440-38-2	Arsenic	3.90E+00 J	3.90E+00 J	UG_L	IS66SW03, IS66SW03P	1/4	10 - 10	3.90E+00	ND	4.50E-01 C			YES	ASL
	7440-39-3	Barium	3.03E+01 J	5.49E+01 J	UG_L	IS66SW02	4/4	200 - 200	5.49E+01	5.03E+01	7.30E+03 N			NO	BSL
	7440-70-2	Calcium	6.90E+03 J	1.63E+04	UG_L	IS66SW03	4/4	5000 - 5000	1.63E+04	4.86E+03	N/A			NO	NUT
	7440-48-4	Cobalt	3.50E+00 J	9.00E+00 J	UG_L	IS66SW02	4/4	50 - 50	9.00E+00	1.25E+01	7.30E+02 N			NO	BSL
	7439-89-6	Iron	2.41E+03 J	7.96E+03	UG_L	IS66SW02	4/4	100 - 100	7.96E+03	3.87E+03	2.60E+04 N			NO	BSL
	7439-92-1	Lead	1.50E+00 J	2.60E+00 J	UG_L	IS66SW02	4/4	3 - 3	2.60E+00	ND	1.50E+01			NO	BSL
	7439-95-4	Magnesium	2.64E+03 J	7.25E+03	UG_L	IS66SW03	4/4	5000 - 5000	7.25E+03	3.93E+03	N/A			NO	NUT
	7439-96-5	Manganese	3.50E+02	1.23E+03	UG_L	IS66SW02	4/4	15 - 15	1.23E+03	5.87E+02	7.30E+02 N			YES	ASL
	7440-02-0	Nickel	5.10E+00 J	5.10E+00 J	UG_L	IS66SW05	1/4	40 - 40	5.10E+00	7.10E+00	7.30E+02 N			NO	BSL
	7440-09-7	Potassium	1.14E+03 J	2.16E+03 J	UG_L	IS66SW05	4/4	5000 - 5000	2.16E+03	1.35E+03	N/A			NO	NUT
	7440-23-5	Sodium	1.71E+04	4.42E+04	UG_L	IS66SW04	4/4	5000 - 5000	4.42E+04	1.97E+04	N/A			NO	NUT
	7440-62-2	Vanadium	2.50E+00 J	4.60E+00 J	UG_L	IS66SW05	4/4	50 - 50	4.60E+00	6.10E+00	3.70E+01 N			NO	BSL
	7440-66-6	Zinc	6.50E+01	6.50E+01	UG_L	IS66SW05	1/4	20 - 20	6.50E+01	ND	1.10E+04 N			NO	BSL
Dissolved Metals	7440-39-3	Barium-dissolved	2.27E+01 J	4.99E+01 J	UG_L	IS66SW02	4/4	200 - 200	4.99E+01	4.87E+01	7.30E+03 N			NO	BSL
	7440-70-2	Calcium-dissolved	6.79E+03 J	1.71E+04	UG_L	IS66SW03	4/4	5000 - 5000	1.71E+04	4.90E+03	N/A			NO	NUT
	7440-48-4	Cobalt-dissolved	5.30E+00 J	9.70E+00 J	UG_L	IS66SW02	2/4	50 - 50	9.70E+00	1.18E+01	7.30E+02 N			NO	BSL
	7439-89-6	Iron-dissolved	2.11E+02 J	3.40E+03	UG_L	IS66SW02	4/4	100 - 100	3.40E+03	1.40E+03	2.60E+04 N			NO	BSL
	7439-95-4	Magnesium-dissolved	2.65E+03 J	7.52E+03	UG_L	IS66SW03	4/4	5000 - 5000	7.52E+03	4.03E+03	N/A			NO	NUT
	7439-96-5	Manganese-dissolved	3.43E+02	1.28E+03	UG_L	IS66SW02	4/4	15 - 15	1.28E+03	5.86E+02	7.30E+02 N			YES	ASL
	7440-09-7	Potassium-dissolved	1.23E+03 J	2.28E+03 J	UG_L	IS66SW05	4/4	5000 - 5000	2.28E+03	1.49E+03	N/A			NO	NUT
	7440-23-5	Sodium-dissolved	1.79E+04	4.52E+04	UG_L	IS66SW04	4/4	5000 - 5000	4.52E+04	2.02E+04	N/A			NO	NUT

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Background values from sample IS66SW01.
[4] Ten times tap water RBC from Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC for noncarcinogens divided by 10 to account for exposure to multiple constituents.
Cobalt was withdrawn from October 2005 RBC Table due to expiration of NCEA provisional toxicity values. Value is from the April 2005 RBC table.
The tap water value of 15 ug/L for lead is the action level provided in the Drinking Water Regulations and Health Advisories.
RBC value for manganese-nonfood 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
K = Biased High
L = Biased Low
C = Carcinogenic
N = Noncarcinogenic
ND = Not detected
N/A = Not available

Table 5-11
Step 1 Human Health Risk Screening Summary for Surface Water
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

VOCs	Inorganics (Total)	Inorganics (Dissolved)
Bromodichloromethane	Arsenic Manganese	Manganese

VOC - volatile organic compound

Table 5-12
Step 2 Human Health Risk Screening Summary for Surface Water
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

VOCs	Inorganics (unfiltered)	Inorganics (filtered)
Bromodichloromethane	Arsenic Manganese	Manganese

VOC - volatile organic compound

Table 5-13
Human Health Risk Screening - Occurrence, Distribution and Selection of Chemicals of Potential Concern in Sediment
Site 66 Site Inspection 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	2.40E-02 J	2.40E-02 J	MG_KG	IS66SD02	1/4	0.012 - 0.055	2.40E-02	NA	4.70E+04 N			NO	BSL
	83-32-9	Acenaphthene	1.00E-01 J	1.00E-01 J	MG_KG	IS66SD05	1/4	0.51 - 1.2	1.00E-01	NA	4.70E+03 N			NO	BSL
	120-12-7	Anthracene	1.20E-01 J	2.60E-01 J	MG_KG	IS66SD05	2/4	0.51 - 1.2	2.60E-01	NA	2.30E+04 N			NO	BSL
	56-55-3	Benzo(a)anthracene	2.40E-01 J	7.10E-01	MG_KG	IS66SD05	3/4	0.51 - 1.2	7.10E-01	NA	2.20E+00 C			NO	BSL
	50-32-8	Benzo(a)pyrene	2.10E-01 J	4.90E-01 J	MG_KG	IS66SD05	3/4	0.51 - 1.2	4.90E-01	NA	2.20E-01 C			YES	ASL
	205-99-2	Benzo(b)fluoranthene	3.30E-01 J	5.90E-01	MG_KG	IS66SD05	3/4	0.51 - 1.2	5.90E-01	NA	2.20E+00 C			NO	BSL
	191-24-2	Benzo(g,h,i)perylene	2.30E-01 J	3.10E-01 J	MG_KG	IS66SD05	2/4	0.51 - 1.2	3.10E-01	NA	2.30E+03 N			NO	BSL
	207-08-9	Benzo(k)fluoranthene	2.40E-01 J	6.40E-01	MG_KG	IS66SD05	3/4	0.51 - 1.2	6.40E-01	NA	2.20E+01 C			NO	BSL
	86-74-8	Carbazole	1.70E-01 J	1.70E-01 J	MG_KG	IS66SD05	1/4	0.51 - 1.2	1.70E-01	NA	3.20E+02 C			NO	BSL
	218-01-9	Chrysene	3.00E-01 J	7.30E-01	MG_KG	IS66SD05	3/4	0.51 - 1.2	7.30E-01	NA	2.20E+02 C			NO	BSL
	53-70-3	Dibenz(a,h)anthracene	1.20E-01 J	1.20E-01 J	MG_KG	IS66SD05	1/4	0.51 - 1.2	1.20E-01	NA	2.20E-01 C			NO	BSL
	206-44-0	Fluoranthene	2.60E-01 J	1.50E+00	MG_KG	IS66SD05	4/4	0.51 - 1.2	1.50E+00	NA	3.10E+03 N			NO	BSL
	86-73-7	Fluorene	1.10E-01 J	1.10E-01 J	MG_KG	IS66SD05	1/4	0.51 - 1.2	1.10E-01	NA	3.10E+03 N			NO	BSL
	193-39-5	Indeno(1,2,3-cd)pyrene	2.80E-01 J	3.90E-01 J	MG_KG	IS66SD05	2/4	0.51 - 1.2	3.90E-01	NA	2.20E+00 C			NO	BSL
	85-01-8	Phenanthrene	3.60E-01 J	9.40E-01	MG_KG	IS66SD05	2/4	0.51 - 1.2	9.40E-01	NA	2.30E+03 N			NO	BSL
	129-00-0	Pyrene	3.30E-01 J	1.10E+00	MG_KG	IS66SD05	3/4	0.51 - 1.2	1.10E+00	NA	2.30E+03 N			NO	BSL
	72-54-8	4,4'-DDD	4.40E-03 J	4.70E-02	MG_KG	IS66SD02P	4/4	0.0051 - 0.012	6.60E-02	1.18E-01	2.70E+01 C			NO	BSL
	72-55-9	4,4'-DDE	4.00E-03 J	2.20E-02	MG_KG	IS66SD02	4/4	0.0051 - 0.012	2.20E-02	2.61E-02	1.90E+01 C			NO	BSL
	50-29-3	4,4'-DDT	1.20E-02 J	1.20E-02 J	MG_KG	IS66SD03	1/4	0.0051 - 0.012	1.20E-02	1.40E-02	1.90E+01 C			NO	BSL
	11096-82-5	Aroclor-1260	1.60E-01	1.60E-01	MG_KG	IS66SD03	1/4	0.051 - 0.12	1.60E-01		3.20E+00 C			NO	BSL
	72-20-8	Endrin	2.10E-03 J	2.10E-03 J	MG_KG	IS66SD04	1/4	0.0051 - 0.012	2.10E-03		2.30E+01 N			NO	BSL
	7421-93-4	Endrin aldehyde	2.50E-03 J	3.40E-03 J	MG_KG	IS66SD02P	2/4	0.0051 - 0.012	3.40E-03		2.30E+01 N			NO	BSL
	53494-70-5	Endrin ketone	1.20E-03 J	4.10E-03 J	MG_KG	IS66SD04	3/4	0.0051 - 0.012	4.10E-03		2.30E+01 N			NO	BSL
	72-43-5	Methoxychlor	1.70E-02 J	3.50E-02 J	MG_KG	IS66SD02P	2/4	0.026 - 0.063	3.50E-02		3.90E+02 N			NO	BSL
	5103-71-9	alpha-Chlordane	8.20E-04 J	5.30E-03 J	MG_KG	IS66SD02	4/4	0.0026 - 0.0063	5.30E-03		1.80E+01 C			NO	BSL
	319-85-7	beta-BHC	1.20E-03 J	1.20E-03 J	MG_KG	IS66SD05	1/4	0.0026 - 0.0063	1.20E-03		3.50E+00 C			NO	BSL
	5103-74-2	gamma-Chlordane	6.50E-04 J	5.00E-03	MG_KG	IS66SD04	4/4	0.0026 - 0.0063	5.00E-03		1.80E+01 C			NO	BSL
	14797-73-0	Perchlorate	7.70E-03 J	7.70E-03 J	MG_KG	IS66SD03	1/1	0.0025 - 0.0057	7.70E-03		5.50E+01 N			NO	BSL
	7429-90-5	Aluminum	2.19E+03	1.65E+04	MG_KG	IS66SD02P	4/4	48.7 - 145	1.65E+04	5.24E+04	7.80E+04 N			NO	BSL
	7440-38-2	Arsenic	3.50E+00	1.38E+01	MG_KG	IS66SD04	4/4	2.4 - 7.3	1.38E+01	6.30E+01	4.30E+00 C			NO	BBK
	7440-39-3	Barium	3.42E+01 J	1.70E+02	MG_KG	IS66SD02P	4/4	48.7 - 145	1.70E+02	5.77E+02	1.60E+04 N			NO	BSL
	7440-70-2	Calcium	5.77E+02 J	3.69E+03	MG_KG	IS66SD02	4/4	1220 - 3630	3.69E+03	8.81E+04	N/A			NO	NUT
	7440-47-3	Chromium	7.90E+00	3.02E+01	MG_KG	IS66SD02P	4/4	2.4 - 7.3	3.02E+01	7.92E+01	2.30E+02 N			NO	BSL
	7440-48-4	Cobalt	5.50E+00 J	4.09E+01	MG_KG	IS66SD02	4/4	12.2 - 36.3	4.09E+01	1.18E+02	1.60E+03 N			NO	BSL
	7440-50-8	Copper	1.29E+01	7.30E+01	MG_KG	IS66SD02P	4/4	6.1 - 18.1	7.30E+01	2.97E+02	3.10E+03 N			NO	BSL
	7439-89-6	Iron	1.13E+04	2.54E+04	MG_KG	IS66SD02P	4/4	24.3 - 72.5	2.54E+04	1.93E+05	5.50E+04 N			NO	BSL

Table 5-13
Human Health Risk Screening - Occurrence, Distribution and Selection of Chemicals of Potential Concern in Sediment
Site 66 Site Inspection 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
	7439-92-1	Lead	2.16E+01	7.89E+01	MG_KG	IS66SD02P	4/4	0.73 - 2.2	7.89E+01	4.76E+02	4.00E+02			NO	BSL
	7439-95-4	Magnesium	3.72E+02 J	1.47E+03 J	MG_KG	IS66SD02P	4/4	1220 - 3630	1.47E+03	1.90E+04	N/A			NO	NUT
	7439-96-5	Manganese	1.22E+02	2.92E+02	MG_KG	IS66SD02P	4/4	3.7 - 10.9	2.92E+02	2.56E+03	1.60E+03 N			NO	BSL
	7439-97-6	Mercury	1.30E+00	1.30E+00	MG_KG	IS66SD03	1/4	0.11 - 0.34	1.30E+00	7.78E-01	2.30E+01 N			NO	BSL
	7440-02-0	Nickel	7.70E+00 J	3.16E+01	MG_KG	IS66SD02	4/4	9.7 - 29	3.16E+01	3.82E+02	1.60E+03 N			NO	BSL
	7440-09-7	Potassium	1.64E+02 J	9.77E+02 J	MG_KG	IS66SD02P	4/4	1220 - 3630	9.77E+02	5.06E+03	N/A			NO	NUT
	7440-62-2	Vanadium	2.06E+01 J	6.80E+01	MG_KG	IS66SD02P	4/4	12.2 - 36.3	6.80E+01	1.96E+02	7.80E+01 N			NO	BSL
	7440-66-6	Zinc	4.79E+01	2.28E+02	MG_KG	IS66SD02P	5/5	4.9 - 14.5	2.28E+02	1.66E+03	2.30E+04 N			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), Table A-12.
[4] Ten times residential soil RBC from Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC for noncarcinogens divided by 10 to account for exposure to multiple constituents.
RBC value for hexavalent chromium used for total chromium.
Cobalt was withdrawn from October 2005 RBC Table due to expiration of NCEA provisional toxicity values. Value is from the April 2005 RBC table.
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.
RBC value for manganese-nonfood used as surrogate for manganese.
RBC value for mercuric chloride used as surrogate for mercury.
RBC value for endrin used as surrogate for endrin aldehyde and endrin ketone.
RBC value for pyrene used as surrogate for phenanthrene and benzo(g,h,i)perylene.
[5] Rationale Codes

Selection Reason: Above Screening Levels (ASL)
Deletion Reason: No Toxicity Information (NTX)
Essential Nutrient (NUT)
Below Screening Level (BSL)
Below Background (BBK)

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
ND = Not detected
N/A = Not available

Table 5-14
Step 1 Human Health Risk Screening Summary for Sediment
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs	Inorganics
Benzo(a)pyrene	Arsenic

SVOC - semivolatile organic compound

Table 5-15
Step 2 Human Health Risk Screening Summary for Sediment
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

SVOCs
Benzo(a)pyrene

SVOC - semivolatile organic compound

Table 5-16
Human Health Risk Screening - Occurrence, Distribution, and Selection of Chemicals of Potential Concern in Ash
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Scenario Timeframe: 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
Surface Soil	3268-87-9	Octachlorodibenzo-p-dioxin	8.41E-05 J	1.75E-04 J	MG_KG	IS66AH01	3/3	0.015585 - 0.020081	1.75E-04		1.40E-02 C			NO	BSL
	37871-00-4	Total heptachlorodibenzo-p-dioxin	1.20E-05	1.70E-05	MG_KG	IS66AH02P	3/3	0.007792 - 0.01004	1.70E-05		4.30E-04 C			NO	BSL
	30402-15-4	Total pentachlorodibenzofuran	2.00E-05	2.00E-05	MG_KG	IS66AH01	1/3	0.007792 - 0.01004	2.00E-05		1.40E-05 C			YES	ASL
	55722-27-5	Total tetrachlorodibenzofuran	2.90E-05	2.90E-05	MG_KG	IS66AH01	1/3	0.003117 - 0.004016	2.90E-05		4.30E-05 C			NO	BSL

[1] Minimum/Maximum detected concentrations.
[2] Maximum concentration is used for screening.
[3] Background values not available.
[4] Risk-Based Concentration Table, April 10, 2007, U.S. EPA Region III, Jennifer Hubbard.
RBC value for 2,3,7,8-TCDD (dioxin) was adjusted using the TEF for the individual congeners. TEFs are the WHO 2005 TEF values.
RBC for total heptachlorodibenzo-p-dioxin adjusted using TEF for 1,2,3,4,6,7,8-HpCDD
RBC for total pentachlorodibenzofuran adjusted using TEF for 2,3,4,7,8-PeCDF
RBC for total tetrachlorodibenzofuran adjusted using TEF for 2,3,7,8-TCDF
[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
ND = Not detected
N/A = Not available

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
Inorganics (MG/KG)								
Aluminum	20 / 20	--	15,100	IS66SS050001	50.0	20 / 20	302	YES
Antimony	0 / 20	3.50	--	--	0.27	-- / --	13.0	YES
Arsenic	19 / 20	0.64	108	IS66SS140001	18.0	4 / 20	6.00	YES
Barium	20 / 20	--	206	IS66SS150001	330	0 / 20	0.62	NO
Beryllium	5 / 20	0.57	2.90	IS66SS110001	21.0	0 / 20	0.14	NO
Cadmium	0 / 20	0.59	--	--	0.36	-- / --	1.64	YES
Calcium [2]	19 / 20	94.0	15,900	IS66SS080001	NSV	-- / --	NSV	NO
Chromium	20 / 20	--	22.8	IS66SS040001	26.0	0 / 20	0.88	NO
Cobalt	20 / 20	--	17.9	IS66SS110001	13.0	1 / 20	1.38	YES
Copper	20 / 20	--	59.6	IS66SS150001	28.0	7 / 20	2.13	YES
Cyanide	11 / 20	0.13	0.57	IS66SS210001	0.30	1 / 20	1.90	YES
Iron	20 / 20	--	35,500	IS66SS040001	200	20 / 20	178	YES
Lead	20 / 20	--	305	IS66SS150001	11.0	19 / 20	27.7	YES
Magnesium [2]	19 / 20	237	2,310	IS66SS080001	NSV	-- / --	NSV	NO
Manganese	20 / 20	--	521	IS66SS150001	220	9 / 20	2.37	YES
Mercury	7 / 20	0.45	22.1	IS66SS200001	0.10	7 / 20	221	YES
Nickel	20 / 20	--	90.4	IS66SS020001	38.0	1 / 20	2.38	YES
Potassium [2]	20 / 20	--	1,140	IS66SS210001	NSV	-- / --	NSV	NO
Selenium	2 / 20	1.30	3.40	IS66SS150001	0.52	2 / 20	6.54	YES
Silver	5 / 20	0.58	0.55	IS66SS200001	4.20	0 / 20	0.13	NO
Sodium [2]	0 / 20	243	--	--	NSV	-- / --	NSV	NO
Thallium	0 / 20	1.60	--	--	1.00	-- / --	1.60	YES
Vanadium	20 / 20	--	115	IS66SS140001	7.80	20 / 20	14.7	YES
Zinc	20 / 20	--	373	IS66SS160001	46.0	13 / 20	8.11	YES
Pesticide/Polychlorinated Biphenyls (UG/KG)								
4,4'-DDD	5 / 20	6.70	45.0	IS66SS010001	100	0 / 20	0.45	NO
4,4'-DDE	14 / 20	6.70	250	IS66SS150001	100	1 / 20	2.50	YES

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
4,4'-DDT	14 / 20	7.20	260	IS66SS150001	100	1 / 20	2.60	YES
Aldrin	1 / 20	4.10	12.0	IS66SS150001	100	0 / 20	0.12	NO
Aroclor-1016	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1221	0 / 20	160	--	--	100	-- / --	1.60	YES
Aroclor-1232	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1242	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1248	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1254	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Aroclor-1260	0 / 20	80.0	--	--	100	-- / --	0.80	NO
Dieldrin	12 / 20	7.20	40.0	IS66SS150001	100	0 / 20	0.40	NO
Endosulfan I	3 / 20	4.10	15.0	IS66SS150001	1,340	0 / 20	0.011	NO
Endosulfan II	7 / 20	7.20	23.0	IS66SS150001	1,340	0 / 20	0.017	NO
Endosulfan sulfate	6 / 20	7.20	38.0	IS66SS150001	1,340	0 / 20	0.028	NO
Endrin	2 / 20	8.00	1.20	IS66SS120001	100	0 / 20	0.012	NO
Endrin aldehyde	10 / 20	7.20	62.0	IS66SS150001	100	0 / 20	0.62	NO
Endrin ketone	12 / 20	7.20	96.0	IS66SS150001	100	0 / 20	0.96	NO
Heptachlor	3 / 20	4.10	1.10	IS66SS010001	1,000	0 / 20	0.0011	NO
Heptachlor epoxide	3 / 20	4.10	5.30	IS66SS150001	100	0 / 20	0.053	NO
Methoxychlor	9 / 20	37.0	230	IS66SS150001	100	1 / 20	2.30	YES
Toxaphene	0 / 20	410	--	--	NSV	-- / --	NSV	NO
alpha-BHC	2 / 20	4.10	3.20	IS66SS120001	100,000	0 / 20	3.20E-05	NO
alpha-Chlordane	9 / 20	4.10	23.0	IS66SS050001	100	0 / 20	0.23	NO
beta-BHC	15 / 20	3.50	9.60	IS66SS150001	100,000	0 / 20	9.60E-05	NO
delta-BHC	2 / 20	4.10	0.64	IS66SS010001	100,000	0 / 20	6.40E-06	NO
gamma-BHC (Lindane)	0 / 20	4.10	--	--	100	-- / --	0.041	NO
gamma-Chlordane	11 / 20	4.10	12.0	IS66SS150001	300	0 / 20	0.040	NO
Semivolatile Organic Compounds (UG/KG)								
1,1-Biphenyl	0 / 20	18,000	--	--	600	-- / --	30.0	YES

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
2,2'-Oxybis(1-chloropropane)	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	0 / 20	45,000	--	--	100	-- / --	450	YES
2,4,6-Trichlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES
2,4-Dichlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES
2,4-Dimethylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES
2,4-Dinitrophenol	0 / 20	45,000	--	--	10,000	-- / --	4.50	YES
2,4-Dinitrotoluene	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
2,6-Dinitrotoluene	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
2-Chloronaphthalene	0 / 20	18,000	--	--	1,033	-- / --	17.4	YES
2-Chlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES
2-Methylnaphthalene	2 / 20	800	710	IS66SS150001	NSV	-- / --	NSV	YES
2-Methylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES
2-Nitroaniline	0 / 20	45,000	--	--	NSV	-- / --	NSV	NO
2-Nitrophenol	0 / 20	18,000	--	--	760	-- / --	23.7	YES
3,3'-Dichlorobenzidine	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
3-Nitroaniline	0 / 20	45,000	--	--	NSV	-- / --	NSV	NO
4,6-Dinitro-2-methylphenol	0 / 20	45,000	--	--	NSV	-- / --	NSV	NO
4-Bromophenyl-phenylether	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
4-Chloro-3-methylphenol	0 / 20	18,000	--	--	6,400	-- / --	2.81	YES
4-Chloroaniline	0 / 20	18,000	--	--	1,950	-- / --	9.23	YES
4-Chlorophenyl-phenylether	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
4-Methylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES
4-Nitroaniline	0 / 20	45,000	--	--	NSV	-- / --	NSV	NO
4-Nitrophenol	0 / 20	45,000	--	--	100	-- / --	450	YES
Acenaphthene	5 / 20	800	26,000	IS66SS150001	100	5 / 20	260	YES
Acenaphthylene	3 / 20	18,000	340	IS66SS210001	100	3 / 20	3.40	YES
Acetophenone	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Anthracene	8 / 20	720	56,000	IS66SS150001	100	8 / 20	560	YES

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
Atrazine	0 / 20	18,000	--	--	600	-- / --	30.0	YES
Benzaldehyde	0 / 20	18,000	--	--	89,600	-- / --	0.20	NO
Benzo(a)anthracene	12 / 20	720	170,000	IS66SS150001	100	12 / 20	1,700	YES
Benzo(a)pyrene	11 / 20	720	180,000	IS66SS150001	100	11 / 20	1,800	YES
Benzo(b)fluoranthene	12 / 20	720	180,000	IS66SS150001	100	12 / 20	1,800	YES
Benzo(g,h,i)perylene	11 / 20	720	92,000	IS66SS150001	100	11 / 20	920	YES
Benzo(k)fluoranthene	11 / 20	720	150,000	IS66SS150001	100	11 / 20	1,500	YES
Butylbenzylphthalate	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Caprolactam	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Carbazole	5 / 20	800	45,000	IS66SS150001	2,000	1 / 20	22.5	YES
Chrysene	12 / 20	720	180,000	IS66SS150001	100	12 / 20	1,800	YES
Di-n-butylphthalate	1 / 20	800	540	IS66SS150001	200,000	0 / 20	0.0027	NO
Di-n-octylphthalate	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Dibenz(a,h)anthracene	8 / 20	720	44,000	IS66SS150001	100	7 / 20	440	YES
Dibenzofuran	2 / 20	800	9,200	IS66SS150001	14,000	0 / 20	0.66	NO
Diethylphthalate	0 / 20	18,000	--	--	1,000	-- / --	18.0	YES
Dimethyl phthalate	0 / 20	18,000	--	--	2,000	-- / --	9.00	YES
Fluoranthene	12 / 20	720	350,000	IS66SS150001	100	12 / 20	3,500	YES
Fluorene	4 / 20	800	14,000	IS66SS150001	100	4 / 20	140	YES
Hexachlorobenzene	0 / 20	18,000	--	--	1,000,000	-- / --	0.018	NO
Hexachlorobutadiene	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Hexachlorocyclopentadiene	0 / 20	18,000	--	--	100	-- / --	180	YES
Hexachloroethane	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Indeno(1,2,3-cd)pyrene	11 / 20	720	120,000	IS66SS150001	100	11 / 20	1,200	YES
Isophorone	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
Naphthalene	2 / 20	800	6,100	IS66SS150001	100	2 / 20	61.0	YES
Nitrobenzene	0 / 20	18,000	--	--	400	-- / --	45.0	YES
Pentachlorophenol	0 / 20	45,000	--	--	100	-- / --	450	YES

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
Phenanthrene	11 / 20	800	210,000	IS66SS150001	100	11 / 20	2,100	YES
Phenol	0 / 20	18,000	--	--	100	-- / --	180	YES
Pyrene	12 / 20	720	280,000	IS66SS150001	100	12 / 20	2,800	YES
bis(2-Chloroethoxy)methane	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
bis(2-Chloroethyl)ether	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
bis(2-Ethylhexyl)phthalate	1 / 20	18,000	27,000	IS66SS080001	10,000	1 / 20	2.70	YES
n-Nitroso-di-n-propylamine	0 / 20	18,000	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 20	18,000	--	--	200	-- / --	90.0	YES
Explosives (UG/KG)								
1,3,5-Trinitrobenzene	0 / 20	620	--	--	4,520	-- / --	0.14	NO
1,3-Dinitrobenzene	0 / 20	620	--	--	4,520	-- / --	0.14	NO
2,4,6-Trinitrotoluene	0 / 20	620	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
2,6-Dinitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
2-Amino-4,6-dinitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
HMX	0 / 20	620	--	--	NSV	-- / --	NSV	NO
Nitrobenzene	0 / 20	620	--	--	400	-- / --	1.55	YES
Nitroglycerin	0 / 20	4,000	--	--	NSV	-- / --	NSV	NO
Nitroguanidine	0 / 20	200	--	--	NSV	-- / --	NSV	NO
Perchlorate	17 / 20	3.50	18.0	IS66SS070001	NSV	-- / --	NSV	YES
RDX	0 / 20	620	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 20	1,200	--	--	NSV	-- / --	NSV	NO
Volatile Organic Compounds (UG/KG)								
1,1,1-Trichloroethane	0 / 20	32.0	--	--	300	-- / --	0.11	NO

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
1,1,2,2-Tetrachloroethane	0 / 20	32.0	--	--	300	-- / --	0.11	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
1,1,2-Trichloroethane	0 / 20	32.0	--	--	300	-- / --	0.11	NO
1,1-Dichloroethane	0 / 20	32.0	--	--	300	-- / --	0.11	NO
1,1-Dichloroethene	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
1,2,4-Trichlorobenzene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
1,2-Dibromo-3-chloropropane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
1,2-Dibromoethane	0 / 20	32.0	--	--	5,000	-- / --	0.0064	NO
1,2-Dichlorobenzene	0 / 20	32.0	--	--	2,560	-- / --	0.013	NO
1,2-Dichloroethane	0 / 20	32.0	--	--	870,000	-- / --	3.68E-05	NO
1,2-Dichloropropane	0 / 20	32.0	--	--	300	-- / --	0.11	NO
1,3-Dichlorobenzene	0 / 20	32.0	--	--	2,560	-- / --	0.013	NO
1,4-Dichlorobenzene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
2-Butanone	0 / 19	32.0	--	--	NSV	-- / --	NSV	NO
2-Hexanone	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
4-Methyl-2-pentanone	0 / 20	32.0	--	--	100,000	-- / --	3.20E-04	NO
Acetone	0 / 19	48.0	--	--	NSV	-- / --	NSV	NO
Benzene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
Bromodichloromethane	0 / 20	32.0	--	--	450,000	-- / --	7.11E-05	NO
Bromoform	0 / 20	32.0	--	--	1,147,000	-- / --	2.79E-05	NO
Bromomethane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Carbon disulfide	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Carbon tetrachloride	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Chlorobenzene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
Chloroethane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Chloroform	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Chloromethane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Cyclohexane	0 / 20	32.0	--	--	100	-- / --	0.32	NO

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-17

Step 1 Ecological Screening Statistics for Surface Soil

Site 66 Site Inspection Report

NSF-IH, Indian Head, Maryland

Analyte Name	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Screening Value	Frequency of Exceedance	Maximum Hazard Quotient[1]	Possible COPC?
Dibromochloromethane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Dichlorodifluoromethane (Freon-12)	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
Isopropylbenzene	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Methyl-tert-butyl ether (MTBE)	0 / 20	32.0	--	--	900	-- / --	0.036	NO
Methylcyclohexane	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Methylene chloride	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Styrene	1 / 20	32.0	16.0	IS66SS070001	100	0 / 20	0.16	NO
Tetrachloroethene	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Toluene	0 / 20	32.0	--	--	100	-- / --	0.32	NO
Trichloroethene	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Trichlorofluoromethane (Freon-11)	0 / 20	32.0	--	--	NSV	-- / --	NSV	NO
Vinyl chloride	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Xylene, total	0 / 20	32.0	--	--	100	-- / --	0.32	NO
cis-1,2-Dichloroethene	0 / 20	32.0	--	--	300	-- / --	0.11	NO
Other Parameters (MG/KG)								
Total organic carbon (TOC)	19 / 20	202	173,000	IS66SS150001	NSV	-- / --	--	--
pH	20 / 20	--	8.19	IS66SS080001	NSV	-- / --	--	--

NSV - No Screening Value

1 - Shaded cells indicate that maximum hazard quotient based on reporting limit

2 - Macronutrient - Not considered to be a COPC

COPC - chemical of potential concern

Table 5-18
Step 2 Ecological Screening Statistics for Surface Soil
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maximum Exceeds 95% UTL?
Inorganics (MG/KG)										
Aluminum	20 / 20	--	15,100	IS66SS050001	50.0	20 / 20	302	YES	19700.0	NO
Antimony	0 / 20	3.50	--	--	0.27	-- / --	13.0	YES	NA	--
Arsenic	19 / 20	0.64	108	IS66SS140001	18.0	4 / 20	6.00	YES	14.9	YES
Cadmium	0 / 20	0.59	--	--	0.36	-- / --	1.64	YES	2.5	NO
Cobalt	20 / 20	--	17.9	IS66SS110001	13.0	1 / 20	1.38	YES	22.3	NO
Copper	20 / 20	--	59.6	IS66SS150001	28.0	7 / 20	2.13	YES	20.3	YES
Cyanide	11 / 20	0.13	0.57	IS66SS210001	0.30	1 / 20	1.90	YES	0.7	NO
Iron	20 / 20	--	35,500	IS66SS040001	200	20 / 20	178	YES	38500.0	NO
Lead	20 / 20	--	305	IS66SS150001	11.0	19 / 20	27.7	YES	62.5	YES
Manganese	20 / 20	--	521	IS66SS150001	220	9 / 20	2.37	YES	1620.0	NO
Mercury	7 / 20	0.45	22.1	IS66SS200001	0.10	7 / 20	221	YES	0.2	YES
Nickel	20 / 20	--	90.4	IS66SS020001	38.0	1 / 20	2.38	YES	15.4	YES
Selenium	2 / 20	1.30	3.40	IS66SS150001	0.52	2 / 20	6.54	YES	1.2	YES
Thallium	0 / 20	1.60	--	--	1.00	-- / --	1.60	YES	2.3	NO
Vanadium	20 / 20	--	115	IS66SS140001	7.80	20 / 20	14.7	YES	53.3	YES
Zinc	20 / 20	--	373	IS66SS160001	46.0	13 / 20	8.11	YES	37.5	YES
Pesticide/Polychlorinated Biphenyls (UG/KG)										
4,4'-DDE	14 / 20	6.70	250	IS66SS150001	100	1 / 20	2.50	YES	10.0	YES
4,4'-DDT	14 / 20	7.20	260	IS66SS150001	100	1 / 20	2.60	YES	9.4	YES
Aroclor-1221	0 / 20	160	--	--	100	-- / --	1.60	YES	NA	--
Methoxychlor	9 / 20	37.0	230	IS66SS150001	100	1 / 20	2.30	YES	NA	--
Semivolatile Organic Compounds (UG/KG)										
1,1-Biphenyl	0 / 20	18,000	--	--	600	-- / --	30.0	YES	NA	--
2,4,5-Trichlorophenol	0 / 20	45,000	--	--	100	-- / --	450	YES	NA	--
2,4,6-Trichlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
2,4-Dichlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
2,4-Dimethylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
2,4-Dinitrophenol	0 / 20	45,000	--	--	10,000	-- / --	4.50	YES	NA	--
2-Chloronaphthalene	0 / 20	18,000	--	--	1,033	-- / --	17.4	YES	NA	--
2-Chlorophenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
2-Methylnaphthalene	2 / 20	800	710	IS66SS150001	NSV	-- / --	NSV	YES	73	YES
2-Methylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
2-Nitrophenol	0 / 20	18,000	--	--	760	-- / --	23.7	YES	NA	--

NA - not analyzed
COPC - chemical of potential concern
1 - Shaded cells indicate maximum hazard quotient based on the reporting limit
2 - Values from "Background Soil Investigation Report" (TTNUS, 2002)

Table 5-18
Step 2 Ecological Screening Statistics for Surface Soil
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maximum Exceeds 95% UTL?
4-Chloro-3-methylphenol	0 / 20	18,000	--	--	6,400	-- / --	2.81	YES	NA	--
4-Chloroaniline	0 / 20	18,000	--	--	1,950	-- / --	9.23	YES	NA	--
4-Methylphenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
4-Nitrophenol	0 / 20	45,000	--	--	100	-- / --	450	YES	NA	--
Acenaphthene	5 / 20	800	26,000	IS66SS150001	100	5 / 20	260	YES	140	YES
Acenaphthylene	3 / 20	18,000	340	IS66SS210001	100	3 / 20	3.40	YES	NA	--
Anthracene	8 / 20	720	56,000	IS66SS150001	100	8 / 20	560	YES	260	YES
Atrazine	0 / 20	18,000	--	--	600	-- / --	30.0	YES	NA	--
Benzo(a)anthracene	12 / 20	720	170,000	IS66SS150001	100	12 / 20	1,700	YES	480	YES
Benzo(a)pyrene	11 / 20	720	180,000	IS66SS150001	100	11 / 20	1,800	YES	390	YES
Benzo(b)fluoranthene	12 / 20	720	180,000	IS66SS150001	100	12 / 20	1,800	YES	420	YES
Benzo(g,h,i)perylene	11 / 20	720	92,000	IS66SS150001	100	11 / 20	920	YES	130	YES
Benzo(k)fluoranthene	11 / 20	720	150,000	IS66SS150001	100	11 / 20	1,500	YES	360	YES
Carbazole	5 / 20	800	45,000	IS66SS150001	2,000	1 / 20	22.5	YES	130	YES
Chrysene	12 / 20	720	180,000	IS66SS150001	100	12 / 20	1,800	YES	440	YES
Dibenz(a,h)anthracene	8 / 20	720	44,000	IS66SS150001	100	7 / 20	440	YES	NA	--
Diethylphthalate	0 / 20	18,000	--	--	1,000	-- / --	18.0	YES	NA	--
Dimethyl phthalate	0 / 20	18,000	--	--	2,000	-- / --	9.00	YES	NA	--
Fluoranthene	12 / 20	720	350,000	IS66SS150001	100	12 / 20	3,500	YES	1100	YES
Fluorene	4 / 20	800	14,000	IS66SS150001	100	4 / 20	140	YES	150	YES
Hexachlorocyclopentadiene	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
Indeno(1,2,3-cd)pyrene	11 / 20	720	120,000	IS66SS150001	100	11 / 20	1,200	YES	100	YES
Naphthalene	2 / 20	800	6,100	IS66SS150001	100	2 / 20	61.0	YES	1100	YES
Nitrobenzene	0 / 20	18,000	--	--	400	-- / --	45.0	YES	NA	--
Pentachlorophenol	0 / 20	45,000	--	--	100	-- / --	450	YES	NA	--
Phenanthrene	11 / 20	800	210,000	IS66SS150001	100	11 / 20	2,100	YES	1100	YES
Phenol	0 / 20	18,000	--	--	100	-- / --	180	YES	NA	--
Pyrene	12 / 20	720	280,000	IS66SS150001	100	12 / 20	2,800	YES	880	YES
bis(2-Ethylhexyl)phthalate	1 / 20	18,000	27,000	IS66SS080001	10,000	1 / 20	2.70	YES	7500	YES
n-Nitrosodiphenylamine	0 / 20	18,000	--	--	200	-- / --	90.0	YES	NA	--
Explosives (UG/KG)										
Nitrobenzene	0 / 20	620	--	--	400	-- / --	1.55	YES	NA	--
Perchlorate	17 / 20	3.50	18.0	IS66SS070001	NSV	-- / --	NSV	YES	NA	--

NA - not analyzed
COPC - chemical of potential concern
1 - Shaded cells indicate maximum hazard quotient based on the reporting limit
2 - Values from "Background Soil Investigation Report" (TTNUS, 2002)

Table 5-19
Step 2 Ecological Screening Summary for Surface Soil
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Inorganics	Pesticides	SVOCs	Explosives
Arsenic	4,4'-DDE	2-Methylnapthalene	Perchlorate
Copper	4,4'-DDT	Acenaphthene	
Lead	Methoxychlor	Acenaphthylene	
Mercury		Anthracene	
Nickel		Benzo(a)anthracene	
Selenium		Benzo(a)pyrene	
Vanadium		Benzo(b)fluoranthene	
Zinc		Benzo(g,h,i)perylene	
		Benzo(k)fluoranthene	
		Carbazole	
		Chrysene	
		Dibenz(a,h)anthracene	
		Fluoranthene	
		Fluorene	
		Indeno(1,2,3-cd)pyrene	
		Naphthalene	
		Phenanthrene	
		Pyrene	
		bis(2-Ethylhexyl)phthalate	

SVOC - semivolatile organic compound

Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Inorganics (UG/L)								
Aluminum	10 / 10	--	34,300	IS66GW040407	87.0	10 / 10	394	YES
Antimony	0 / 10	9.90	--	--	30.0	-- / --	0.33	NO
Arsenic	8 / 10	2.80	100	IS66GW040407	5.00	7 / 10	20.0	YES
Barium	10 / 10	--	1,910	IS66GW010407	4.00	10 / 10	478	YES
Beryllium	3 / 10	2.90	5.80	IS66GW010407	0.66	3 / 10	8.79	YES
Cadmium	0 / 10	0.46	--	--	0.35	-- / --	1.32	YES
Calcium [2]	10 / 10	--	87,500	IS66GW040407	NSV	-- / --	NSV	NO
Chromium	5 / 10	4.50	67.7	IS66GW100407	97.6	0 / 10	0.69	NO
Cobalt	8 / 10	0.90	69.2	IS66GW010407	23.0	6 / 10	3.01	YES
Copper	6 / 10	5.10	55.8	IS66GW010407	12.4	5 / 10	4.49	YES
Cyanide	1 / 8	1.20	2.30	IS66GW020407	5.00	0 / 8	0.46	NO
Iron	10 / 10	--	242,000	IS66GW040407	300	10 / 10	807	YES
Lead	6 / 10	6.80	106	IS66GW040407	4.88	6 / 10	21.7	YES
Magnesium [2]	10 / 10	--	20,100	IS66GW010407	NSV	-- / --	NSV	NO
Manganese	10 / 10	--	5,630	IS66GW080407	120	10 / 10	46.9	YES
Mercury	3 / 10	0.10	0.19	IS66GW030407	0.10	3 / 10	1.90	YES
Nickel	7 / 10	3.70	83.1	IS66GW010407	69.3	1 / 10	1.20	YES
Potassium [2]	10 / 10	--	11,100	IS66GW040407	NSV	-- / --	NSV	NO
Selenium	0 / 10	2.70	--	--	1.00	-- / --	2.70	YES
Silver	0 / 10	1.20	--	--	5.74	-- / --	0.21	NO
Sodium [2]	10 / 10	--	47,700	IS66GW060407	NSV	-- / --	NSV	NO
Thallium	0 / 10	12.4	--	--	0.80	-- / --	15.5	YES
Vanadium	7 / 10	1.90	199	IS66GW040407	20.0	6 / 10	9.95	YES
Zinc	7 / 10	21.7	960	IS66GW040407	159	3 / 10	6.02	YES
Dissolved Metals (UG/L)								
Aluminum	0 / 9	18.4	--	--	87.0	-- / --	0.21	NO

NSV - no screening value
COPC - chemical of potential concern
1 - Shaded cell indicates maximum hazard quotient based on the reporting limit
2 - Macronutrient; not considered a COPC

Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Antimony	0 / 9	7.40	--	--	30.0	-- / --	0.25	NO
Arsenic	4 / 9	2.70	97.8	IS66GW040407	5.00	4 / 9	19.6	YES
Barium	9 / 9	--	346	IS66GW080407	4.00	9 / 9	86.5	YES
Beryllium	0 / 9	0.20	--	--	0.66	-- / --	0.30	NO
Cadmium	0 / 9	0.20	--	--	0.31	-- / --	0.64	NO
Calcium [2]	9 / 9	--	80,100	IS66GW040407	NSV	-- / --	NSV	NO
Chromium	0 / 9	0.84	--	--	97.6	-- / --	0.0086	NO
Cobalt	5 / 9	3.70	37.8	IS66GW080407	23.0	4 / 9	1.64	YES
Copper	0 / 9	4.50	--	--	11.9	-- / --	0.38	NO
Iron	9 / 9	--	108,000	IS66GW040407	300	9 / 9	360	YES
Lead	0 / 9	2.40	--	--	3.62	-- / --	0.66	NO
Magnesium [2]	9 / 9	--	16,600	IS66GW040407	NSV	-- / --	NSV	NO
Manganese	9 / 9	--	6,050	IS66GW080407	120	9 / 9	50.4	YES
Mercury	0 / 9	0.10	--	--	0.10	-- / --	1.00	YES
Nickel	5 / 9	2.70	28.2	IS66GW010407	69.1	0 / 9	0.41	NO
Potassium [2]	9 / 9	--	8,730	IS66GW040407	NSV	-- / --	NSV	NO
Selenium	0 / 9	3.60	--	--	1.00	-- / --	3.60	YES
Silver	1 / 9	0.50	0.84	IS66GW080407	5.74	0 / 9	0.15	NO
Sodium [2]	9 / 9	--	47,400	IS66GW060407	NSV	-- / --	NSV	NO
Thallium	0 / 9	4.90	--	--	0.80	-- / --	6.13	YES
Vanadium	1 / 9	3.80	18.1	IS66GW030407	20.0	0 / 9	0.91	NO
Zinc	0 / 9	74.3	--	--	157	-- / --	0.47	NO
Pesticide/Polychlorinated Biphenyls (UG/L)								
4,4'-DDD	1 / 9	0.11	9.50	IS66GW040407	0.011	1 / 9	864	YES
4,4'-DDE	1 / 9	0.11	0.027	IS66GW040407	21.0	0 / 9	0.0013	NO
4,4'-DDT	1 / 9	0.11	0.047	IS66GW040407	0.0010	1 / 9	47.0	YES
Aldrin	0 / 9	0.054	--	--	3.00	-- / --	0.018	NO

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Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Aroclor-1016	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Aroclor-1221	0 / 9	2.20	--	--	7.40E-05	-- / --	29,730	YES
Aroclor-1232	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Aroclor-1242	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Aroclor-1248	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Aroclor-1254	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Aroclor-1260	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES
Dieldrin	0 / 9	0.11	--	--	0.056	-- / --	1.96	YES
Endosulfan I	0 / 9	0.054	--	--	0.051	-- / --	1.06	YES
Endosulfan II	0 / 9	0.11	--	--	0.051	-- / --	2.16	YES
Endosulfan sulfate	0 / 9	0.11	--	--	0.051	-- / --	2.16	YES
Endrin	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES
Endrin aldehyde	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES
Endrin ketone	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES
Heptachlor	0 / 9	0.054	--	--	0.0038	-- / --	14.2	YES
Heptachlor epoxide	1 / 9	0.054	0.036	IS66GW040407	0.0038	1 / 9	9.47	YES
Methoxychlor	0 / 9	0.54	--	--	0.019	-- / --	28.4	YES
Toxaphene	0 / 9	5.40	--	--	2.00E-04	-- / --	27,000	YES
alpha-BHC	0 / 9	0.054	--	--	2.20	-- / --	0.025	NO
alpha-Chlordane	0 / 9	0.054	--	--	0.17	-- / --	0.32	NO
beta-BHC	0 / 9	0.054	--	--	2.20	-- / --	0.025	NO
delta-BHC	0 / 9	0.054	--	--	141	-- / --	3.83E-04	NO
gamma-BHC (Lindane)	0 / 9	0.054	--	--	0.010	-- / --	5.40	YES
gamma-Chlordane	0 / 9	0.054	--	--	0.17	-- / --	0.32	NO
Semivolatile Organic Compounds (UG/L)								
1,1-Biphenyl	0 / 9	11.0	--	--	14.0	-- / --	0.79	NO
2,2'-Oxybis(1-chloropropane)	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO

NSV - no screening value
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Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
2,4,5-Trichlorophenol	0 / 9	28.0	--	--	63.0	-- / --	0.44	NO
2,4,6-Trichlorophenol	0 / 9	11.0	--	--	194	-- / --	0.057	NO
2,4-Dichlorophenol	0 / 9	11.0	--	--	73.0	-- / --	0.15	NO
2,4-Dimethylphenol	0 / 9	11.0	--	--	530	-- / --	0.021	NO
2,4-Dinitrophenol	0 / 9	28.0	--	--	30.0	-- / --	0.93	NO
2,4-Dinitrotoluene	0 / 9	11.0	--	--	46.0	-- / --	0.24	NO
2,6-Dinitrotoluene	0 / 9	11.0	--	--	81.0	-- / --	0.14	NO
2-Chloronaphthalene	0 / 9	11.0	--	--	620	-- / --	0.018	NO
2-Chlorophenol	0 / 9	11.0	--	--	24.0	-- / --	0.46	NO
2-Methylnaphthalene	0 / 9	11.0	--	--	4.70	-- / --	2.34	YES
2-Methylphenol	0 / 9	11.0	--	--	13.0	-- / --	0.85	NO
2-Nitroaniline	0 / 9	28.0	--	--	2,300	-- / --	0.012	NO
2-Nitrophenol	0 / 9	11.0	--	--	1,920	-- / --	0.0057	NO
3,3'-Dichlorobenzidine	0 / 9	11.0	--	--	4.50	-- / --	2.44	YES
3-Nitroaniline	0 / 9	28.0	--	--	1,000	-- / --	0.028	NO
4,6-Dinitro-2-methylphenol	0 / 9	28.0	--	--	3.20	-- / --	8.75	YES
4-Bromophenyl-phenylether	0 / 9	11.0	--	--	3.90	-- / --	2.82	YES
4-Chloro-3-methylphenol	0 / 9	11.0	--	--	10.0	-- / --	1.10	YES
4-Chloroaniline	0 / 9	11.0	--	--	232	-- / --	0.047	NO
4-Chlorophenyl-phenylether	0 / 9	11.0	--	--	7.30	-- / --	1.51	YES
4-Methylphenol	0 / 9	11.0	--	--	543	-- / --	0.020	NO
4-Nitroaniline	0 / 9	28.0	--	--	317	-- / --	0.088	NO
4-Nitrophenol	0 / 9	28.0	--	--	60.0	-- / --	0.47	NO
Acenaphthene	1 / 9	11.0	3.00	IS66GW060407	5.80	0 / 9	0.52	NO
Acenaphthylene	0 / 9	11.0	--	--	104	-- / --	0.11	NO
Acetophenone	0 / 9	11.0	--	--	1,570	-- / --	0.0070	NO
Anthracene	0 / 9	11.0	--	--	0.012	-- / --	917	YES

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Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Atrazine	0 / 9	11.0	--	--	1.80	-- / --	6.11	YES
Benzaldehyde	0 / 9	11.0	--	--	22.0	-- / --	0.50	NO
Benzo(a)anthracene	0 / 9	11.0	--	--	0.018	-- / --	611	YES
Benzo(a)pyrene	0 / 9	11.0	--	--	0.015	-- / --	733	YES
Benzo(b)fluoranthene	0 / 9	11.0	--	--	20.5	-- / --	0.54	NO
Benzo(g,h,i)perylene	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Benzo(k)fluoranthene	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Butylbenzylphthalate	0 / 9	11.0	--	--	19.0	-- / --	0.58	NO
Caprolactam	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Carbazole	0 / 9	11.0	--	--	1,000	-- / --	0.011	NO
Chrysene	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Di-n-butylphthalate	1 / 9	11.0	2.00	IS66GW010407	19.0	0 / 9	0.11	NO
Di-n-octylphthalate	0 / 9	11.0	--	--	22.0	-- / --	0.50	NO
Dibenz(a,h)anthracene	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Dibenzofuran	0 / 9	11.0	--	--	3.70	-- / --	2.97	YES
Diethylphthalate	0 / 9	11.0	--	--	210	-- / --	0.052	NO
Dimethyl phthalate	0 / 9	11.0	--	--	330	-- / --	0.033	NO
Fluoranthene	0 / 9	11.0	--	--	0.040	-- / --	275	YES
Fluorene	0 / 9	11.0	--	--	3.00	-- / --	3.67	YES
Hexachlorobenzene	0 / 9	11.0	--	--	3.00E-04	-- / --	36,667	YES
Hexachlorobutadiene	0 / 9	11.0	--	--	1.30	-- / --	8.46	YES
Hexachlorocyclopentadiene	0 / 9	11.0	--	--	1.04	-- / --	10.6	YES
Hexachloroethane	0 / 9	11.0	--	--	12.0	-- / --	0.92	NO
Indeno(1,2,3-cd)pyrene	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
Isophorone	0 / 9	11.0	--	--	2,340	-- / --	0.0047	NO
Naphthalene	0 / 9	11.0	--	--	1.10	-- / --	10.0	YES
Nitrobenzene	0 / 9	11.0	--	--	540	-- / --	0.020	NO

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Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Pentachlorophenol	0 / 9	28.0	--	--	0.50	-- / --	56.0	YES
Phenanthrene	0 / 9	11.0	--	--	0.40	-- / --	27.5	YES
Phenol	0 / 9	11.0	--	--	4.00	-- / --	2.75	YES
Pyrene	0 / 9	11.0	--	--	0.025	-- / --	440	YES
bis(2-Chloroethoxy)methane	0 / 9	11.0	--	--	220	-- / --	0.050	NO
bis(2-Chloroethyl)ether	0 / 9	11.0	--	--	2,380	-- / --	0.0046	NO
bis(2-Ethylhexyl)phthalate	0 / 9	11.0	--	--	16.0	-- / --	0.69	NO
n-Nitroso-di-n-propylamine	0 / 9	11.0	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 9	11.0	--	--	117	-- / --	0.094	NO
Explosives (UG_L)								
1,3,5-Trinitrobenzene	0 / 9	2.50	--	--	11.0	-- / --	0.23	NO
1,3-Dinitrobenzene	0 / 9	2.50	--	--	40.0	-- / --	0.063	NO
2,4,6-Trinitrotoluene	0 / 9	2.50	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 9	5.00	--	--	46.0	-- / --	0.11	NO
2,6-Dinitrotoluene	0 / 9	5.00	--	--	81.0	-- / --	0.062	NO
2-Amino-4,6-dinitrotoluene	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
HMX	0 / 9	2.50	--	--	NSV	-- / --	NSV	NO
Nitrobenzene	0 / 9	2.50	--	--	540	-- / --	0.0046	NO
Nitroglycerin	0 / 9	16.0	--	--	NSV	-- / --	NSV	NO
Nitroguanidine	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO
Perchlorate	3 / 8	0.20	0.58	IS66GW030407	NSV	-- / --	NSV	YES
RDX	0 / 9	2.50	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 9	5.00	--	--	NSV	-- / --	NSV	NO

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Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Volatile Organic Compounds (UG/L)								
1,1,1-Trichloroethane	0 / 10	10.0	--	--	11.0	-- / --	0.91	NO
1,1,2,2-Tetrachloroethane	0 / 10	10.0	--	--	111	-- / --	0.090	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 10	10.0	--	--	NSV	-- / --	NSV	NO
1,1,2-Trichloroethane	0 / 10	10.0	--	--	1,200	-- / --	0.0083	NO
1,1-Dichloroethane	0 / 10	10.0	--	--	47.0	-- / --	0.21	NO
1,1-Dichloroethene	0 / 10	10.0	--	--	25.0	-- / --	0.40	NO
1,2,4-Trichlorobenzene	0 / 10	10.0	--	--	24.0	-- / --	0.42	NO
1,2-Dibromo-3-chloropropane	0 / 10	10.0	--	--	216	-- / --	0.046	NO
1,2-Dibromoethane	0 / 10	10.0	--	--	180	-- / --	0.056	NO
1,2-Dichlorobenzene	0 / 10	10.0	--	--	0.70	-- / --	14.3	YES
1,2-Dichloroethane	0 / 10	10.0	--	--	100	-- / --	0.10	NO
1,2-Dichloropropane	0 / 10	10.0	--	--	1,140	-- / --	0.0088	NO
1,3-Dichlorobenzene	0 / 10	10.0	--	--	150	-- / --	0.067	NO
1,4-Dichlorobenzene	0 / 10	10.0	--	--	26.0	-- / --	0.38	NO
2-Butanone	0 / 10	10.0	--	--	14,000	-- / --	7.14E-04	NO
2-Hexanone	0 / 10	10.0	--	--	99.0	-- / --	0.10	NO
4-Methyl-2-pentanone	0 / 10	10.0	--	--	170	-- / --	0.059	NO
Acetone	0 / 10	11.0	--	--	1,500	-- / --	0.0073	NO
Benzene	0 / 10	10.0	--	--	370	-- / --	0.027	NO
Bromodichloromethane	0 / 10	10.0	--	--	220	-- / --	0.045	NO
Bromoform	0 / 10	10.0	--	--	320	-- / --	0.031	NO
Bromomethane	0 / 10	10.0	--	--	110	-- / --	0.091	NO
Carbon disulfide	0 / 10	10.0	--	--	0.92	-- / --	10.9	YES
Carbon tetrachloride	0 / 10	10.0	--	--	13.3	-- / --	0.75	NO
Chlorobenzene	0 / 10	10.0	--	--	1.30	-- / --	7.69	YES
Chloroethane	0 / 10	10.0	--	--	NSV	-- / --	NSV	NO

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Table 5-20
Step 1 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?
Chloroform	0 / 10	10.0	--	--	1.80	-- / --	5.56	YES
Chloromethane	0 / 10	10.0	--	--	5,500	-- / --	0.0018	NO
Cyclohexane	0 / 10	10.0	--	--	329	-- / --	0.030	NO
Dibromochloromethane	0 / 10	10.0	--	--	220	-- / --	0.045	NO
Dichlorodifluoromethane (Freon-12)	0 / 10	10.0	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 10	10.0	--	--	90.0	-- / --	0.11	NO
Isopropylbenzene	0 / 10	10.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 10	10.0	--	--	3,200	-- / --	0.0031	NO
Methyl-tert-butyl ether (MTBE)	0 / 10	10.0	--	--	11,070	-- / --	9.03E-04	NO
Methylcyclohexane	0 / 10	10.0	--	--	452	-- / --	0.022	NO
Methylene chloride	0 / 10	10.0	--	--	98.1	-- / --	0.10	NO
Styrene	0 / 10	10.0	--	--	72.0	-- / --	0.14	NO
Tetrachloroethene	0 / 10	10.0	--	--	111	-- / --	0.090	NO
Toluene	0 / 10	9.00	--	--	2.00	-- / --	4.50	YES
Trichloroethene	0 / 10	10.0	--	--	21.0	-- / --	0.48	NO
Trichlorofluoromethane (Freon-11)	0 / 10	10.0	--	--	220	-- / --	0.045	NO
Vinyl chloride	0 / 10	10.0	--	--	930	-- / --	0.011	NO
Xylene, total	0 / 10	10.0	--	--	13.0	-- / --	0.77	NO
cis-1,2-Dichloroethene	0 / 10	10.0	--	--	590	-- / --	0.017	NO
trans-1,3-Dichloropropene	0 / 10	10.0	--	--	0.055	-- / --	182	YES

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Table 5-21
Step 2 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Inorganics (UG/L)										
Aluminum	10 / 10	--	34,300	IS66GW040407	87.0	10 / 10	394	YES	286,545,198	NO
Arsenic	8 / 10	2.80	100	IS66GW040407	5.00	7 / 10	20.0	YES	NA	--
Barium	10 / 10	--	1,910	IS66GW010407	4.00	10 / 10	478	YES	254	YES
Beryllium	3 / 10	2.90	5.80	IS66GW010407	0.66	3 / 10	8.79	YES	NA	--
Cadmium	0 / 10	0.46	--	--	0.35	-- / --	1.32	YES	2.8	NO
Cobalt	8 / 10	0.90	69.2	IS66GW010407	23.0	6 / 10	3.01	YES	39.6	YES
Copper	6 / 10	5.10	55.8	IS66GW010407	12.4	5 / 10	4.49	YES	22.4	YES
Iron	10 / 10	--	242,000	IS66GW040407	300	10 / 10	807	YES	57,199	YES
Lead	6 / 10	6.80	106	IS66GW040407	4.88	6 / 10	21.7	YES	NA	NO
Manganese	10 / 10	--	5,630	IS66GW080407	120	10 / 10	46.9	YES	28,160	NO
Mercury	3 / 10	0.10	0.19	IS66GW030407	0.10	3 / 10	1.90	YES	0.13	YES
Nickel	7 / 10	3.70	83.1	IS66GW010407	69.3	1 / 10	1.20	YES	39.0	YES
Selenium	0 / 10	2.70	--	--	1.00	-- / --	2.70	YES	NA	--
Thallium	0 / 10	12.4	--	--	0.80	-- / --	15.5	YES	NA	--
Vanadium	7 / 10	1.90	199	IS66GW040407	20.0	6 / 10	9.95	YES	24.1	YES
Zinc	7 / 10	21.7	960	IS66GW040407	159	3 / 10	6.02	YES	45.2	YES
Dissolved Metals (UG/L)										
Arsenic	4 / 9	2.70	97.8	IS66GW040407	5.00	4 / 9	19.6	YES	NA	--
Barium	9 / 9	--	346	IS66GW080407	4.00	9 / 9	86.5	YES	114	YES
Cobalt	5 / 9	3.70	37.8	IS66GW080407	23.0	4 / 9	1.64	YES	13	YES
Iron	9 / 9	--	108,000	IS66GW040407	300	9 / 9	360	YES	4,171,372	NO
Manganese	9 / 9	--	6,050	IS66GW080407	120	9 / 9	50.4	YES	2,257	YES
Mercury	0 / 9	0.10	--	--	0.10	-- / --	1.00	YES	0.16	NO
Selenium	0 / 9	3.60	--	--	1.00	-- / --	3.60	YES	NA	--
Thallium	0 / 9	4.90	--	--	0.80	-- / --	6.13	YES	NA	--
Pesticide/Polychlorinated Biphenyls (UG/L)										
4,4'-DDD	1 / 9	0.11	9.50	IS66GW040407	0.011	1 / 9	864	YES	NA	--
4,4'-DDT	1 / 9	0.11	0.047	IS66GW040407	0.0010	1 / 9	47.0	YES	NA	--
Aroclor-1016	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--
Aroclor-1221	0 / 9	2.20	--	--	7.40E-05	-- / --	29,730	YES	NA	--
Aroclor-1232	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--
Aroclor-1242	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--
Aroclor-1248	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--

NA - not analyzed
COPC - chemical of potential concern
1 - Shaded cell indicates maximum hazard quotient based on the reporting limit
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Table 5-21
Step 2 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Aroclor-1254	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--
Aroclor-1260	0 / 9	1.10	--	--	7.40E-05	-- / --	14,865	YES	NA	--
Dieldrin	0 / 9	0.11	--	--	0.056	-- / --	1.96	YES	NA	--
Endosulfan I	0 / 9	0.054	--	--	0.051	-- / --	1.06	YES	NA	--
Endosulfan II	0 / 9	0.11	--	--	0.051	-- / --	2.16	YES	NA	--
Endosulfan sulfate	0 / 9	0.11	--	--	0.051	-- / --	2.16	YES	NA	--
Endrin	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES	NA	--
Endrin aldehyde	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES	NA	--
Endrin ketone	0 / 9	0.11	--	--	0.036	-- / --	3.06	YES	NA	--
Heptachlor	0 / 9	0.054	--	--	0.0038	-- / --	14.2	YES	NA	--
Heptachlor epoxide	1 / 9	0.054	0.036	IS66GW040407	0.0038	1 / 9	9.47	YES	NA	--
Methoxychlor	0 / 9	0.54	--	--	0.019	-- / --	28.4	YES	NA	--
Toxaphene	0 / 9	5.40	--	--	2.00E-04	-- / --	27,000	YES	NA	--
gamma-BHC (Lindane)	0 / 9	0.054	--	--	0.010	-- / --	5.40	YES	NA	--
Semivolatile Organic Compounds (UG/L)										
2-Methylnaphthalene	0 / 9	11.0	--	--	4.70	-- / --	2.34	YES	NA	--
3,3'-Dichlorobenzidine	0 / 9	11.0	--	--	4.50	-- / --	2.44	YES	NA	--
4,6-Dinitro-2-methylphenol	0 / 9	28.0	--	--	3.20	-- / --	8.75	YES	NA	--
4-Bromophenyl-phenylether	0 / 9	11.0	--	--	3.90	-- / --	2.82	YES	NA	--
4-Chloro-3-methylphenol	0 / 9	11.0	--	--	10.0	-- / --	1.10	YES	NA	--
4-Chlorophenyl-phenylether	0 / 9	11.0	--	--	7.30	-- / --	1.51	YES	NA	--
Anthracene	0 / 9	11.0	--	--	0.012	-- / --	917	YES	NA	--
Atrazine	0 / 9	11.0	--	--	1.80	-- / --	6.11	YES	NA	--
Benzo(a)anthracene	0 / 9	11.0	--	--	0.018	-- / --	611	YES	NA	--
Benzo(a)pyrene	0 / 9	11.0	--	--	0.015	-- / --	733	YES	NA	--
Dibenzofuran	0 / 9	11.0	--	--	3.70	-- / --	2.97	YES	NA	--
Fluoranthene	0 / 9	11.0	--	--	0.040	-- / --	275	YES	NA	--
Fluorene	0 / 9	11.0	--	--	3.00	-- / --	3.67	YES	NA	--
Hexachlorobenzene	0 / 9	11.0	--	--	3.00E-04	-- / --	36,667	YES	NA	--
Hexachlorobutadiene	0 / 9	11.0	--	--	1.30	-- / --	8.46	YES	NA	--
Hexachlorocyclopentadiene	0 / 9	11.0	--	--	1.04	-- / --	10.6	YES	NA	--
Naphthalene	0 / 9	11.0	--	--	1.10	-- / --	10.0	YES	NA	--
Pentachlorophenol	0 / 9	28.0	--	--	0.50	-- / --	56.0	YES	NA	--
Phenanthrene	0 / 9	11.0	--	--	0.40	-- / --	27.5	YES	NA	--

NA - not analyzed
COPC - chemical of potential concern
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Table 5-21
Step 2 Ecological Screening Statistics for *In situ* Groundwater
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Phenol	0 / 9	11.0	--	--	4.00	-- / --	2.75	YES	NA	--
Pyrene	0 / 9	11.0	--	--	0.025	-- / --	440	YES	NA	--
Explosives (UG/L)										
Perchlorate	3 / 8	0.20	0.58	IS66GW030407	NSV	-- / --	NSV	YES	NA	--
Volatile Organic Compounds (UG/L)										
1,2-Dichlorobenzene	0 / 10	10.0	--	--	0.70	-- / --	14.3	YES	NA	--
Carbon disulfide	0 / 10	10.0	--	--	0.92	-- / --	10.9	YES	NA	--
Chlorobenzene	0 / 10	10.0	--	--	1.30	-- / --	7.69	YES	NA	--
Chloroform	0 / 10	10.0	--	--	1.80	-- / --	5.56	YES	NA	--
Toluene	0 / 10	9.00	--	--	2.00	-- / --	4.50	YES	NA	--
trans-1,3-Dichloropropene	0 / 10	10.0	--	--	0.055	-- / --	182	YES	NA	--

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Table 5-22
Step 2 Ecological Screening Summary for *In Situ* Groundwater
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Inorganics (Total)	**Inorganics (Dissolved)**	**Pesticides**	**Explosives**
Arsenic	Arsenic	4,4'-DDD	Perchlorate
Barium	Barium	4,4'-DDT	
Beryllium	Cobalt	Heptachlor epoxide	
Cobalt	Manganese		
Copper			
Iron			
Manganese			

Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Total Inorganics (UG/L)								
Aluminum	3 / 4	122	525	IS66SW03	87.0	3 / 4	6.03	YES
Antimony	0 / 4	1.50	--	--	30.0	-- / --	0.050	NO
Arsenic	1 / 4	2.70	3.90	IS66SW03	5.00	0 / 4	0.78	NO
Barium	4 / 4	--	54.9	IS66SW02	4.00	4 / 4	13.7	YES
Beryllium	0 / 4	0.20	--	--	0.66	-- / --	0.30	NO
Cadmium	0 / 4	0.20	--	--	0.16	-- / --	1.25	YES
Calcium [2]	4 / 4	--	16,300	IS66SW03	NSV	-- / --	NSV	NO
Chromium	0 / 4	1.00	--	--	48.2	-- / --	0.021	NO
Cobalt	4 / 4	--	9.00	IS66SW02	23.0	0 / 4	0.39	NO
Copper	0 / 4	4.40	--	--	5.09	-- / --	0.86	NO
Cyanide	0 / 4	1.20	--	--	5.00	-- / --	0.24	NO
Iron	4 / 4	--	7,960	IS66SW02	300	4 / 4	26.5	YES
Lead	4 / 4	--	2.60	IS66SW02	1.29	4 / 4	2.02	YES
Magnesium [2]	4 / 4	--	7,250	IS66SW03	NSV	-- / --	NSV	NO
Manganese	4 / 4	--	1,230	IS66SW02	120	4 / 4	10.3	YES
Mercury	0 / 4	0.10	--	--	0.10	-- / --	1.00	YES
Nickel	1 / 4	3.60	5.10	IS66SW05	28.6	0 / 4	0.18	NO
Potassium [2]	4 / 4	--	2,160	IS66SW05	NSV	-- / --	NSV	NO
Selenium	0 / 4	2.90	--	--	1.00	-- / --	2.90	YES
Silver	0 / 4	0.50	--	--	1.12	-- / --	0.45	NO
Sodium [2]	4 / 4	--	44,200	IS66SW04	NSV	-- / --	NSV	NO
Thallium	0 / 4	4.90	--	--	0.80	-- / --	6.13	YES
Vanadium	4 / 4	--	4.60	IS66SW05	20.0	0 / 4	0.23	NO
Zinc	1 / 4	11.3	65.0	IS66SW05	65.7	0 / 4	0.99	NO
Dissolved Metals (UG/L)								
Aluminum	0 / 4	22.1	--	--	87.0	-- / --	0.25	NO

NSV - No Screening Value
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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Antimony	0 / 4	1.50	--	--	30.0	-- / --	0.050	NO
Arsenic	0 / 4	2.70	--	--	5.00	-- / --	0.54	NO
Barium	4 / 4	--	49.9	IS66SW02	4.00	4 / 4	12.5	YES
Beryllium	0 / 4	0.20	--	--	0.66	-- / --	0.30	NO
Cadmium	0 / 4	0.20	--	--	0.15	-- / --	1.33	YES
Calcium [2]	4 / 4	--	17,100	IS66SW03	NSV	-- / --	NSV	NO
Chromium	0 / 4	0.40	--	--	41.5	-- / --	0.0096	NO
Cobalt	2 / 4	4.40	9.70	IS66SW02	23.0	0 / 4	0.42	NO
Copper	0 / 4	1.60	--	--	4.89	-- / --	0.33	NO
Iron	4 / 4	--	3,400	IS66SW02	300	3 / 4	11.3	YES
Lead	0 / 4	1.50	--	--	1.15	-- / --	1.30	YES
Magnesium [2]	4 / 4	--	7,520	IS66SW03	NSV	-- / --	NSV	NO
Manganese	4 / 4	--	1,280	IS66SW02	120	4 / 4	10.7	YES
Mercury	0 / 4	0.14	--	--	0.10	-- / --	1.40	YES
Nickel	0 / 4	2.90	--	--	28.5	-- / --	0.10	NO
Potassium [2]	4 / 4	--	2,280	IS66SW05	NSV	-- / --	NSV	NO
Selenium	0 / 4	2.90	--	--	1.00	-- / --	2.90	YES
Silver	0 / 4	0.50	--	--	0.95	-- / --	0.53	NO
Sodium [2]	4 / 4	--	45,200	IS66SW04	NSV	-- / --	NSV	NO
Thallium	0 / 4	4.90	--	--	0.80	-- / --	6.13	YES
Vanadium	0 / 4	1.10	--	--	20.0	-- / --	0.055	NO
Zinc	0 / 4	5.90	--	--	64.8	-- / --	0.091	NO
Pesticide/Polychlorinated Biphenyls (UG/L)								
4,4'-DDD	0 / 4	0.10	--	--	0.011	-- / --	9.09	YES
4,4'-DDE	0 / 4	0.10	--	--	21.0	-- / --	0.0048	NO
4,4'-DDT	0 / 4	0.10	--	--	0.0010	-- / --	100	YES
Aldrin	0 / 4	0.050	--	--	3.00	-- / --	0.017	NO

NSV - No Screening Value
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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Aroclor-1016	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Aroclor-1221	0 / 4	2.00	--	--	7.40E-05	-- / --	27,027	YES
Aroclor-1232	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Aroclor-1242	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Aroclor-1248	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Aroclor-1254	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Aroclor-1260	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES
Dieldrin	0 / 4	0.10	--	--	0.056	-- / --	1.79	YES
Endosulfan I	0 / 4	0.050	--	--	0.051	-- / --	0.98	NO
Endosulfan II	0 / 4	0.10	--	--	0.051	-- / --	1.96	YES
Endosulfan sulfate	0 / 4	0.10	--	--	0.051	-- / --	1.96	YES
Endrin	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES
Endrin aldehyde	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES
Endrin ketone	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES
Heptachlor	0 / 4	0.050	--	--	0.0038	-- / --	13.2	YES
Heptachlor epoxide	0 / 4	0.050	--	--	0.0038	-- / --	13.2	YES
Methoxychlor	0 / 4	0.50	--	--	0.019	-- / --	26.3	YES
Toxaphene	0 / 4	5.00	--	--	2.00E-04	-- / --	25,000	YES
alpha-BHC	0 / 4	0.050	--	--	2.20	-- / --	0.023	NO
alpha-Chlordane	0 / 4	0.050	--	--	0.17	-- / --	0.29	NO
beta-BHC	0 / 4	0.050	--	--	2.20	-- / --	0.023	NO
delta-BHC	0 / 4	0.050	--	--	141	-- / --	3.55E-04	NO
gamma-BHC (Lindane)	0 / 4	0.050	--	--	0.010	-- / --	5.00	YES
gamma-Chlordane	0 / 4	0.050	--	--	0.17	-- / --	0.29	NO
Semivolatile Organic Compounds (UG/L)								
1,1-Biphenyl	0 / 4	10.0	--	--	14.0	-- / --	0.71	NO
2,2'-Oxybis(1-chloropropane)	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	0 / 4	25.0	--	--	63.0	-- / --	0.40	NO

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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
2,4,6-Trichlorophenol	0 / 4	10.0	--	--	194	-- / --	0.052	NO
2,4-Dichlorophenol	0 / 4	10.0	--	--	73.0	-- / --	0.14	NO
2,4-Dimethylphenol	0 / 4	10.0	--	--	530	-- / --	0.019	NO
2,4-Dinitrophenol	0 / 4	25.0	--	--	30.0	-- / --	0.83	NO
2,4-Dinitrotoluene	0 / 4	10.0	--	--	46.0	-- / --	0.22	NO
2,6-Dinitrotoluene	0 / 4	10.0	--	--	81.0	-- / --	0.12	NO
2-Chloronaphthalene	0 / 4	10.0	--	--	620	-- / --	0.016	NO
2-Chlorophenol	0 / 4	10.0	--	--	24.0	-- / --	0.42	NO
2-Methylnaphthalene	0 / 4	10.0	--	--	4.70	-- / --	2.13	YES
2-Methylphenol	0 / 4	10.0	--	--	13.0	-- / --	0.77	NO
2-Nitroaniline	0 / 4	25.0	--	--	2,300	-- / --	0.011	NO
2-Nitrophenol	0 / 4	10.0	--	--	1,920	-- / --	0.0052	NO
3,3'-Dichlorobenzidine	0 / 4	10.0	--	--	4.50	-- / --	2.22	YES
3-Nitroaniline	0 / 4	25.0	--	--	1,000	-- / --	0.025	NO
4,6-Dinitro-2-methylphenol	0 / 4	25.0	--	--	3.20	-- / --	7.81	YES
4-Bromophenyl-phenylether	0 / 4	10.0	--	--	3.90	-- / --	2.56	YES
4-Chloro-3-methylphenol	0 / 4	10.0	--	--	10.0	-- / --	1.00	YES
4-Chloroaniline	0 / 4	10.0	--	--	232	-- / --	0.043	NO
4-Chlorophenyl-phenylether	0 / 4	10.0	--	--	7.30	-- / --	1.37	YES
4-Methylphenol	0 / 4	10.0	--	--	543	-- / --	0.018	NO
4-Nitroaniline	0 / 4	25.0	--	--	317	-- / --	0.079	NO
4-Nitrophenol	0 / 4	25.0	--	--	60.0	-- / --	0.42	NO
Acenaphthene	0 / 4	10.0	--	--	5.80	-- / --	1.72	YES
Acenaphthylene	0 / 4	10.0	--	--	104	-- / --	0.096	NO
Acetophenone	0 / 4	10.0	--	--	1,570	-- / --	0.0064	NO
Anthracene	0 / 4	10.0	--	--	0.012	-- / --	833	YES
Atrazine	0 / 4	10.0	--	--	1.80	-- / --	5.56	YES
Benzaldehyde	0 / 4	10.0	--	--	22.0	-- / --	0.45	NO

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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Benzo(a)anthracene	0 / 4	10.0	--	--	0.018	-- / --	556	YES
Benzo(a)pyrene	0 / 4	10.0	--	--	0.015	-- / --	667	YES
Benzo(b)fluoranthene	0 / 4	10.0	--	--	20.5	-- / --	0.49	NO
Benzo(g,h,i)perylene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Benzo(k)fluoranthene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Butylbenzylphthalate	0 / 4	10.0	--	--	19.0	-- / --	0.53	NO
Caprolactam	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Carbazole	0 / 4	10.0	--	--	1,000	-- / --	0.010	NO
Chrysene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Di-n-butylphthalate	0 / 4	10.0	--	--	19.0	-- / --	0.53	NO
Di-n-octylphthalate	0 / 4	10.0	--	--	22.0	-- / --	0.45	NO
Dibenz(a,h)anthracene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Dibenzofuran	0 / 4	10.0	--	--	3.70	-- / --	2.70	YES
Diethylphthalate	0 / 4	10.0	--	--	210	-- / --	0.048	NO
Dimethyl phthalate	0 / 4	10.0	--	--	330	-- / --	0.030	NO
Fluoranthene	0 / 4	10.0	--	--	0.040	-- / --	250	YES
Fluorene	0 / 4	10.0	--	--	3.00	-- / --	3.33	YES
Hexachlorobenzene	0 / 4	10.0	--	--	3.00E-04	-- / --	33,333	YES
Hexachlorobutadiene	0 / 4	10.0	--	--	1.30	-- / --	7.69	YES
Hexachlorocyclopentadiene	0 / 4	10.0	--	--	1.04	-- / --	9.62	YES
Hexachloroethane	0 / 4	10.0	--	--	12.0	-- / --	0.83	NO
Indeno(1,2,3-cd)pyrene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Isophorone	0 / 4	10.0	--	--	2,340	-- / --	0.0043	NO
Naphthalene	0 / 4	10.0	--	--	1.10	-- / --	9.09	YES
Nitrobenzene	0 / 4	10.0	--	--	540	-- / --	0.019	NO
Pentachlorophenol	0 / 4	25.0	--	--	0.50	-- / --	50.0	YES
Phenanthrene	0 / 4	10.0	--	--	0.40	-- / --	25.0	YES
Phenol	0 / 4	10.0	--	--	4.00	-- / --	2.50	YES

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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Pyrene	0 / 4	10.0	--	--	0.025	-- / --	400	YES
bis(2-Chloroethoxy)methane	0 / 4	10.0	--	--	220	-- / --	0.045	NO
bis(2-Chloroethyl)ether	0 / 4	10.0	--	--	2,380	-- / --	0.0042	NO
bis(2-Ethylhexyl)phthalate	0 / 4	10.0	--	--	16.0	-- / --	0.63	NO
n-Nitroso-di-n-propylamine	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 4	10.0	--	--	117	-- / --	0.085	NO
Explosives (UG/L)								
1,3,5-Trinitrobenzene	0 / 4	2.50	--	--	11.0	-- / --	0.23	NO
1,3-Dinitrobenzene	0 / 4	2.50	--	--	40.0	-- / --	0.063	NO
2,4,6-Trinitrotoluene	0 / 4	2.50	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 4	5.00	--	--	46.0	-- / --	0.11	NO
2,6-Dinitrotoluene	0 / 4	5.00	--	--	81.0	-- / --	0.062	NO
2-Amino-4,6-dinitrotoluene	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
HMX	0 / 4	2.50	--	--	NSV	-- / --	NSV	NO
Nitrobenzene	0 / 4	2.50	--	--	540	-- / --	0.0046	NO
Nitroglycerin	0 / 4	16.0	--	--	NSV	-- / --	NSV	NO
Nitroguanidine	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
Perchlorate	0 / 4	0.20	--	--	NSV	-- / --	NSV	NO
RDX	0 / 4	2.50	--	--	NSV	-- / --	NSV	NO
Tetryl	0 / 4	5.00	--	--	NSV	-- / --	NSV	NO
Volatile Organic Compounds (UG/L)								
1,1,1-Trichloroethane	0 / 4	10.0	--	--	11.0	-- / --	0.91	NO
1,1,2,2-Tetrachloroethane	0 / 4	10.0	--	--	111	-- / --	0.090	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO

NSV - No Screening Value
COPC - chemical of potential concern
1 - Shaded cells indicate maximum hazard quotient based on the reporting limit
2 - Macronutrient - Not considered to be a COPC

Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
1,1,2-Trichloroethane	0 / 4	10.0	--	--	1,200	-- / --	0.0083	NO
1,1-Dichloroethane	0 / 4	10.0	--	--	47.0	-- / --	0.21	NO
1,1-Dichloroethene	0 / 4	10.0	--	--	25.0	-- / --	0.40	NO
1,2,4-Trichlorobenzene	0 / 4	10.0	--	--	24.0	-- / --	0.42	NO
1,2-Dibromo-3-chloropropane	0 / 4	10.0	--	--	216	-- / --	0.046	NO
1,2-Dibromoethane	0 / 4	10.0	--	--	180	-- / --	0.056	NO
1,2-Dichlorobenzene	0 / 4	10.0	--	--	0.70	-- / --	14.3	YES
1,2-Dichloroethane	0 / 4	10.0	--	--	100	-- / --	0.10	NO
1,2-Dichloropropane	0 / 4	10.0	--	--	1,140	-- / --	0.0088	NO
1,3-Dichlorobenzene	0 / 4	10.0	--	--	150	-- / --	0.067	NO
1,4-Dichlorobenzene	0 / 4	10.0	--	--	26.0	-- / --	0.38	NO
2-Butanone	0 / 4	10.0	--	--	14,000	-- / --	7.14E-04	NO
2-Hexanone	0 / 4	10.0	--	--	99.0	-- / --	0.10	NO
4-Methyl-2-pentanone	0 / 4	10.0	--	--	170	-- / --	0.059	NO
Acetone	0 / 4	14.0	--	--	1,500	-- / --	0.0093	NO
Benzene	0 / 4	10.0	--	--	370	-- / --	0.027	NO
Bromodichloromethane	1 / 4	10.0	2.00	IS66SW03	220	0 / 4	0.0091	NO
Bromoform	0 / 4	10.0	--	--	320	-- / --	0.031	NO
Bromomethane	0 / 4	10.0	--	--	110	-- / --	0.091	NO
Carbon disulfide	0 / 4	10.0	--	--	0.92	-- / --	10.9	YES
Carbon tetrachloride	0 / 4	10.0	--	--	13.3	-- / --	0.75	NO
Chlorobenzene	0 / 4	10.0	--	--	1.30	-- / --	7.69	YES
Chloroethane	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Chloroform	1 / 4	10.0	1.00	IS66SW03	1.80	0 / 4	0.56	NO
Chloromethane	0 / 4	10.0	--	--	5,500	-- / --	0.0018	NO
Cyclohexane	0 / 4	10.0	--	--	329	-- / --	0.030	NO
Dibromochloromethane	0 / 4	10.0	--	--	220	-- / --	0.045	NO
Dichlorodifluoromethane (Freon-12)	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO

NSV - No Screening Value
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Table 5-23
Step 1 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?
Ethylbenzene	0 / 4	10.0	--	--	90.0	-- / --	0.11	NO
Isopropylbenzene	0 / 4	10.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 4	10.0	--	--	3,200	-- / --	0.0031	NO
Methyl-tert-butyl ether (MTBE)	0 / 4	10.0	--	--	11,070	-- / --	9.03E-04	NO
Methylcyclohexane	0 / 4	10.0	--	--	452	-- / --	0.022	NO
Methylene chloride	0 / 4	10.0	--	--	98.1	-- / --	0.10	NO
Styrene	0 / 4	10.0	--	--	72.0	-- / --	0.14	NO
Tetrachloroethene	0 / 4	10.0	--	--	111	-- / --	0.090	NO
Toluene	0 / 4	10.0	--	--	2.00	-- / --	5.00	YES
Trichloroethene	0 / 4	10.0	--	--	21.0	-- / --	0.48	NO
Trichlorofluoromethane (Freon-11)	0 / 4	10.0	--	--	220	-- / --	0.045	NO
Vinyl chloride	0 / 4	10.0	--	--	930	-- / --	0.011	NO
Xylene, total	0 / 4	10.0	--	--	13.0	-- / --	0.77	NO
cis-1,2-Dichloroethene	0 / 4	10.0	--	--	590	-- / --	0.017	NO
trans-1,3-Dichloropropene	0 / 4	10.0	--	--	0.055	-- / --	182	YES

NSV - No Screening Value
COPC - chemical of potential concern
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Table 5-24
Step 2 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?	Background Concentration[2]	Maxiumum Exceeds Background?
Inorganics (UG/L)										
Aluminum	3 / 4	122	525	IS66SW03	87.0	3 / 4	6.03	YES	352	YES
Barium	4 / 4	--	54.9	IS66SW02	4.00	4 / 4	13.7	YES	50.3	YES
Cadmium	0 / 4	0.20	--	--	0.16	-- / --	1.25	YES	ND	NO
Iron	4 / 4	--	7,960	IS66SW02	300	4 / 4	26.5	YES	3,870	YES
Lead	4 / 4	--	2.60	IS66SW02	1.29	4 / 4	2.02	YES	ND	YES
Manganese	4 / 4	--	1,230	IS66SW02	120	4 / 4	10.3	YES	587	YES
Mercury	0 / 4	0.10	--	--	0.10	-- / --	1.00	YES	ND	NO
Selenium	0 / 4	2.90	--	--	1.00	-- / --	2.90	YES	ND	NO
Thallium	0 / 4	4.90	--	--	0.80	-- / --	6.13	YES	ND	NO
Dissolved Metals (UG/L)										
Barium	4 / 4	--	49.9	IS66SW02	4.00	4 / 4	12.5	YES	48.7	YES
Cadmium	0 / 4	0.20	--	--	0.15	-- / --	1.33	YES	ND	NO
Iron	4 / 4	--	3,400	IS66SW02	300	3 / 4	11.3	YES	1,400	YES
Lead	0 / 4	1.50	--	--	1.15	-- / --	1.30	YES	ND	NO
Manganese	4 / 4	--	1,280	IS66SW02	120	4 / 4	10.7	YES	586	YES
Mercury	0 / 4	0.14	--	--	0.10	-- / --	1.40	YES	ND	NO
Selenium	0 / 4	2.90	--	--	1.00	-- / --	2.90	YES	ND	NO
Thallium	0 / 4	4.90	--	--	0.80	-- / --	6.13	YES	ND	NO
Pesticide/Polychlorinated Biphenyls (UG/L)										
4,4'-DDD	0 / 4	0.10	--	--	0.011	-- / --	9.09	YES	ND	NO
4,4'-DDT	0 / 4	0.10	--	--	0.0010	-- / --	100	YES	ND	NO
Aroclor-1016	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Aroclor-1221	0 / 4	2.00	--	--	7.40E-05	-- / --	27,027	YES	ND	NO
Aroclor-1232	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Aroclor-1242	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Aroclor-1248	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Aroclor-1254	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Aroclor-1260	0 / 4	1.00	--	--	7.40E-05	-- / --	13,514	YES	ND	NO
Dieldrin	0 / 4	0.10	--	--	0.056	-- / --	1.79	YES	ND	NO
Endosulfan II	0 / 4	0.10	--	--	0.051	-- / --	1.96	YES	ND	NO
Endosulfan sulfate	0 / 4	0.10	--	--	0.051	-- / --	1.96	YES	ND	NO

ND - Not Detected
COPC - chemical of potential concern
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Table 5-24
Step 2 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?	Background Concentration[2]	Maxiumum Exceeds Background?
Endrin	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES	ND	NO
Endrin aldehyde	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES	ND	NO
Endrin ketone	0 / 4	0.10	--	--	0.036	-- / --	2.78	YES	ND	NO
Heptachlor	0 / 4	0.050	--	--	0.0038	-- / --	13.2	YES	ND	NO
Heptachlor epoxide	0 / 4	0.050	--	--	0.0038	-- / --	13.2	YES	ND	NO
Methoxychlor	0 / 4	0.50	--	--	0.019	-- / --	26.3	YES	ND	NO
Toxaphene	0 / 4	5.00	--	--	2.00E-04	-- / --	25,000	YES	ND	NO
gamma-BHC (Lindane)	0 / 4	0.050	--	--	0.010	-- / --	5.00	YES	ND	NO
Semivolatile Organic Compounds (UG/L)										
2-Methylnaphthalene	0 / 4	10.0	--	--	4.70	-- / --	2.13	YES	ND	NO
3,3'-Dichlorobenzidine	0 / 4	10.0	--	--	4.50	-- / --	2.22	YES	ND	NO
4,6-Dinitro-2-methylphenol	0 / 4	25.0	--	--	3.20	-- / --	7.81	YES	ND	NO
4-Bromophenyl-phenylether	0 / 4	10.0	--	--	3.90	-- / --	2.56	YES	ND	NO
4-Chloro-3-methylphenol	0 / 4	10.0	--	--	10.0	-- / --	1.00	YES	ND	NO
4-Chlorophenyl-phenylether	0 / 4	10.0	--	--	7.30	-- / --	1.37	YES	ND	NO
Acenaphthene	0 / 4	10.0	--	--	5.80	-- / --	1.72	YES	ND	NO
Anthracene	0 / 4	10.0	--	--	0.012	-- / --	833	YES	ND	NO
Atrazine	0 / 4	10.0	--	--	1.80	-- / --	5.56	YES	ND	NO
Benzo(a)anthracene	0 / 4	10.0	--	--	0.018	-- / --	556	YES	ND	NO
Benzo(a)pyrene	0 / 4	10.0	--	--	0.015	-- / --	667	YES	ND	NO
Dibenzofuran	0 / 4	10.0	--	--	3.70	-- / --	2.70	YES	ND	NO
Fluoranthene	0 / 4	10.0	--	--	0.040	-- / --	250	YES	ND	NO
Fluorene	0 / 4	10.0	--	--	3.00	-- / --	3.33	YES	ND	NO
Hexachlorobenzene	0 / 4	10.0	--	--	3.00E-04	-- / --	33,333	YES	ND	NO
Hexachlorobutadiene	0 / 4	10.0	--	--	1.30	-- / --	7.69	YES	ND	NO
Hexachlorocyclopentadiene	0 / 4	10.0	--	--	1.04	-- / --	9.62	YES	ND	NO
Naphthalene	0 / 4	10.0	--	--	1.10	-- / --	9.09	YES	ND	NO
Pentachlorophenol	0 / 4	25.0	--	--	0.50	-- / --	50.0	YES	ND	NO
Phenanthrene	0 / 4	10.0	--	--	0.40	-- / --	25.0	YES	ND	NO
Phenol	0 / 4	10.0	--	--	4.00	-- / --	2.50	YES	ND	NO
Pyrene	0 / 4	10.0	--	--	0.025	-- / --	400	YES	ND	NO
Volatile Organic Compounds (UG/L)										

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Table 5-24
Step 2 Ecological Screening Statistics for Surface Water
Site 66 Site Inspection 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]	Possible COPC?	Background Concentration[2]	Maxiumum Exceeds Background?
1,2-Dichlorobenzene	0 / 4	10.0	--	--	0.70	-- / --	14.3	YES	ND	NO
Carbon disulfide	0 / 4	10.0	--	--	0.92	-- / --	10.9	YES	ND	NO
Chlorobenzene	0 / 4	10.0	--	--	1.30	-- / --	7.69	YES	ND	NO
Toluene	0 / 4	10.0	--	--	2.00	-- / --	5.00	YES	ND	NO
trans-1,3-Dichloropropene	0 / 4	10.0	--	--	0.055	-- / --	182	YES	ND	NO

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Table 5-25
Step 2 Ecological Screening Summary for Surface Water
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Inorganics (Total)	Inorganics (Dissolved)
Aluminum	Barium
Barium	Iron
Iron	Manganese
Lead	
Manganese	

Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
Inorganics (MG/KG)								
Aluminum	4 / 4	--	16,500	IS66SD02	25,500	0 / 4	0.65	NO
Antimony	0 / 4	3.30	--	--	2.00	-- / --	1.65	YES
Arsenic	4 / 4	--	13.8	IS66SD04	9.80	1 / 4	1.41	YES
Barium	4 / 4	--	170	IS66SD02	500	0 / 4	0.34	NO
Beryllium	0 / 4	1.50	--	--	NSV	-- / --	NSV	NO
Cadmium	0 / 4	1.10	--	--	0.99	-- / --	1.11	YES
Calcium [2]	4 / 4	--	3,690	IS66SD02	NSV	-- / --	NSV	NO
Chromium	4 / 4	--	30.2	IS66SD02	43.4	0 / 4	0.70	NO
Cobalt	4 / 4	--	40.9	IS66SD02	50.0	0 / 4	0.82	NO
Copper	4 / 4	--	73.0	IS66SD02	31.6	1 / 4	2.31	YES
Cyanide	0 / 4	0.22	--	--	0.10	-- / --	2.20	YES
Iron	4 / 4	--	25,400	IS66SD02	20,000	1 / 4	1.27	YES
Lead	4 / 4	--	78.9	IS66SD02	35.8	3 / 4	2.20	YES
Magnesium [2]	4 / 4	--	1,470	IS66SD02	NSV	-- / --	NSV	NO
Manganese	4 / 4	--	292	IS66SD02	460	0 / 4	0.63	NO
Mercury	1 / 4	0.18	1.30	IS66SD03	0.18	1 / 4	7.22	YES
Nickel	4 / 4	--	31.6	IS66SD02	22.7	1 / 4	1.39	YES
Potassium [2]	4 / 4	--	977	IS66SD02	NSV	-- / --	NSV	NO
Selenium	0 / 4	2.00	--	--	2.00	-- / --	1.00	YES
Silver	0 / 4	0.87	--	--	1.00	-- / --	0.87	NO
Sodium [2]	0 / 4	526	--	--	NSV	-- / --	NSV	NO
Thallium	0 / 4	2.10	--	--	NSV	-- / --	NSV	NO
Vanadium	4 / 4	--	68.0	IS66SD02	57.0	1 / 4	1.19	YES
Zinc	4 / 4	--	228	IS66SD02	121	2 / 4	1.88	YES
Pesticide/Polychlorinated Biphenyls (UG/KG)								

NSV - No Screening Value
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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
4,4'-DDD	4 / 4	--	47.0	IS66SD02	4.88	3 / 4	9.63	YES
4,4'-DDE	4 / 4	--	22.0	IS66SD02	3.16	4 / 4	6.96	YES
4,4'-DDT	1 / 4	12.0	12.0	IS66SD03	4.16	1 / 4	2.88	YES
Aldrin	0 / 4	6.30	--	--	2.00	-- / --	3.15	YES
Aroclor-1016	0 / 4	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1221	0 / 4	250	--	--	59.8	-- / --	4.18	YES
Aroclor-1232	0 / 4	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1242	0 / 4	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1248	0 / 4	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1254	0 / 4	120	--	--	59.8	-- / --	2.01	YES
Aroclor-1260	1 / 4	120	160	IS66SD03	59.8	1 / 4	2.68	YES
Dieldrin	0 / 4	12.0	--	--	1.90	-- / --	6.32	YES
Endosulfan I	0 / 4	6.30	--	--	2.90	-- / --	2.17	YES
Endosulfan II	0 / 4	12.0	--	--	14.0	-- / --	0.86	NO
Endosulfan sulfate	0 / 4	12.0	--	--	5.40	-- / --	2.22	YES
Endrin	1 / 4	12.0	2.10	IS66SD04	2.22	0 / 4	0.95	NO
Endrin aldehyde	2 / 4	8.30	3.40	IS66SD02	3.00	1 / 4	1.13	YES
Endrin ketone	3 / 4	8.30	4.10	IS66SD04	3.00	1 / 4	1.37	YES
Heptachlor	0 / 4	6.30	--	--	68.0	-- / --	0.093	NO
Heptachlor epoxide	0 / 4	6.30	--	--	2.47	-- / --	2.55	YES
Methoxychlor	2 / 4	43.0	35.0	IS66SD02	18.7	1 / 4	1.87	YES
Toxaphene	0 / 4	630	--	--	1.00	-- / --	630	YES
alpha-BHC	0 / 4	6.30	--	--	6.00	-- / --	1.05	YES
alpha-Chlordane	4 / 4	--	5.30	IS66SD02	3.24	1 / 4	1.64	YES
beta-BHC	1 / 4	6.30	1.20	IS66SD05	5.00	0 / 4	0.24	NO
delta-BHC	0 / 4	6.30	--	--	6,400	-- / --	9.84E-04	NO
gamma-BHC (Lindane)	0 / 4	6.30	--	--	2.37	-- / --	2.66	YES

NSV - No Screening Value
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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
gamma-Chlordane	4 / 4	--	5.00	IS66SD04	7.00	0 / 4	0.71	NO
Semivolatile Organic Compounds (UG/KG)								
1,1-Biphenyl	0 / 4	1,200	--	--	1,220	-- / --	0.98	NO
2,2'-Oxybis(1-chloropropane)	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2,4,5-Trichlorophenol	0 / 4	3,100	--	--	213	-- / --	14.6	YES
2,4,6-Trichlorophenol	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2,4-Dichlorophenol	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2,4-Dimethylphenol	0 / 4	1,200	--	--	29.0	-- / --	41.4	YES
2,4-Dinitrophenol	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 4	1,200	--	--	41.6	-- / --	28.8	YES
2,6-Dinitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2-Chloronaphthalene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2-Chlorophenol	0 / 4	1,200	--	--	31.2	-- / --	38.5	YES
2-Methylnaphthalene	0 / 4	1,200	--	--	20.2	-- / --	59.4	YES
2-Methylphenol	0 / 4	1,200	--	--	63.0	-- / --	19.0	YES
2-Nitroaniline	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO
2-Nitrophenol	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
3,3'-Dichlorobenzidine	0 / 4	1,200	--	--	127	-- / --	9.45	YES
3-Nitroaniline	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO
4,6-Dinitro-2-methylphenol	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO
4-Bromophenyl-phenylether	0 / 4	1,200	--	--	1,230	-- / --	0.98	NO
4-Chloro-3-methylphenol	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
4-Chloroaniline	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
4-Chlorophenyl-phenylether	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
4-Methylphenol	0 / 4	1,200	--	--	670	-- / --	1.79	YES
4-Nitroaniline	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO
4-Nitrophenol	0 / 4	3,100	--	--	NSV	-- / --	NSV	NO

NSV - No Screening Value
COPC - chemical of potential concern
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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
Acenaphthene	1 / 4	1,200	100	IS66SD05	6.70	1 / 4	14.9	YES
Acenaphthylene	0 / 4	1,200	--	--	5.90	-- / --	203	YES
Acetophenone	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
Anthracene	2 / 4	1,200	260	IS66SD05	57.2	2 / 4	4.55	YES
Atrazine	0 / 4	1,200	--	--	6.62	-- / --	181	YES
Benzaldehyde	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
Benzo(a)anthracene	3 / 4	1,200	710	IS66SD05	108	3 / 4	6.57	YES
Benzo(a)pyrene	3 / 4	1,200	490	IS66SD05	150	3 / 4	3.27	YES
Benzo(b)fluoranthene	3 / 4	1,200	590	IS66SD05	27.2	3 / 4	21.7	YES
Benzo(g,h,i)perylene	2 / 4	1,200	310	IS66SD05	170	2 / 4	1.82	YES
Benzo(k)fluoranthene	3 / 4	1,200	640	IS66SD05	27.2	3 / 4	23.5	YES
Butylbenzylphthalate	0 / 4	1,200	--	--	10,900	-- / --	0.11	NO
Caprolactam	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
Carbazole	1 / 4	1,200	170	IS66SD05	1,800	0 / 4	0.094	NO
Chrysene	3 / 4	1,200	730	IS66SD05	166	3 / 4	4.40	YES
Di-n-butylphthalate	0 / 4	1,200	--	--	6,470	-- / --	0.19	NO
Di-n-octylphthalate	0 / 4	1,200	--	--	6,200	-- / --	0.19	NO
Dibenz(a,h)anthracene	1 / 4	1,200	120	IS66SD05	33.0	1 / 4	3.64	YES
Dibenzofuran	0 / 4	1,200	--	--	415	-- / --	2.89	YES
Diethylphthalate	0 / 4	1,200	--	--	603	-- / --	1.99	YES
Dimethyl phthalate	0 / 4	1,200	--	--	71.0	-- / --	16.9	YES
Fluoranthene	4 / 4	--	1,500	IS66SD05	423	2 / 4	3.55	YES
Fluorene	1 / 4	1,200	110	IS66SD05	77.4	1 / 4	1.42	YES
Hexachlorobenzene	0 / 4	1,200	--	--	20.0	-- / --	60.0	YES
Hexachlorobutadiene	0 / 4	1,200	--	--	11.0	-- / --	109	YES
Hexachlorocyclopentadiene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
Hexachloroethane	0 / 4	1,200	--	--	1,027	-- / --	1.17	YES

NSV - No Screening Value
COPC - chemical of potential concern
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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
Indeno(1,2,3-cd)pyrene	2 / 4	1,200	390	IS66SD05	17.0	2 / 4	22.9	YES
Isophorone	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
Naphthalene	0 / 4	1,200	--	--	176	-- / --	6.82	YES
Nitrobenzene	0 / 4	1,200	--	--	21.0	-- / --	57.1	YES
Pentachlorophenol	0 / 4	3,100	--	--	504	-- / --	6.15	YES
Phenanthrene	2 / 4	1,200	940	IS66SD05	204	2 / 4	4.61	YES
Phenol	0 / 4	1,200	--	--	420	-- / --	2.86	YES
Pyrene	3 / 4	1,200	1,100	IS66SD05	195	3 / 4	5.64	YES
bis(2-Chloroethoxy)methane	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
bis(2-Chloroethyl)ether	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
bis(2-Ethylhexyl)phthalate	0 / 4	1,200	--	--	180	-- / --	6.67	YES
n-Nitroso-di-n-propylamine	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
n-Nitrosodiphenylamine	0 / 4	1,200	--	--	2,680	-- / --	0.45	NO
Explosives (UG/KG)								
1,3,5-Trinitrobenzene	0 / 4	620	--	--	NSV	-- / --	NSV	NO
1,3-Dinitrobenzene	0 / 4	620	--	--	NSV	-- / --	NSV	NO
2,4,6-Trinitrotoluene	0 / 4	620	--	--	NSV	-- / --	NSV	NO
2,4-Dinitrotoluene	0 / 4	1,200	--	--	41.6	-- / --	28.8	YES
2,6-Dinitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2-Amino-4,6-dinitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
2-Nitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
3-Nitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
4-Amino-2,6-dinitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
4-Nitrotoluene	0 / 4	1,200	--	--	NSV	-- / --	NSV	NO
HMX	0 / 4	620	--	--	NSV	-- / --	NSV	NO
Nitrobenzene	0 / 4	620	--	--	21.0	-- / --	29.5	YES
Nitroglycerin	0 / 4	4,000	--	--	NSV	-- / --	NSV	NO

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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
Nitroguanidine	0 / 4	320	--	--	NSV	-- / --	NSV	NO
Perchlorate	1 / 1	--	7.70	IS66SD03	NSV	-- / --	NSV	YES
RDX	0 / 4	620	--	--	NSV	-- / --	NSV	NO
Tetryl					NSV	-- --	NSV	NO
Volatile Organic Compounds (UG/KG)								
1,1,1-Trichloroethane	0 / 4	55.0	--	--	30.2	-- / --	1.82	YES
1,1,2,2-Tetrachloroethane	0 / 4	55.0	--	--	1,360	-- / --	0.040	NO
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,1,2-Trichloroethane	0 / 4	55.0	--	--	1,240	-- / --	0.044	NO
1,1-Dichloroethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,1-Dichloroethene	0 / 4	55.0	--	--	31.0	-- / --	1.77	YES
1,2,4-Trichlorobenzene	0 / 4	55.0	--	--	2,100	-- / --	0.026	NO
1,2-Dibromo-3-chloropropane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dibromoethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dichlorobenzene	0 / 4	55.0	--	--	16.5	-- / --	3.33	YES
1,2-Dichloroethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,2-Dichloropropane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
1,3-Dichlorobenzene	0 / 4	55.0	--	--	4,430	-- / --	0.012	NO
1,4-Dichlorobenzene	0 / 4	55.0	--	--	599	-- / --	0.092	NO
2-Butanone	1 / 4	21.0	24.0	IS66SD02	270	0 / 4	0.089	NO
2-Hexanone	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
4-Methyl-2-pentanone	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Acetone	0 / 4	79.0	--	--	NSV	-- / --	NSV	NO
Benzene	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Bromodichloromethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Bromoform	0 / 4	55.0	--	--	654	-- / --	0.084	NO
Bromomethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO

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Table 5-26
Step 1 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	COPC?
Carbon disulfide	0 / 4	55.0	--	--	0.85	-- / --	64.6	YES
Carbon tetrachloride	0 / 4	55.0	--	--	64.2	-- / --	0.86	NO
Chlorobenzene	0 / 4	55.0	--	--	8.42	-- / --	6.53	YES
Chloroethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Chloroform	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Chloromethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Cyclohexane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Dibromochloromethane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Dichlorodifluoromethane (Freon-12)	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Ethylbenzene	0 / 4	55.0	--	--	1,100	-- / --	0.050	NO
Isopropylbenzene	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Methyl acetate	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Methyl-tert-butyl ether (MTBE)	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Methylcyclohexane	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Methylene chloride	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Styrene	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Tetrachloroethene	0 / 4	55.0	--	--	468	-- / --	0.12	NO
Toluene	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Trichloroethene	0 / 4	55.0	--	--	96.9	-- / --	0.57	NO
Trichlorofluoromethane (Freon-11)	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Vinyl chloride	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Xylene, total	0 / 4	55.0	--	--	25.2	-- / --	2.18	YES
cis-1,2-Dichloroethene	0 / 4	55.0	--	--	NSV	-- / --	NSV	NO
Other Parameters (MG/KG)								
Total organic carbon (TOC)	4 / 4	--	146,000	IS66SD03	NSV	-- / --	NSV	YES
pH	4 / 4	--	6.96	IS66SD04	NSV	-- / --	NSV	YES

NSV - No Screening Value
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Table 5-27
Step 2 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Inorganics (MG/KG)										
Antimony	0 / 4	3.30	--	--	2.00	-- / --	1.65	YES	NA	--
Arsenic	4 / 4	--	13.8	IS66SD04	9.80	1 / 4	1.41	YES	63.0	NO
Cadmium	0 / 4	1.10	--	--	0.99	-- / --	1.11	YES	1.85	YES
Copper	4 / 4	--	73.0	IS66SD02	31.6	1 / 4	2.31	YES	297	NO
Cyanide	0 / 4	0.22	--	--	0.10	-- / --	2.20	YES	NA	--
Iron	4 / 4	--	25,400	IS66SD02	20,000	1 / 4	1.27	YES	193,218	NO
Lead	4 / 4	--	78.9	IS66SD02	35.8	3 / 4	2.20	YES	476	NO
Mercury	1 / 4	0.18	1.30	IS66SD03	0.18	1 / 4	7.22	YES	0.778	YES
Nickel	4 / 4	--	31.6	IS66SD02	22.7	1 / 4	1.39	YES	382	NO
Selenium	0 / 4	2.00	--	--	2.00	-- / --	1.00	YES	6.45	YES
Vanadium	4 / 4	--	68.0	IS66SD02	57.0	1 / 4	1.19	YES	196	NO
Zinc	4 / 4	--	228	IS66SD02	121	2 / 4	1.88	YES	1660	NO
Pesticide/Polychlorinated Biphenyls (UG/KG)										
4,4'-DDD	4 / 4	--	47.0	IS66SD02	4.88	3 / 4	9.63	YES	118	NO
4,4'-DDE	4 / 4	--	22.0	IS66SD02	3.16	4 / 4	6.96	YES	26.1	NO
4,4'-DDT	1 / 4	12.0	12.0	IS66SD03	4.16	1 / 4	2.88	YES	14	NO
Aldrin	0 / 4	6.30	--	--	2.00	-- / --	3.15	YES	NA	--
Aroclor-1016	0 / 4	120	--	--	59.8	-- / --	2.01	YES	NA	--
Aroclor-1221	0 / 4	250	--	--	59.8	-- / --	4.18	YES	NA	--
Aroclor-1232	0 / 4	120	--	--	59.8	-- / --	2.01	YES	NA	--
Aroclor-1242	0 / 4	120	--	--	59.8	-- / --	2.01	YES	NA	--
Aroclor-1248	0 / 4	120	--	--	59.8	-- / --	2.01	YES	NA	--
Aroclor-1254	0 / 4	120	--	--	59.8	-- / --	2.01	YES	NA	--
Aroclor-1260	1 / 4	120	160	IS66SD03	59.8	1 / 4	2.68	YES	NA	--
Dieldrin	0 / 4	12.0	--	--	1.90	-- / --	6.32	YES	NA	--
Endosulfan I	0 / 4	6.30	--	--	2.90	-- / --	2.17	YES	NA	--

NA - not analyzed
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Table 5-27
Step 2 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Endosulfan sulfate	0 / 4	12.0	--	--	5.40	-- / --	2.22	YES	NA	--
Endrin aldehyde	2 / 4	8.30	3.40	IS66SD02	3.00	1 / 4	1.13	YES	NA	--
Endrin ketone	3 / 4	8.30	4.10	IS66SD04	3.00	1 / 4	1.37	YES	NA	--
Heptachlor epoxide	0 / 4	6.30	--	--	2.47	-- / --	2.55	YES	NA	--
Methoxychlor	2 / 4	43.0	35.0	IS66SD02	18.7	1 / 4	1.87	YES	NA	--
Toxaphene	0 / 4	630	--	--	1.00	-- / --	630	YES	NA	--
alpha-BHC	0 / 4	6.30	--	--	6.00	-- / --	1.05	YES	NA	--
alpha-Chlordane	4 / 4	--	5.30	IS66SD02	3.24	1 / 4	1.64	YES	NA	--
gamma-BHC (Lindane)	0 / 4	6.30	--	--	2.37	-- / --	2.66	YES	NA	--
Semivolatile Organic Compounds (UG/KG)										
2,4,5-Trichlorophenol	0 / 4	3,100	--	--	213	-- / --	14.6	YES	NA	--
2,4-Dimethylphenol	0 / 4	1,200	--	--	29.0	-- / --	41.4	YES	NA	--
2,4-Dinitrotoluene	0 / 4	1,200	--	--	41.6	-- / --	28.8	YES	NA	--
2-Chlorophenol	0 / 4	1,200	--	--	31.2	-- / --	38.5	YES	NA	--
2-Methylnaphthalene	0 / 4	1,200	--	--	20.2	-- / --	59.4	YES	NA	--
2-Methylphenol	0 / 4	1,200	--	--	63.0	-- / --	19.0	YES	NA	--
3,3'-Dichlorobenzidine	0 / 4	1,200	--	--	127	-- / --	9.45	YES	NA	--
4-Methylphenol	0 / 4	1,200	--	--	670	-- / --	1.79	YES	NA	--
Acenaphthene	1 / 4	1,200	100	IS66SD05	6.70	1 / 4	14.9	YES	NA	--
Acenaphthylene	0 / 4	1,200	--	--	5.90	-- / --	203	YES	NA	--
Anthracene	2 / 4	1,200	260	IS66SD05	57.2	2 / 4	4.55	YES	NA	--
Atrazine	0 / 4	1,200	--	--	6.62	-- / --	181	YES	NA	--
Benzo(a)anthracene	3 / 4	1,200	710	IS66SD05	108	3 / 4	6.57	YES	NA	--
Benzo(a)pyrene	3 / 4	1,200	490	IS66SD05	150	3 / 4	3.27	YES	NA	--
Benzo(b)fluoranthene	3 / 4	1,200	590	IS66SD05	27.2	3 / 4	21.7	YES	NA	--
Benzo(g,h,i)perylene	2 / 4	1,200	310	IS66SD05	170	2 / 4	1.82	YES	NA	--
Benzo(k)fluoranthene	3 / 4	1,200	640	IS66SD05	27.2	3 / 4	23.5	YES	NA	--

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Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Chrysene	3 / 4	1,200	730	IS66SD05	166	3 / 4	4.40	YES	NA	--
Dibenz(a,h)anthracene	1 / 4	1,200	120	IS66SD05	33.0	1 / 4	3.64	YES	NA	--
Dibenzofuran	0 / 4	1,200	--	--	415	-- / --	2.89	YES	NA	--
Diethylphthalate	0 / 4	1,200	--	--	603	-- / --	1.99	YES	NA	--
Dimethyl phthalate	0 / 4	1,200	--	--	71.0	-- / --	16.9	YES	NA	--
Fluoranthene	4 / 4	--	1,500	IS66SD05	423	2 / 4	3.55	YES	NA	--
Fluorene	1 / 4	1,200	110	IS66SD05	77.4	1 / 4	1.42	YES	NA	--
Hexachlorobenzene	0 / 4	1,200	--	--	20.0	-- / --	60.0	YES	NA	--
Hexachlorobutadiene	0 / 4	1,200	--	--	11.0	-- / --	109	YES	NA	--
Hexachloroethane	0 / 4	1,200	--	--	1,027	-- / --	1.17	YES	NA	--
Indeno(1,2,3-cd)pyrene	2 / 4	1,200	390	IS66SD05	17.0	2 / 4	22.9	YES	NA	--
Naphthalene	0 / 4	1,200	--	--	176	-- / --	6.82	YES	NA	--
Nitrobenzene	0 / 4	1,200	--	--	21.0	-- / --	57.1	YES	NA	--
Pentachlorophenol	0 / 4	3,100	--	--	504	-- / --	6.15	YES	NA	--
Phenanthrene	2 / 4	1,200	940	IS66SD05	204	2 / 4	4.61	YES	NA	--
Phenol	0 / 4	1,200	--	--	420	-- / --	2.86	YES	NA	--
Pyrene	3 / 4	1,200	1,100	IS66SD05	195	3 / 4	5.64	YES	NA	--
bis(2-Ethylhexyl)phthalate	0 / 4	1,200	--	--	180	-- / --	6.67	YES	NA	--
Explosives (UG/KG)										
2,4-Dinitrotoluene	0 / 4	1,200	--	--	41.6	-- / --	28.8	YES	NA	--
Nitrobenzene	0 / 4	620	--	--	21.0	-- / --	29.5	YES	NA	--
Perchlorate	1 / 1	--	7.70	IS66SD03	NSV	-- / --	NSV	YES	NA	--
Volatile Organic Compounds (UG/KG)										
1,1,1-Trichloroethane	0 / 4	55.0	--	--	30.2	-- / --	1.82	YES	NA	--
1,1-Dichloroethene	0 / 4	55.0	--	--	31.0	-- / --	1.77	YES	NA	--
1,2-Dichlorobenzene	0 / 4	55.0	--	--	16.5	-- / --	3.33	YES	NA	--
Carbon disulfide	0 / 4	55.0	--	--	0.85	-- / --	64.6	YES	NA	--

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Table 5-27
Step 2 Ecological Screening Statistics for Sediment
Site 66 Site Inspection 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]	Possible COPC?	Background 95% UTL[2]	Maxiumum Exceeds 95% UTL?
Chlorobenzene	0 / 4	55.0	--	--	8.42	-- / --	6.53	YES	NA	--
Xylene, total	0 / 4	55.0	--	--	25.2	-- / --	2.18	YES	NA	--

NA - not analyzed
COPC - chemical of potential concern
1 - Shaded cells indicate maximum hazard quotient based on the reporting limit
2 - "Background Soil Investigation Report" (TTNUS, 2002)

Table 5-28
Step 2 Ecological Screening Summary for Sediment
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Inorganics	Pesticides/PCBs	SVOCs	Explosives
Mercury	Aroclor-1260	Acenaphthene	Perchlorate
	Endrin aldehyde	Anthracene	
	Endrin ketone	Benzo(a)anthracene	
	Methoxychlor	Benzo(a)pyrene	
	alpha-Chlordane	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	

PCB - polychlorinated biphenyl
SVOC - semivolatile organic compound

Table 5-29
Step 1 Ecological Screening Statistics for Ash
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

AnalyteName	Frequency of Detection	Maximum Non-Detect	Maximum Concentration Detected	Sample ID of Maximum Detected Concentration	Mammal TEF[1]	Mammal 2,3,7,8-TCDD Equivalent Concentration	Avian TEF[1]	Avian 2,3,7,8 TCDD Equivalent Concentration
Dioxins/Furans (ug/kg)								
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.01	0.100	<0.001	0.010
1,2,3,4,6,7,8-Heptachlorodibenzofuran	0 / 3	10.040	--	--	0.01	0.100	0.01	0.010
1,2,3,4,7,8,9-Heptachlorodibenzofuran	0 / 3	10.040	--	--	0.01	0.100	0.01	0.010
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.1	1.004	0.05	0.010
1,2,3,4,7,8-Hexachlorodibenzofuran	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.1	1.004	0.01	0.010
1,2,3,6,7,8-Hexachlorodibenzofuran	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
1,2,3,7,8,9-Hexachlorodibenzofuran	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	1	10.040	1	0.010
1,2,3,7,8-Pentachlorodibenzofuran	0 / 3	10.040	--	--	0.03	0.301	0.1	0.010
2,3,4,6,7,8-Hexachlorodibenzofuran	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
2,3,4,7,8-Pentachlorodibenzofuran	0 / 3	10.040	--	--	0.5	5.020	1	0.010
2,3,7,8-TCDD (dioxin)	0 / 3	4.016	--	--	1	4.016	1	0.004
2,3,7,8-Tetrachlorodibenzofuran	0 / 3	4.016	--	--	0.1	0.402	1	0.004
Octachlorodibenzo-p-dioxin	3 / 3	--	0.175	IS66AH01	0.0003	0.0001	0.0001	0.0002
Octachlorodibenzofuran	0 / 3	20.081	--	--	0.0003	0.006	0.0001	0.020
Total heptachlorodibenzo-p-dioxin	3 / 3	--	0.017	IS66AH02	0.01	0.0002	0.01	0.00002
Total heptachlorodibenzofuran	0 / 3	10.040	--	--	0.01	0.100	0.01	0.010
Total hexachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
Total hexachlorodibenzofuran	0 / 3	10.040	--	--	0.1	1.004	0.1	0.010
Total pentachlorodibenzo-p-dioxin	0 / 3	10.040	--	--	0.5	5.020	0.5	0.010
Total pentachlorodibenzofuran	1 / 3	10.040	0.020	IS66AH01	0.05	0.0010	0.05	0.00002
Total tetrachlorodibenzo-p-dioxin	0 / 3	4.016	--	--	1	4.016	1	0.004
Total tetrachlorodibenzofuran	1 / 3	4.016	0.029	IS66AH01	0.1	0.0029	0.1	0.00003
					Sum	38.263	**Sum**	0.203
					Screening Value[2]	**Hazard Quotient**	**Screening Value[2]**	**Hazard Quotient**
					1.0	**38.3**	**1.0**	**0.2**

1 - TEFs from USEPA (1989) for total congeners; from van den Berg et al (2006) and WHO (2007) for individual congeners
2 - Screening Value for 2,3,7,8-TCDD (dioxin)

SECTION 6

Conclusions and Recommendations

The results from this SI, which included the collection and analyses of various environmental samples, are adequate to meet the objectives of this study. Based on a visual inspection of the site, the extent of the waste boundary was increased from the original footprint (Figure 2-1). Based on the soil boring program, the site is underlain by up to three distinct units: ash, fill, and silt/clay/sand. Both the ash and fill are limited in areal extent. Results of static water levels in DPT soil borings indicate that groundwater flows to the east and southeast toward the unnamed creek. The following discussion summarizes the COPCs that are based on the screening of data to human health and ecological risk values, and for some media to background data.

6.1 Surface Soil

- Nature and Extent
  - Several SVOCs, pesticides, and inorganics were detected in one or more samples.
  - One VOC, styrene, was detected in one sample (IS66DP07).
  - One explosive, perchlorate, was detected in 17 of 20 samples.
  - PCBs were not detected in any samples.
- Human Health Risk Screening
  - Exceedance of 11 SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, dibenzofuran, fluoranthene, indeno(1,2,3-cd)pyrene, and pyrene)
  - Exceedance of one pesticide (dieldrin)
  - Exceedance of three inorganics (arsenic, mercury, and vanadium)
- Ecological Risk Screening
  - Exceedance of 19 SVOCs (2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, carbazole, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, and bis(2-ethylhexyl)phthalate)
  - Exceedance of three pesticides (4,4'-DDE, 4,4'-DDT, and methoxychlor)
  - Exceedance of one explosive (perchlorate)
  - Exceedance of eight inorganics (arsenic, copper, lead, mercury, nickel, selenium, vanadium, and zinc)

Based on the results of the human health and ecological risk screening, surface soil is recommended for further assessment.

6.2 Subsurface Soil

- Nature and Extent
  - Several SVOCs, pesticides, and inorganics were detected in one or more samples. SVOCs and metals were the dominant groups of detected compounds.
  - One explosive, perchlorate, was detected in 6 of 10 samples.
  - PCBs and VOCs were not detected in any samples.
  - Samples from locations IS66DP01, IS66DP09, and IS66DP10 had the least number of detected constituents.
- Human Health Risk Screening
  - Exceedance of six SVOCs (benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene)
  - Exceedance of two pesticides (4,4′-DDD and heptachlor epoxide)
  - Exceedance of five inorganics (arsenic, iron, lead, manganese, and vanadium)
- Ecological Risk Screening
  - Incomplete exposure pathway

Based on the results of the human health risk screening, subsurface soil is recommended for further assessment.

6.3 *In situ* Groundwater

- Nature and Extent
  - Two SVOCs were detected at two locations, IS66DP01 and IS66DP06.
  - Four pesticides were detected at one location, IS66DP04.
  - Several total and dissolved inorganics were detected in all wells.
  - One explosive, perchlorate, was detected in three of nine samples. Due to low yield and collection of insufficient volume of water at IS66DP10, this groundwater sample was not analyzed for explosives.
  - PCBs and VOCs were not detected in any samples.
- Human Health Risk Screening
  - Exceedance of two pesticides (4,4′-DDD and heptachlor epoxide)
  - Exceedance of seven total metals (arsenic, barium, chromium, iron, lead, nickel, and vanadium) and three dissolved metals (arsenic, manganese, and vanadium)
- Ecological Risk Screening
  - Exceedance of three pesticides (4,4′-DDD, 4,4′-DDT, and heptachlor epoxide)
  - Exceedance of one explosive (perchlorate)

  - Exceedance of seven total inorganics (arsenic, barium, beryllium, cobalt, copper, iron, and manganese) and four dissolved inorganics (arsenic, barium, copper, and manganese)

Based on the results of the human health risk screening, groundwater is recommended for further assessment. The ecological risk screening results suggest that the inorganic chemicals detected in the surface water at the site are likely related to background conditions and do 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 samples. 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.

6.4 Surface Water

- Nature and Extent
  - Two VOCs were detected at one location, IS66SWSD03.
  - Several total and dissolved inorganics were detected.
  - SVOCs, pesticides, PCBs, and explosives were not detected in any samples.
- Human Health Risk Screening
  - Exceedance of one VOC (bromodichloromethane)
  - Exceedance of two total metals (arsenic and manganese) and one dissolved metal (manganese)
- Ecological Risk Screening
  - Exceedance of five total metals (aluminum, barium, iron, lead, and manganese) and three dissolved metals (barium, iron, and manganese)

Based on the results of the human health and ecological risk screening, surface water is not recommended for further assessment. The human health risk screening suggests that it is unlikely exposure to surface water would result in any human health risks. Two of the chemicals retained as COPCs in surface water (bromodichloromethane and arsenic) were only detected in one of the five surface water samples, and at concentrations within an order-of-magnitude of the screening criteria. Arsenic was only detected in the unfiltered sample, and was not detected in any of the filtered samples. Bromodichloromethane also was only detected in a duplicate sample, and was not detected in the sample associated with that duplicate. The only other COPC, manganese, is a human nutrient and also may be associated with background conditions. However, a full set of background data were not available for the surface water. Only one site-specific upgradient surface water sample was available.

The ecological risk screening results suggest that the inorganic chemicals detected in the surface water at the site are likely related to background conditions and do not warrant further consideration for ecological risk. The average dissolved concentrations of barium (36.9 μg/L) and iron (1,676 μg/L) were below the background concentrations (48.7 μg/L and 3,870 μg/L, respectively). The average concentration of manganese (716 μg/L) exceeded

the background concentration of 587 µg/L; however, considering the limited background data, it is likely that the manganese levels found in the stream are consistent with background conditions.

6.5 Sediment

- Nature and Extent
  - One VOC was detected at location IS66SWSD02.
  - Several SVOCs were detected at locations IS66SWSD03 through IS66SWSD05. Only one SVOC was detected at IS66SWSD02 and none were detected at IS66SWSD01.
  - One PCB was detected at location IS66SWSD03.
  - Several pesticides were detected at all locations.
  - One explosive, perchlorate, was detected at locations IS66SWSD01 and IS66SWSD03.
  - Several metals were detected at all locations.
- Human Health Risk Screening
  - Exceedance of one SVOC (benzo(a)pyrene)
- Ecological Risk Screening
  - Exceedance of 14 SVOCs (acenaphthene, 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)
  - Exceedance of one PCB (Aroclor-1260) four pesticides (endrin aldehyde, endrin ketone, metholychlor, and alpha-chlordane)
  - Exceedance of one explosive (perchlorate)
  - Exceedance of one inorganic (mercury)

Based on the results of the ecological risk screening, sediment is recommended for further assessment. The results of the human health risk screening suggest that it is unlikely that exposure to sediment would result in any human health risks because only one COPC (benzo(a)pyrene) was identified in this medium, and the maximum detected concentration is within an order-of-magnitude of the screening criteria.

6.6 Ash

- Nature and Extent
  - Three ash samples were collected and analyzed only for dioxins and furans. Octachlorodibenzo-p-dioxin and total heptachlorodibenzo-p-dioxin were detected in all three ash samples. Total pentachlorodibenzofuran and total tetrachlorodibenzofuran also were detected in the sample IS66AH01.
  - Although the ash samples were only analyzed for dioxins and furans, a surface soil sample consisting of ash was collected from location IS66SS14 and analyzed for the full suite of parameters (Table 4-1). VOCs, SVOCs, pesticides, and PCBs were not

detected in the sample. Several metals and perchlorate were detected. The results from this sample could be used to augment the dioxin and furan data for ash.

- Human Health Risk Screening
  - There are no exceedances of dioxins and furans.
- Ecological Risk Screening
  - The four detected compounds are retained as COPCs.

Because no risks were identified from the human health risk screening, no further assessment is recommended for ash. The results of the ecological risk screening indicate a potential risk to mammals from dioxin and furan compounds in the ash at the site. However, the risk estimate was driven by high detection limits, which were used as surrogate values for nondetected compounds, and the sum of the detected congeners did not exceed the screening value. Therefore, the risk is probably overestimated for dioxin and furan compounds in the ash, and an unacceptable risk to mammals in unlikely.

SECTION 7

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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"-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						

CH2MHILL	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						

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	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"-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						

CH2MHILL	PROJECT NUMBER 317395.SI.DF	BORING NUMBER 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
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"-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						
						Water Table encountered at ~ 16.5' bgs
	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	0.0 ppm
20						
					End of boring = 21 feet	Set PVC at 20 feet
25						

CH2MHILL	PROJECT NUMBER	BORING NUMBER	
	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 s 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
10	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
					End of Boring = 13 feet	Place PVC screen 10'-0'
15						

CH2MHILL	PROJECT NUMBER 317395.SI.DF	BORING NUMBER 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"-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 2' of Black (5 Y 2.5/1) ash-like material, med. stiff, wet	0.0 ppm
5	5-9		4		2' of ash-like material as above, wet, very soft, becomes Olive Green and clayey at base 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 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 medium sand, trace silt, loose, moist to wet (perched)	0.0 ppm
10					2' of Dark Yellowish Brown (10 YR 4/6) and Light Gray (SILT)(ML), very hard, mixed clay, moist, low plasticity, cohesive 0.5' of black (5Y 2.5/1) ash-like material, appears slightly clayey, low plasticity, wet, v. soft	Water Table encountered at ~ 10' bgs 0.0 ppm
	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						

CH2MHILL	PROJECT NUMBER 317395.SI.DF	BORING NUMBER 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"-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, wood at ~ 4' bgs
5						
					End of boring = 6 feet	Place PVC screen 6'
10						

CH2MHILL	PROJECT NUMBER 317395.SI.DF	BORING NUMBER 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"-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, lit	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						

Appendix B
Validated Analytical Data

Table B-1
Surface Soil Analytical Results
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001
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	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	04/12/07	04/12/07
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	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
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	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
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	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,1,2-Trichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,1-Dichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,1-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,2,4-Trichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
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	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,2-Dibromoethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,2-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,2-Dichloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,2-Dichloropropane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,3-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
1,4-Dichlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
2-Butanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	69 R
2-Hexanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
4-Methyl-2-pentanone	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Acetone	12 U	10 U	10 U	13 U	10 U	7 B	15 B	10 U	10 U	7 B	25 B	12 U	7 B	25 U	48 B	22 B	24 B	7 B	10 U	11 U	20 B	380 R
Benzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Bromodichloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Bromoform	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Bromomethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Carbon disulfide	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Carbon tetrachloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Chlorobenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Chloroethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Chloroform	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Chloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Cyclohexane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Dibromochloromethane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Dichlorodifluoromethane (Freon-12)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Ethylbenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Isopropylbenzene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Methyl acetate	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
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	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Methylcyclohexane	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Methylene chloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Styrene	12 U	10 U	10 U	13 U	10 U	10 U	16	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Tetrachloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Toluene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Trichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Trichlorofluoromethane(Freon-11)	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Vinyl chloride	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Xylene, total	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
cis-1,2-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
cis-1,3-Dichloropropene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
trans-1,2-Dichloroethene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
trans-1,3-Dichloropropene	12 U	10 U	10 U	13 U	10 U	10 U	10 U	10 U	10 U	11 U	32 U	12 U	13 U	25 U	19 U	20 U	13 U	11 U	10 U	11 U	17 U	18 U
Semi-volatile 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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	1,800 U	1,200 U	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
2,4,6-Trichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2,4-Dichlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2,4-Dimethylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	1,800 U	1,200 U	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
2,4-Dinitrotoluene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2,6-Dinitrotoluene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2-Chloronaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2-Chlorophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2-Methylnaphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	130 J	460 U	670 U	710 J	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
2-Methylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	1,800 U	1,200 U	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
2-Nitrophenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
3,3'-Dichlorobenzidine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U

Table B-1
Surface Soil Analytical Results
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001
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	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	04/12/07	04/12/07
Chemical Name																						
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	1,800 U	1,200 U	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
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	1,800 U	1,200 U	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
4-Bromophenyl-phenylether	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
4-Chloroaniline	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
4-Chlorophenyl-phenylether	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
4-Methylphenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
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	1,800 U	1,200 U	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
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	1,800 U	1,200 U	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
Acenaphthene	430 U	130 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	1,100	460 U	670 U	8,500 J	26,000 J	190 J	520 U	410 U	110 J	540 U	800 U
Acenaphthylene	220 J	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	120 J	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	340 J
Acetophenone	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Anthracene	110 J	360 J	110 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	2,500	460 U	670 U	21,000 J	56,000 J	500 J	520 U	410 U	170 J	540 U	530 J
Atrazine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Benzaldehyde	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Benzo(a)anthracene	530	1,700	370 J	400 U	420 U	390 U	400 U	390	410 U	420 U	720 U	9,800	100 J	670 U	69,000 J	170,000 J	1,800	530	220 J	320 J	350 J	3,100
Benzo(a)pyrene	670	1,700	340 J	400 U	420 U	390 U	400 U	310 J	410 U	420 U	720 U	11,000	460 U	670 U	58,000 J	180,000 J	2,000	540	200 J	1,400 J	440 J	4,400
Benzo(b)fluoranthene	680	1,900	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	720 U	8,900	110 J	670 U	130,000 J	180,000 J	1,800	660 J	320 J	260 J	620 J	7,200 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	720 U	9,500	460 U	670 U	2,500 J	92,000 J	1,100	210 J	94 J	390 J	270 J	2,000
Benzo(k)fluoranthene	670	1,600	380 J	400 U	420 U	390 U	400 U	360 J	410 U	420 U	720 U	11,000	460 U	670 U	130,000 J	150,000 J	2,000	570	310 J	240 J	710	5,100
Butylbenzylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Caprolactam	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Carbazole	430 U	300 J	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	1,900	460 U	670 U	18,000 J	45,000 J	350 J	520 U	410 U	140 J	540 U	800 U
Chrysene	710	1,800	410	400 U	420 U	390 U	400 U	420	410 U	420 U	720 U	10,000	110 J	670 U	70,000 J	180,000 J	1,900	600	260 J	250 J	550	3,100
Di-n-butylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	540 J	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Di-n-octylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Dibenz(a,h)anthracene	170 J	400 J	86 J	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	1,700	460 U	670 U	9,000 J	44,000 J	580	110 J	410 U	400 U	540 U	950
Dibenzofuran	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	420 J	460 U	670 U	3,000 J	9,200 J	540 U	520 U	410 U	400 U	540 U	800 U
Diethylphthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Dimethyl phthalate	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Fluoranthene	1,000	3,200	590	400 U	420 U	390 U	400 U	780	410 U	420 U	720 U	19,000	240 J	670 U	130,000 J	350,000 J	3,300	840	330 J	570	740	1,700
Fluorene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	720	460 U	670 U	4,200 J	14,000 J	130 J	520 U	410 U	140 J	540 U	800 U
Hexachlorobenzene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Hexachlorobutadiene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Hexachlorocyclopentadiene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Hexachloroethane	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	720 U	9,600	460 U	670 U	58,000 J	120,000 J	1,500	360 J	120 J	560	320 J	2,700
Isophorone	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Naphthalene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	360 J	460 U	670 U	2,300 J	6,100 J	540 U	520 U	410 U	400 U	540 U	800 U
Nitrobenzene	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	1,800 U	1,200 U	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
Phenanthrene	340 J	1,400	270 J	400 U	420 U	390 U	400 U	250 J	410 U	420 U	720 U	11,000	160 J	670 U	72,000 J	210,000 J	1,800	290 J	88 J	440 J	270 J	800 U
Phenol	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
Pyrene	1,200	2,800	570	400 U	420 U	390 U	400 U	720	410 U	420 U	720 U	16,000	190 J	670 U	100,000 J	280,000 J	2,800	860	410 J	950 J	670	3,200
bis(2-Chloroethoxy)methane	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
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	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
n-Nitrosodiphenylamine	430 U	410 U	410 U	400 U	420 U	390 U	400 U	370 U	410 U	420 U	720 U	490 U	460 U	670 U	1,800 U	18,000 U	540 U	520 U	410 U	400 U	540 U	800 U
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	1.7 B	6.7 B	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
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	2.2 J	9.6	7.9	6.7 U	250 J	210 J	11	10	5.5 J	7.4	23	58
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	7.2 U	35	8 J	6.7 U	230 J	260 J	21	18	30 J	40	60	16 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	3.7 U	2.5 U	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
Aroclor-1016	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
Aroclor-1221	88 U	84 U	83 U	82 U	86 U	80 U	81 U	75 U	84 U	85 U	150 U	99 U	93 U	140 U	120 U	120 U	110 U	110 U	84 U	82 U	110 U	160 U
Aroclor-1232	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
Aroclor-1242	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
Aroclor-1248	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
Aroclor-1254	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
Aroclor-1260	43 U	41 U	41 U	40 U	42 U	39 U	40 U	37 U	41 U	42 U	72 U	49 U	46 U	67 U	59 U	59 U	54 U	52 U	41 U	40 U	54 U	80 U
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	7.2 U	2.2 J	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
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	3.7 U	0.88 J	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
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	7.2 U	1.9 J	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
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	7.2 U	4 J	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
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	7.2 U	1.2 J	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
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	7.2 U	13	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

Table B-1
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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10	IS66SO11	IS66SO12	IS66SO13	IS66SO14	IS66SO15		IS66SO16	IS66SO17	IS66SO19		IS66SO20	IS66SO21
Sample ID	IS66SS010001	IS66SS020001	IS66SS030001	IS66SS040001	IS66SS050001	IS66SS060001	IS66SS070001	IS66SS080001	IS66SS090001	IS66SS100001	IS66SS110001	IS66SS120001	IS66SS130001	IS66SS140001	IS66SS150001	IS66SS15P0001	IS66SS160001	IS66SS170001	IS66SS190001	IS66SS19P0001	IS66SS200001	IS66SS210001
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	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	04/12/07	04/12/07
Chemical Name																						
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	7.2 U	23	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
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	3.7 U	2.5 U	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
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	3.7 U	2.5 U	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
Methoxychlor	10 J	13 J	17 J	21 U	22 U	8.1 J	20 U	19 U	21 U	22 U	37 U	60 J	24 U	35 U	230 J	30 U	13 J	27 U	27	23 J	28 U	51 J
Toxaphene	220 U	210 U	210 U	210 U	220 U	200 U	200 U	190 U	210 U	220 U	370 U	250 U	240 U	350 U	300 U	300 U	280 U	270 U	210 U	210 U	280 U	410 U
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	3.7 U	3.2	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
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	2.1 J	2.5 U	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
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	3.2 J	4.5 J	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
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	3.7 U	2.5 U	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
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	3.7 U	2.5 U	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
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	3.7 U	9.6	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
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	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 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	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 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	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
2,4-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	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
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	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
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	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
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	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
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	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
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	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
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	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
HMX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
Nitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 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	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	4,000 U	4,000 U
Nitroguanidine	120 U	120 U	110 U	110 U	130 U	120 U	130 U	140 U	120 U	110 U	170 U	150 U	130 U	190 U	170 U	160 U	150 U	140 U	140 U	120 U	130 U	200 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	11 J	1.5 J	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
RDX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 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	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	1,200 UJ	1,200 UJ
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	6,100	4,550	5,060	5,560	7,030	6,800	6,200	5,660	4,700	4,000	6,290	9,790
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	1.6 B	3.2 B	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
Arsenic	17.9	10.1	10.6	0.64 U	6	3.1	2.6	34.9	2.1 J	3.1	1.4 J	5	2.3 J	108	30.5	33.1	9.8	22.2	6.6	6.1	5.5	3.5 J
Barium	41.9 J	108	51.9	33.5 J	64.4	40.8 J	66.2	92.3	43.1 J	57	180	126	62.5	64.4 J	200	206	111	93.6	50.7	43.5 J	73.8	98.1
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	2.9	0.28 B	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
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	0.4 B	0.5 B	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
Calcium	766 J	2,360	1,370	402 J	293 J	249 J	445 J	15,900	2,990	94 B	3,220	4,440	412 J	1,950	2,930	3,050	6,510	4,410	2,130 J	4,750 J	5,100	6,150
Chromium	15.7	19.4	13.3	22.8	16.7	14.8	14	11	12.9	16.1	10.1	11.9	8.2	15.5	18.9	17.8	11.9	10.9	11	8.6	13.9	14
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	17.9 J	3.7 J	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
Copper	28.1	26.8	14.1	22.9	10.8	9.7	9.8	20.6	11.3	7.3	23	31.4	29	33.3	56.9	59.6	19.7	32.4	9.7	10.1	27.8	41.5
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	0.13 U	0.12 J	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
Iron	11,000	22,300	13,900	35,500	29,000	19,500	18,000	17,300	11,400	16,600	5,550	10,900	10,100	31,600	23,400	22,500	13,700	10,500	12,700	9,740	12,900	18,500
Lead	73.6	160	112	12.1	13.5	12.3	11.6	41.8	14.1	10.6	20.8	267	42.6	12.1	305	225	188	121	27.4	28.4	182	38.7
Magnesium	584 J	743 J	685 J	762 J	882 J	816 J	987 J	2,310	875 J	912 J	1,060 J	894 J	398 J	237 B	690 J	732 J	708 J	726 J	424 J	549 J	897 J	1,700 J
Manganese	134	405	112	34.7	56	111	380	207	142	69.9	110	305	152	74.8	521	448	368	518	345	263	350	381
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	0.15 B	0.5 J	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
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	31.9	10.8 J	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
Potassium	308 J	446 J	357 J	708 J	605 J	600 J	562 J	590 J	560 J	509 J	373 J	345 J	359 J	290 J	456 J	462 J	835 J	434 J	324 J	298 J	651 J	1,140 J
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	1.1 U	0.76 U	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
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	0.5 U	0.36 J	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
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	243 B	114 B	113 B	90 B	165 B	177 B	112 B	149 B	88.3 B	86.2 B	109 B	172 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	1.2 U	0.82 U	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
Vanadium	32.5	31	25.8	26.7	30.9	26.8	24.2	75.9	19.3	29.9	19.9 J	27.5	36.5	115	87	89	27.8	33.9	26.4	24.6	32.4	40
Zinc	129	120	83.6	33.4	28	26.5	35.8	47.3	47.2	25.1	114	244	16.5	36.9	203	177	373	373	35.1	37.4	149	211
Wet Chemistry (MG_KG)																						
Total organic carbon (TOC)	23,300	30,300	34,700	11,800	8,570	37,400	12,200	120,000	30,400	7,490	70,400	71,200	93,700	202 U	173,000	145,000	82,700	76,100	706 J	25,500 J	47,000	148,000
pH	5.98	5.88	5.76	4.63	4.78	4.84	4.95	8.19	7.53	4.45	6.53	6.99	4.37	6.22	5.8	6.05	5.79	5.96	7.62	7.54	6.86	6.11

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
R - Unreliable result
UJ - Analyte not detected, result may be estimated
A shaded cell indicates that the constituents is detected.

Table B-2
Subsurface Soil Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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-Butanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
2-Hexanone	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
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
Acetone	12 U	12 U	18 UJ	99 B	22 U	19 U	73 B	15 U	15 B	17 B	26 B
Benzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Bromodichloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Bromoform	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Bromomethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Carbon disulfide	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Carbon tetrachloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Chlorobenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Chloroethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Chloroform	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Chloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Cyclohexane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Dibromochloromethane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
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
Ethylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Isopropylbenzene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Methyl acetate	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
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
Methylcyclohexane	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Methylene chloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Styrene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Tetrachloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
Toluene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U

Table B-2
Subsurface Soil Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
Chemical Name											
Trichloroethene	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 U
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
Vinyl chloride	12 U	12 U	18 UJ	19 U	22 U	19 U	15 U	15 U	10 U	17 U	11 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
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
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
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
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
Semi-volatile 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
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
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
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
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
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
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
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
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
2-Chloronaphthalene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
2-Methylnaphthalene	420 U	410 U	520 U	210 J	650 U	550 U	420 U	210 J	420 U	420 U	410 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
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
2-Nitrophenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
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
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
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
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
4-Chloroaniline	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
4-Methylphenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
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
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
Acenaphthene	420 U	150 J	520 U	830	650 U	550 U	420 U	1,700	420 U	420 U	410 U
Acenaphthylene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	170 J	420 U	420 U	410 U
Acetophenone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	110 J	420 U	420 U	410 U
Anthracene	420 U	440	520 U	180 J	650 U	110 J	420 U	4,700 J	420 U	420 U	410 U
Atrazine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Benzaldehyde	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Benzo(a)anthracene	420 U	1,000	270 J	820	650 U	280 J	420 U	15,000	170 J	420 U	410 U

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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
Chemical Name											
Benzo(a)pyrene	420 U	850	320 J	600 J	650 U	200 J	420 U	15,000	110 J	420 U	410 U
Benzo(b)fluoranthene	420 U	920	470 J	640	650 U	240 J	420 U	15,000	160 J	420 U	410 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
Benzo(k)fluoranthene	420 U	920	310 J	570 J	650 U	180 J	420 U	13,000	120 J	420 U	410 U
Butylbenzylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Caprolactam	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Carbazole	420 U	360 J	220 J	610 U	650 U	550 U	420 U	2,900	420 U	420 U	410 U
Chrysene	420 U	1,200	350 J	850	650 U	290 J	420 U	15,000	190 J	420 U	410 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
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
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
Dibenzofuran	420 U	170 J	520 U	410 J	650 U	550 U	420 U	710	420 U	420 U	410 U
Diethylphthalate	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
Fluoranthene	420 U	2,500	770	1,600	200 J	720	120 J	27,000	340 J	420 U	410 U
Fluorene	420 U	280 J	120 J	610 U	650 U	550 U	420 U	1,200	420 U	420 U	410 U
Hexachlorobenzene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Hexachlorobutadiene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Hexachlorocyclopentadiene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Hexachloroethane	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
Isophorone	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Naphthalene	420 U	110 J	140 J	610 U	650 U	550 U	420 U	630	420 U	420 U	410 U
Nitrobenzene	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 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
Phenanthrene	420 U	1,900	510 J	1,400	650 U	500 J	230 J	17,000	100 J	420 U	410 U
Phenol	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U
Pyrene	420 U	1,900	580	1,600	150 J	590	420 U	25,000	300 J	420 U	410 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
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
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
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
n-Nitrosodiphenylamine	420 U	410 U	520 U	610 U	650 U	550 U	420 U	510 U	420 U	420 U	410 U

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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
Toxaphene	220 U	210 U	270 U	16,000 U	330 U	280 U	220 U	260 U	220 U	220 U	210 U
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
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
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
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
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
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

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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
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	620 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
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
2,4-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
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
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
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
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
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
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
HMX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
Nitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U
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
Nitroguanidine	120 U	120 U	150 U	140 U	200 U	160 U	120 U	120 U	120 U	130 U	130 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
RDX	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 U	620 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

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Station ID	IS66DP01	IS66DP02	IS66DP03	IS66DP04	IS66DP05		IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66SB010710	IS66SB020205	IS66SB030306	IS66SB040912	IS66SB050812	IS66SB05P0812	IS66SB061216	IS66SB070103	IS66SB081014	IS66SB090104	IS66SB101214
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
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
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
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
Barium	63.4	47.7 J	131	87.8	85.3	126	66	46.3 J	34.5 J	66.8	48 J
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
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
Calcium	311 J	3,710	22,600	2,550	2,000	965 J	858 J	255 J	597 J	1,630	35.3 B
Chromium	11.8	17.4	26.2	13.3	16.8	14.4	11	19.1	13.3	16	13.6
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
Copper	17.2	21.5	40.4	10.6	31	31.5	9.9	12.7	11.1	18.4	12
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
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
Lead	10.8	31.5	186	37.5	242 J	1,420 J	16	10.3	18.7	11.5	11.3
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
Manganese	64.8	71.9	272	106	79	73.8	139	278	78.4	93.1	24.6
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
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
Potassium	714 J	552 J	913 J	722 J	552 J	370 J	547 J	680 J	641 J	1,010 J	778 J
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
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
Sodium	127 B	83.3 B	293 B	201 B	294 B	243 B	170 B	136 B	155 B	104 B	143 B
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
Vanadium	19	62.2	156	31.5	166 J	73.4 J	21.7	26.2	25.4	22	23
Zinc	35.3	36.2	391	61.5	201 J	429 J	30.7	35	28.8	47.6	27.4
Wet Chemistry (MG_KG)											
Total organic carbon (TOC)	5,260	9,850	73,100	134,000	139,000	163,000	37,000	11,800	16,400	6,660	5,710
pH	5.13	8.12	8.52	8.3	6.67	6.17	7.58	4.97	6.06	6.76	5.18

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
UJ - Analyte not detected, result may be estimated
A shaded cell indicates that the constituents is detected.

Table B-3
Groundwater Analytical Data
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Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
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
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
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
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
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
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
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
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
1,2-Dibromoethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
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
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
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
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
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-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
Acetone	8 B	10 U	10 U	11 B	4 B	10 U	10 U	10 U	10 U	10 U	9 B
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Cyclohexane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
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
Methylcyclohexane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	1 B	1 B	2 B	1 B	1 B	2 B	2 B	2 B	9 B	2 B	1 B
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 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

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Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
Chemical Name											
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
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
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
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
Semi-volatile 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
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
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
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
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2,4-Dinitrophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
2-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
3-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
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
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
4-Nitroaniline	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
4-Nitrophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
Acenaphthene	10 U	10 U	10 U	10 U	10 U	11 U	3 J	10 U	10 U	10 U	NA
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Acetophenone	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Anthracene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Atrazine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Benzaldehyde	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Caprolactam	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Carbazole	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Chrysene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA

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Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
Chemical Name											
Di-n-butylphthalate	2 J	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Di-n-octylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Fluoranthene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Fluorene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
Isophorone	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Naphthalene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Pentachlorophenol	25 U	25 U	25 U	25 U	26 U	28 U	25 U	26 U	25 U	26 U	NA
Phenanthrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Phenol	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
Pyrene	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
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
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
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
n-Nitrosodiphenylamine	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U	NA
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
Chemical Name											
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
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
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
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
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
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
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
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
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
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
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
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
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
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
2-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
3-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
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
4-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
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
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
Nitroglycerin	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	16 U	NA
Nitroguanidine	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
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
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
Tetryl	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NA
Total Metals (UG_L)											
Aluminum	15,300	304	320	1,460	34,300	12,800	2,860	11,500 J	252	493	31,800
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
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
Barium	1,910	77.5 J	79.2 J	128 J	848	238	171 J	124 J	347	137 J	290
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
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
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
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
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
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
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
Iron	64,800	11,100	11,200	2,270	242,000	22,200	26,200	25,100 J	28,600	42,100	66,900
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
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
Manganese	1,540	678	686	137	2,020	778	1,850	1,580	5,630	2,490	741
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

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Station ID	IS66DP01	IS66DP02		IS66DP03	IS66DP04	IS66DP05	IS66DP06	IS66DP07	IS66DP08	IS66DP09	IS66DP10
Sample ID	IS66GW010407	IS66GW020407	IS66GW020407P	IS66GW030407	IS66GW040407	IS66GW050407	IS66GW060407	IS66GW070407	IS66GW080407	IS66GW090407	IS66GW100407
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
Chemical Name											
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
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
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
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
Sodium	38,400	10,500	10,600	4,750 J	22,500	43,800	47,700	26,700	20,800	28,000	6,940
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
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
Zinc	235	12.1 B	12.5 B	188	960	77.9	21.7 B	63.2 J	13.2 B	22.7	153
Dissolved Metals (UG_L)											
Aluminum	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
Antimony	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
Arsenic	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
Barium	148 J	90.6 J	83.5 J	110 J	280	63.3 J	145 J	23 J	346	130 J	NA
Beryllium	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
Cadmium	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
Calcium	5,090	31,500	33,000	52,400	80,100	3,750 J	48,600	1,130 J	7,580	71,200	NA
Chromium	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
Cobalt	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
Copper	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
Iron	8,770	20,300 J	15,200 J	870	108,000	3,340	24,200	8,300	26,400	43,000	NA
Lead	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
Magnesium	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
Manganese	759	921	809	131	937	652	1,820	1,090	6,050	2,490	NA
Mercury	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
Nickel	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
Potassium	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
Selenium	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
Silver	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
Sodium	36,200	10,900	10,900	4,780 J	23,800	43,900	47,400	25,400	20,800	27,900	NA
Thallium	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
Vanadium	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
Zinc	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
Wet Chemistry (MG_L)											
Hardness	NA	123	99.6	145	341	31.9	170	19.6	47.6	240	NA

Notes:
NA - Not analyzed
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
A shaded cell indicates that the constituents is detected.

Table B-4
Surface Water Analytical Data
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Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
Volatile Organic Compounds (UG_L)						
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	10 U	4 B	7 B	10 U	14 B	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	2 J	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	1 J	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U
Cyclohexane	10 U	10 U	10 U	10 U	10 U	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane (Freon-12)	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U
Isopropylbenzene	10 U	10 U	10 U	10 U	10 U	10 U
Methyl acetate	10 U	10 U	10 U	10 U	10 U	10 U
Methyl-tert-butyl ether (MTBE)	10 U	10 U	10 U	10 U	10 U	10 U
Methylcyclohexane	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U	5 B	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	1 B	10 U	10 U	1 B
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane(Freon-11)	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U
Xylene, total	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U

Table B-4
Surface Water Analytical Data
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Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
Semi-volatile Organic Compounds (UG_L)						
1,1-Biphenyl	10 U	10 U	10 U	10 U	10 U	10 U
2,2'-Oxybis(1-chloropropane)	10 U	10 U	10 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	25 U	25 U	25 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dichlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U
2,4-Dinitrophenol	25 U	25 U	25 U	25 U	25 U	25 U
2,4-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U
2,6-Dinitrotoluene	10 U	10 U	10 U	10 U	10 U	10 U
2-Chloronaphthalene	10 U	10 U	10 U	10 U	10 U	10 U
2-Chlorophenol	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U
2-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U
2-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U
2-Nitrophenol	10 U	10 U	10 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	10 U	10 U	10 U	10 U	10 U	10 U
3-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25 U	25 U	25 U	25 U	25 U	25 U
4-Bromophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloro-3-methylphenol	10 U	10 U	10 U	10 U	10 U	10 U
4-Chloroaniline	10 U	10 U	10 U	10 U	10 U	10 U
4-Chlorophenyl-phenylether	10 U	10 U	10 U	10 U	10 U	10 U
4-Methylphenol	10 U	10 U	10 U	10 U	10 U	10 U
4-Nitroaniline	25 U	25 U	25 U	25 U	25 U	25 U
4-Nitrophenol	25 U	25 U	25 U	25 U	25 U	25 U
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U
Acetophenone	10 U	10 U	10 U	10 U	10 U	10 U
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U
Atrazine	10 U	10 U	10 U	10 U	10 U	10 U
Benzaldehyde	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U
Butylbenzylphthalate	10 U	10 U	10 U	10 U	10 U	10 U
Caprolactam	10 U	10 U	10 U	10 U	10 U	10 U
Carbazole	10 U	10 U	10 U	10 U	10 U	10 U
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-butylphthalate	10 U	10 U	10 U	10 U	10 U	10 U
Di-n-octylphthalate	10 U	10 U	10 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U
Diethylphthalate	10 U	10 U	10 U	10 U	10 U	10 U
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U

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Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
Hexachlorocyclopentadiene	10 U	10 U	10 U	10 U	10 U	10 U
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	10 U	10 U	10 U	10 U	10 U
Isophorone	10 U	10 U	10 U	10 U	10 U	10 U
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U
Nitrobenzene	10 U	10 U	10 U	10 U	10 U	10 U
Pentachlorophenol	25 U	25 U	25 U	25 U	25 U	25 U
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U
Phenol	10 U	10 U	10 U	10 U	10 U	10 U
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethoxy)methane	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Chloroethyl)ether	10 U	10 U	10 U	10 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	10 U	10 U	10 U	10 U	10 U
n-Nitroso-di-n-propylamine	10 U	10 U	10 U	10 U	10 U	10 U
n-Nitrosodiphenylamine	10 U	10 U	10 U	10 U	10 U	10 U
Pesticide/Polychlorinated Biphenyls (UG_L)						
4,4'-DDD	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDE	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
4,4'-DDT	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Aldrin	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Aroclor-1016	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1221	2 U	2 U	2 U	2 U	2 U	2 U
Aroclor-1232	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1242	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1248	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1254	1 U	1 U	1 U	1 U	1 U	1 U
Aroclor-1260	1 U	1 U	1 U	1 U	1 U	1 U
Dieldrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan I	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Endosulfan II	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endosulfan sulfate	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin aldehyde	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Endrin ketone	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Heptachlor	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methoxychlor	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toxaphene	5 U	5 U	5 U	5 U	5 U	5 U
alpha-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
alpha-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
delta-BHC	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-BHC (Lindane)	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
gamma-Chlordane	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
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
1,3-Dinitrobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,4,6-Trinitrotoluene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
2,4-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U

Table B-4
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Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
2,6-Dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
2-Amino-4,6-dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
2-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
4-Amino-2,6-dinitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
4-Nitrotoluene	5 U	5 U	5 U	5 U	5 U	5 U
HMX	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Nitrobenzene	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Nitroglycerin	16 U	16 U	16 U	16 U	16 U	16 U
Nitroguanidine	5 U	5 U	5 U	5 U	5 U	5 U
Perchlorate	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
RDX	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Tetryl	5 U	5 U	5 U	5 U	5 U	5 U
Total Metals (UG_L)						
Aluminum	352	122 B	525	113 B	215	314
Antimony	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Arsenic	2.7 U	2.7 U	3.9 J	3.9 J	2.7 U	2.7 U
Barium	50.3 J	54.9 J	45.4 J	42.4 J	30.3 J	40 J
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	4,860 J	15,700	16,300	15,700	6,900	11,700
Chromium	0.92 B	0.56 B	0.65 B	0.48 B	0.69 B	1 B
Cobalt	12.5 J	9 J	3.5 J	3.1 J	6.1 J	5.6 J
Copper	2 B	2.6 B	2.1 B	1.9 B	4.4 B	3.1 B
Cyanide	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
Iron	3,870	7,960	2,410 J	1,770 J	4,250	6,310
Lead	1.3 U	2.6 J	2.2 J	1.6 J	1.5 J	1.8 J
Magnesium	3,930 J	3,450 J	7,250	7,090	2,640 J	3,960 J
Manganese	587	1,230	350	341	654	648
Mercury	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Nickel	7.1 J	3.4 B	3.5 B	3.4 B	3.6 B	5.1 J
Potassium	1,350 J	1,140 J	1,570 J	1,500 J	1,830 J	2,160 J
Selenium	2.9 U	2.9 U	2.9 U	4.2 B	2.9 U	2.9 U
Silver	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Sodium	19,700	17,100	37,000	36,800	44,200	41,300
Thallium	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
Vanadium	6.1 J	2.7 J	2.6 J	1.8 B	2.5 J	4.6 J
Zinc	8.5 B	5.9 B	11.3 B	8.6 B	7.5 B	65
Dissolved Metals (UG_L)						
Aluminum	98.9 B	11.7 U	11.7 U	53.5 B	11.7 U	22.1 B
Antimony	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Arsenic	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U
Barium	48.7 J	49.9 J	41.1 J	41.2 J	22.7 J	33.9 J
Beryllium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Cadmium	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Calcium	4,900 J	13,300	17,100	16,600	6,790	11,400
Chromium	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
Cobalt	11.8 J	9.7 J	2.6 B	2.4 B	5.3 J	4.4 B
Copper	0.89 B	0.98 B	0.68 B	0.75 B	1.6 B	1.3 B

Table B-4
Surface Water Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02	IS66SWSD03		IS66SWSD04	IS66SWSD05
Sample ID	IS66SW01	IS66SW02	IS66SW03	IS66SW03P	IS66SW04	IS66SW05
Sample Date	04/11/07	04/11/07	04/10/07	04/10/07	04/10/07	04/09/07
Chemical Name						
Iron	1,400	3,400	73.5 B	211 J	724	2,370
Lead	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5 B
Magnesium	4,030 J	3,440 J	7,520	7,400	2,650 J	3,890 J
Manganese	586	1,280	343	343	623	617
Mercury	0.1 B	0.14 B	0.1 B	0.11 B	0.12 B	0.1 U
Nickel	6 J	2.9 B	1.6 B	1.6 B	2.3 B	2.7 B
Potassium	1,490 J	1,230 J	1,700 J	1,660 J	2,010 J	2,280 J
Selenium	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U
Silver	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Sodium	20,200	17,900	38,600	38,300	45,200	41,400
Thallium	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U	4.9 U
Vanadium	2.3 B	0.6 B	0.3 U	0.3 U	0.77 B	1.1 B
Zinc	8.4 B	5.2 B	5.5 B	5.9 B	4.4 B	4.8 B
Wet Chemistry (MG_L)						
Hardness	30.7	56.6	81.1	79.7	28.5	49.1

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
A shaded cell indicates that the constituents is detected.

Table B-5
Sediment Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	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	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2,2-Tetrachloroethane	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2-Trichloro-1,2,2-trifluoroethane(Freon-113)	13 U	42 U	55 U	21 U	12 U	13 U
1,1,2-Trichloroethane	13 U	42 U	55 U	21 U	12 U	13 U
1,1-Dichloroethane	13 U	42 U	55 U	21 U	12 U	13 U
1,1-Dichloroethene	13 U	42 U	55 U	21 U	12 U	13 U
1,2,4-Trichlorobenzene	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dibromo-3-chloropropane	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dibromoethane	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichlorobenzene	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichloroethane	13 U	42 U	55 U	21 U	12 U	13 U
1,2-Dichloropropane	13 U	42 U	55 U	21 U	12 U	13 U
1,3-Dichlorobenzene	13 U	42 U	55 U	21 U	12 U	13 U
1,4-Dichlorobenzene	13 U	42 U	55 U	21 U	12 U	13 U
2-Butanone	13 U	24 J	55 U	21 U	12 U	13 U
2-Hexanone	13 U	42 U	55 U	21 U	12 U	13 U
4-Methyl-2-pentanone	13 U	42 U	55 U	21 U	12 U	13 U
Acetone	13 U	79 B	59 B	23 B	9 B	11 B
Benzene	13 U	42 U	55 U	21 U	12 U	13 U
Bromodichloromethane	13 U	42 U	55 U	21 U	12 U	13 U
Bromoform	13 U	42 U	55 U	21 U	12 U	13 U
Bromomethane	13 U	42 U	55 U	21 U	12 U	13 U
Carbon disulfide	13 U	42 U	55 U	21 U	12 U	13 U
Carbon tetrachloride	13 U	42 U	55 U	21 U	12 U	13 U
Chlorobenzene	13 U	42 U	55 U	21 U	12 U	13 U
Chloroethane	13 U	42 U	55 U	21 U	12 U	13 U
Chloroform	13 U	42 U	55 U	21 U	12 U	13 U
Chloromethane	13 U	42 U	55 U	21 U	12 U	13 U
Cyclohexane	13 U	42 U	55 U	21 U	12 U	13 U
Dibromochloromethane	13 U	42 U	55 U	21 U	12 U	13 U
Dichlorodifluoromethane (Freon-12)	13 U	42 U	55 U	21 U	12 U	13 U
Ethylbenzene	13 U	42 U	55 U	21 U	12 U	13 U
Isopropylbenzene	13 U	42 U	55 U	21 U	12 U	13 U
Methyl acetate	13 U	42 U	55 U	21 U	12 U	13 U
Methyl-tert-butyl ether (MTBE)	13 U	42 U	55 U	21 U	12 U	13 U
Methylcyclohexane	13 U	42 U	55 U	21 U	12 U	13 U
Methylene chloride	13 U	42 U	55 U	21 U	12 U	13 U
Styrene	13 U	42 U	55 U	21 U	12 U	13 U
Tetrachloroethene	13 U	42 U	55 U	21 U	12 U	13 U
Toluene	13 U	42 U	55 U	21 U	12 U	13 U
Trichloroethene	13 U	42 U	55 U	21 U	12 U	13 U
Trichlorofluoromethane(Freon-11)	13 U	42 U	55 U	21 U	12 U	13 U
Vinyl chloride	13 U	42 U	55 U	21 U	12 U	13 U
Xylene, total	13 U	42 U	55 U	21 U	12 U	13 U
cis-1,2-Dichloroethene	13 U	42 U	55 U	21 U	12 U	13 U
cis-1,3-Dichloropropene	13 U	42 U	55 U	21 U	12 U	13 U
trans-1,2-Dichloroethene	13 U	42 U	55 U	21 U	12 U	13 U
trans-1,3-Dichloropropene	13 U	42 U	55 U	21 U	12 U	13 U

Table B-5
Sediment Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name						
Semi-volatile Organic Compounds (UG_KG)						
1,1-Biphenyl	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,2'-Oxybis(1-chloropropane)	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4,5-Trichlorophenol	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2,4,6-Trichlorophenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dichlorophenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dimethylphenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,4-Dinitrophenol	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2,4-Dinitrotoluene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2,6-Dinitrotoluene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Chloronaphthalene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Chlorophenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Methylnaphthalene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Methylphenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
2-Nitroaniline	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
2-Nitrophenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
3,3'-Dichlorobenzidine	430 U	1,200 U	1,200 U	830 U	510 U	500 U
3-Nitroaniline	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4,6-Dinitro-2-methylphenol	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4-Bromophenyl-phenylether	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Chloro-3-methylphenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Chloroaniline	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Chlorophenyl-phenylether	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Methylphenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
4-Nitroaniline	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
4-Nitrophenol	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
Acenaphthene	430 U	1,200 U	1,200 U	830 U	510 U	100 J
Acenaphthylene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Acetophenone	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Anthracene	430 U	1,200 U	1,200 U	830 U	120 J	260 J
Atrazine	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Benzaldehyde	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Benzo(a)anthracene	430 U	1,200 U	1,200 U	240 J	410 J	710
Benzo(a)pyrene	430 U	1,200 U	1,200 U	210 J	390 J	490 J
Benzo(b)fluoranthene	430 U	1,200 U	1,200 U	330 J	450 J	590
Benzo(g,h,i)perylene	430 U	1,200 U	1,200 U	830 U	230 J	310 J
Benzo(k)fluoranthene	430 U	1,200 U	1,200 U	240 J	360 J	640
Butylbenzylphthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Caprolactam	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Carbazole	430 U	1,200 U	1,200 U	830 U	510 U	170 J
Chrysene	430 U	1,200 U	1,200 U	300 J	440 J	730
Di-n-butylphthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Di-n-octylphthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Dibenz(a,h)anthracene	430 U	1,200 U	1,200 U	830 U	510 U	120 J
Dibenzofuran	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Diethylphthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Dimethyl phthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Fluoranthene	430 U	260 J	1,200 U	360 J	770	1,500
Fluorene	430 U	1,200 U	1,200 U	830 U	510 U	110 J
Hexachlorobenzene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachlorobutadiene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachlorocyclopentadiene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Hexachloroethane	430 U	1,200 U	1,200 U	830 U	510 U	500 U

Table B-5
Sediment Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name						
Indeno(1,2,3-cd)pyrene	430 U	1,200 U	1,200 U	830 U	280 J	390 J
Isophorone	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Naphthalene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Nitrobenzene	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Pentachlorophenol	1,100 U	3,000 U	3,100 U	2,100 U	1,300 U	1,300 U
Phenanthrene	430 U	1,200 U	1,200 U	830 U	360 J	940
Phenol	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Pyrene	430 U	1,200 U	1,200 U	330 J	630	1,100
bis(2-Chloroethoxy)methane	430 U	1,200 U	1,200 U	830 U	510 U	500 U
bis(2-Chloroethyl)ether	430 U	1,200 U	1,200 U	830 U	510 U	500 U
bis(2-Ethylhexyl)phthalate	430 U	1,200 U	1,200 U	830 U	510 U	500 U
n-Nitroso-di-n-propylamine	430 U	1,200 U	1,200 U	830 U	510 U	500 U
n-Nitrosodiphenylamine	430 U	1,200 U	1,200 U	830 U	510 U	500 U
Pesticide/Polychlorinated Biphenyls (UG_KG)						
4,4'-DDD	66	38 J	47	4.4 J	13	40
4,4'-DDE	8.1	22	21	8.4	4 J	4.2 J
4,4'-DDT	3.1 B	12 U	12 B	12 J	3.1 B	2.7 B
Aldrin	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Aroclor-1016	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1221	88 U	240 U	250 U	170 U	100 U	100 U
Aroclor-1232	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1242	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1248	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1254	43 U	120 U	120 U	83 U	51 U	50 U
Aroclor-1260	43 U	120 U	120 U	160	51 U	50 U
Dieldrin	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endosulfan I	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Endosulfan II	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endosulfan sulfate	4.3 U	12 U	12 U	8.3 U	5.1 U	5 U
Endrin	4.3 U	12 U	12 U	8.3 U	2.1 J	5 U
Endrin aldehyde	4.3 U	12 U	3.4 J	8.3 U	2.5 J	5 U
Endrin ketone	4.3 U	12 U	2.6 J	8.3 U	4.1 J	1.2 J
Heptachlor	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Heptachlor epoxide	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
Methoxychlor	22 U	61 U	35 J	43 U	17 J	26 U
Toxaphene	220 U	610 U	630 U	430 U	260 U	260 U
alpha-BHC	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
alpha-Chlordane	1.2 J	5.3 J	4 J	1.8 J	0.82 J	1.6 J
beta-BHC	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	1.2 J
delta-BHC	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
gamma-BHC (Lindane)	2.2 U	6.1 U	6.3 U	4.3 U	2.6 U	2.6 U
gamma-Chlordane	0.67 J	2.3 J	1.6 J	1.6 J	5	0.65 J
Explosives (UG_KG)						
1,3,5-Trinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U
1,3-Dinitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U
2,4,6-Trinitrotoluene	620 U	620 U	620 U	620 U	620 U	620 U
2,4-Dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
2,6-Dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
2-Amino-4,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
2-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
3-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U

Table B-5
Sediment Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66SWSD01	IS66SWSD02		IS66SWSD03	IS66SWSD04	IS66SWSD05
Sample ID	IS66SD01	IS66SD02	IS66SD02P	IS66SD03	IS66SD04	IS66SD05
Sample Date	04/12/07	04/10/07	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name						
4-Amino-2,6-dinitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
4-Nitrotoluene	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U	1,200 U
HMX	620 U	620 U	620 U	620 U	620 U	620 U
Nitrobenzene	620 U	620 U	620 U	620 U	620 U	620 U
Nitroglycerin	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U	4,000 U
Nitroguanidine	130 U	320 U	280 U	230 U	120 U	140 U
Perchlorate	2.9 J	5.9 R	6.3 R	7.7 J	3 R	3.1 R
RDX	620 U	620 U	620 U	620 U	620 U	620 U
Tetryl	1,200 R	1,200 R	1,200 R	1,200 R	1,200 R	1,200 R
Total Metals (MG_KG)						
Aluminum	928	14,300	16,500	9,170	2,190	3,030
Antimony	0.66 B	2.2 B	3.3 B	3 B	1.2 B	0.86 B
Arsenic	1.2 J	6.2 J	8.2	8.9	13.8	3.5
Barium	16.2 J	154	170	93.6 J	34.2 J	36.6 J
Beryllium	0.18 B	1.5 B	1.5 B	0.71 B	0.38 B	0.36 B
Cadmium	0.097 U	1.1 B	1.1 B	0.45 B	0.11 U	0.12 U
Calcium	285 J	3,690	3,580 J	2,980	1,180 J	577 J
Chromium	2.6	26.8	30.2	13.2	8.2	7.9
Cobalt	3.1 J	40.9	28.9 J	19 J	15.3	5.5 J
Copper	3.5 J	67.8	73	30.2 J	13.2	12.9
Cyanide	0.08 U	0.21 U	0.22 U	0.15 U	0.092 U	0.093 U
Iron	3,460	21,300	25,400	11,300	13,700	13,700
Lead	3.6	67.5	78.9	39.8	70.9	21.6
Magnesium	180 J	1,310 J	1,470 J	1,090 J	868 J	372 J
Manganese	119	247	292	229	122	126
Mercury	0.057 U	0.18 B	0.16 B	1.3	0.072 B	0.076 U
Nickel	2 J	31.6	30	20.6	14.2	7.7 J
Potassium	66.1 J	878 J	977 J	679 J	164 J	219 J
Selenium	0.66 UJ	1.8 UJ	2 UJ	1.3 UJ	0.77 UJ	0.81 UJ
Silver	0.29 U	0.81 U	0.87 U	0.68 B	0.34 U	0.36 U
Sodium	105 B	408 B	526 B	294 B	166 B	174 B
Thallium	0.71 U	2 U	2.1 U	1.4 U	0.83 U	0.87 U
Vanadium	9.6 J	61.5	68	25.7	26.2	20.6
Zinc	10.4	216	228	186	55.1	47.9
Wet Chemistry (MG_KG)						
Total organic carbon (TOC)	11,800 J	98,600 J	94,100 J	146,000 J	145,000 J	26,500 J
pH	7.01	6.39	6.6	6.53	6.96	6.61

Notes:
U - Analyte not detected
J - Result may be estimated
B - Possible blank contamination
R - Unreliable result
UJ - Analyte not detected, result may be estimated
A shaded cell indicates that the constituents is detected.

Table B-6
Ash Analytical Data
Site 66 Site Inspection Report
NSF-IH, Indian Head, Maryland

Station ID	IS66ASH01	IS66ASH02		IS66ASH03
Sample ID	IS66AH01	IS66AH02	IS66AH02P	IS66AH03
Sample Date	04/10/07	04/10/07	04/10/07	04/10/07
Chemical Name				
Dioxin/Furans (UG_KG)				
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,4,7,8-Hexachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,6,7,8-Hexachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,7,8,9-Hexachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
1,2,3,7,8-Pentachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
2,3,4,6,7,8-Hexachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
2,3,4,7,8-Pentachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
2,3,7,8-TCDD (dioxin)	3.12 U	3.77 U	3.29 U	4.02 U
2,3,7,8-Tetrachlorodibenzofuran	3.12 U	3.77 U	3.29 U	4.02 U
Octachlorodibenzo-p-dioxin	0.175 J	0.113 J	0.167 J	0.0841 J
Octachlorodibenzofuran	15.6 U	18.8 U	16.5 U	20.1 U
Total heptachlorodibenzo-p-dioxin	0.013	0.016	0.017	0.012
Total heptachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
Total hexachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
Total hexachlorodibenzofuran	7.79 U	9.42 U	8.24 U	10.0 U
Total pentachlorodibenzo-p-dioxin	7.79 U	9.42 U	8.24 U	10.0 U
Total pentachlorodibenzofuran	0.02	9.42 U	8.24 U	10.0 U
Total tetrachlorodibenzo-p-dioxin	3.12 U	3.77 U	3.29 U	4.02 U
Total tetrachlorodibenzofuran	0.029	3.77 U	3.29 U	4.02 U

Notes:
U - Analyte not detected
J - Result may be estimated
A shaded cell indicates that the constituents is detected.