

**US Army Corps
of Engineers**

**FINAL COMPLIANCE STATUS REPORT
OLD PROPERTY DISPOSAL (PDO) YARD**

at

**HUNTER ARMY AIRFIELD
SAVANNAH, GEORGIA**

under

**Contract No. DACA21-93-D-0049
Delivery Order No. 0020**

May 1997

Submitted to:

**U.S. ARMY CORPS OF ENGINEERS
SAVANNAH, GEORGIA**

Presented by:

**METCALF & EDDY, INC.
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LIST OF ACRONYMS

ARARs	-	Applicable or Relevant and Appropriate Requirements
AST	-	Aboveground Storage Tank
AT&E	-	Atlanta Testing & Engineering
bls	-	below land surface
BTEX	-	Benzene, Toluene, Ethylbenzene and Xylene
CAP	-	Corrective Action Plan
CDAP	-	Chemical Data Acquisition Plan
CO	-	Consent Order
COPC	-	Contaminants of Potential Concern
CSR	-	Compliance Status Report
DNR	-	Department of Natural Resources
DQOs	-	Data Quality Objectives
DRO	-	Diesel Range Organics
EPA	-	Environmental Protection Agency
EPD	-	Environmental Protection Division
fpm	-	feet per minute
ft/ft	-	feet per feet
GHWMA	-	Georgia's Hazardous Waste Management Act
GRO	-	Gasoline Range Organics
HAAF	-	Hunter Army Air Field
HP-II	-	Hydropunch II
HSI	-	Hazardous Sites Inventory
HSRA	-	Hazardous Sites Response Act
HW	-	Hazardous Waste
IWQS	-	Instream Water Quality Standards
K _d	-	partitioning coefficient
K _{oc}	-	organic carbon partitioning coefficient
K _{ow}	-	octanol/water partitioning coefficient
KOH	-	electrolyte
MCL	-	Maximum Contaminant Level
M&E	-	Metcalf & Eddy, Inc.
msl	-	mean sea level
OVA	-	Organic Vapor Analyzer
PAH	-	Polynuclear Aromatic Hydrocarbons
PDO	-	Old Property Disposal Yard
PRG	-	Preliminary Remediation Goal
RAGS	-	Risk Assessment Guidance for Superfund
RCRA	-	Resource Conservation and Recovery Act
RRS	-	Risk Reduction Standards
SAV	-	Savannah District
SDWA	-	Safe Drinking Water Act
SI	-	Site Investigation
SOW	-	Scope of Work
SVOC	-	Semivolatile organic compound
TPH	-	Total petroleum hydrocarbons
µg/L	-	micrograms/liter

ACRONYMS (Continued)

USACE	-	United States Army Corps of Engineers
USAEHA	-	United States Army Environmental Hygiene Agency
USDA	-	United States Department of Agriculture
VOC	-	Volatile Organic Compound
WDES	-	Waste Disposal Engineering Study

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CERTIFICATION OF COMPLIANCE

I certify under penalty of law that this report and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Based on my review of the findings of this report with respect to the risk reduction standards of the Rules for Hazardous Site Response, Rule 391-3-19-.07, I have determined that this site/property is in compliance with Type 3 risk reduction standards.

Authorized Representative

Date

SECTION 1.0

INTRODUCTION

Metcalf & Eddy, Inc. (M&E) has been contracted by the United States Army Corps of Engineers (USACE), Savannah District (SAV), to perform a site investigations (SI) at the old Property Disposal (PDO) Yard at Hunter Army Airfield (HAAF) in Savannah, Georgia. Hunter Army Airfield is a sub-installation of nearby Ft. Stewart, located approximately 30 miles to the west. The PDO Yard, located near the northwestern boundary of HAAF, contains three above-ground storage tanks (ASTs). A location map showing the HAAF facility and the PDO Yard is shown in **Figure 1**. The SI was performed under Contract DACA21-93-D-0049, Delivery Order No. 20.

The investigation was conducted in accordance with federal, state, and USACE regulations and rules as stated in the scope of work (SOW). The State of Georgia Department of Natural Resources (DNR), Environmental Protection Division (EPD) Rules (Chapter 391-3-19) and Regulatory Compliance Unit requirements were observed during the performance of the SI.

1.1 Purpose Of Report

The purpose of this report is to respond to the EPD's determination that a release exceeding reportable quantities had occurred at the PDO Yard based on sample analytical results provided in United States Army Environmental Hygiene Agency (USAEHA) reports. The PDO Yard was subsequently placed on the hazardous sites inventory (HSI) list in accordance with Georgia Rule, Chapter 391-3-19-.05 (1). Additionally, a Consent Order (CO) GA4210022733 was issued for the site requiring that a remedial investigation be conducted. This CO was a result of an HAAF inspection by the Georgia DNR, EPD to evaluate compliance with Georgia's Hazardous Waste Management Act (GHWMA) and Rules. Several sites received violations, including the PDO Yard.

Violations sited during the inspection at the PDO Yard included:

1. 40 CFR 262.11: Hazardous Waste Determination
2. 40 CFR 262.34(a)(2): Date of Accumulation Marked
3. 40 CFR 262.34 (a)(3): Label during Accumulation Time
4. 40 CFR 265.15(a) & (c): General Inspection Requirements

This Compliance Status Report (CSR) is submitted in accordance with Georgia Rule, Chapter 391-3-19-.06 (3). The purpose of this CSR is to document the current status of the PDO Yard with regard to the Risk Reduction Standards (RRS) of Rule 391-3-19-.07 for all regulated substances associated with the release at the PDO Yard. The intent of the CSR is to provide documentation on the horizontal and vertical extent of soil and groundwater contamination. In addition, an acceptable determination of background concentrations for each contaminant of potential concern (COPC) must be identified. The CSR will culminate in a determination of the need for corrective action at the PDO Yard. Once completed, the CSR will be submitted to the EPD for classification in accordance with compliance for RRS provided in Georgia Rule 391-3-19-.07. Compliance with Type 1 or Type 2 RRS may allow the EPD to remove the PDO Yard from the HSI. Compliance with Type 3 or Type 4 RRS will allow the EPD to reclassify the site as class III, and state on the HSI that corrective action consists of activities needed to maintain compliance with Type 3 or Type 4 RRS. Upon achieving compliance with property notice requirements listed in Georgia Rule 391-3-19-.08, the EPD may remove the PDO Yard from the HSI. Certification of compliance with Type 5 RRS in the CSR is similar to compliance with Type 3 or Type 4 RRS except that the HSI shall document corrective actions at the site will be those needed to maintain compliance with Type 5 RRS and the property will remain on the HSI regardless of the property notice requirements mentioned above.

M&E will also prepare a Corrective Action Plan (CAP) to respond to the Consent Order issued by the DNR EPD. This CAP will be submitted as a separate document following the submittal

of the CSR. The CAP is required in direct response to the Consent Order GA4210022733. Although the CAP will utilize data collected during this SI, it is a separate report submitted to the Resource Conservation and Recovery Act (RCRA) Department of the EPD and will, therefore, not be discussed further within this CSR.

The PDO Yard SI project objectives were to:

- I. Determine the horizontal and vertical extent of contamination.
- II. Determine whether contaminants present constitute a threat to human health or the environment.
- III. Determine the need for further actions and/or no further action and gather necessary data to support development of a remedial design, if warranted.

Metcalf & Eddy focused on the six categories listed below during this SI to meet the USACE SOW objectives.

Data Evaluation - All acquired data were evaluated for completeness and for meeting the requirements of the project Data Quality Objectives (DQOs).

Fate and Transport - A qualitative assessment of the fate and transport for detected contaminants was performed.

Site Characterization - The nature and extent of contaminants of concern found on site was evaluated and conclusions drawn from the analytical data were supported by contaminant distribution maps and related figures and tables.

Health and Environmental Assessments - A limited evaluation of the potential for health and environmental impacts for site use and potential use of surrounding areas was performed. The CSR includes a discussion of the chemicals of concern identified at the PDO Yard, an exposure assessment, toxicity assessment, and a qualitative assessment of potential risk.

Identification of Action Levels and Media Clean-up Standards - Action levels for all identified contaminants of concern and clean-up standards and/or points of compliance required for remediation activities were developed.

Conclusions and Recommendations - Conclusions and recommendations were made based on an overall analysis of the data, site characteristics, and probable impacts..

1.2 Site Background

1.2.1 Site Description

Hunter Army Airfield is located within the Coastal Plain Physiographic Province in the city of Savannah, Chatham County, Georgia. The airfield covers approximately 5,400 acres, and it is bounded on the north by lightly populated areas, on the east and south by residential and light commercial areas, and on the west by the Little Ogeechee River. HAAF is a subinstallation to the Fort Stewart Military Installation, which is located approximately 30 miles southwest.

HAAF is located near the coast toward the north end of the Barrier Island Sequence physiographic province of Georgia. Area topography consists of step-like terraces with decreasing altitudes toward the Atlantic Ocean (Clark and Zisa, 1976). Topographic relief base-wide ranges from approximately 2 to 42 feet above mean sea level (msl).

The PDO Yard is located near the northwestern boundary of HAAF. It consists of a parcel containing approximately 0.955 acres which is a part of a larger parent parcel designated as

Tract Number I-900 conveyed by Warranty Deed dated 29 September 1950 from the Mayor and Aldermen of the City of Savannah to the United States of America as recorded in Deed Book 52-J Office of the Clerk of Superior Court, Chatham County, Georgia. A legal description is provided in **Appendix A**.

The site, which is fenced, is approximately 136 feet by 300 feet. Only a small portion of the site is paved. The PDO Yard contains three AST's, which serve as an accumulation point for used oil and off-specification JP-4, a 90-day hazardous waste (HW) storage area, and a scrap metal storage area. A coal stockpile area was located outside the fenced area, toward the north. Although no longer in use, the coal pile area was used to stockpile coal reserves for 20 to 30 years.

1.2.2 Site History

From the early days of aviation, the area now known as Hunter Army Airfield was used by practice flyers, barnstormers, and aerial circuses. In 1928, the city of Savannah took possession of the field for use as a municipal airport. In the spring of 1940, the property was designated as a military airfield. Except for a short period when military activities were moved to Travis Field west of the city, the Army Air Corps (and later the separately-organized Air Force) made extensive use of the base for approximately two decades. Users included the U.S. Air Force Strategic Air Command and the Military Air Transport Command.

The Air Force ceased using the base in the early 1960's, and deactivation efforts were undertaken. However, the Army acquired the facility in 1967 to support the increased need for helicopter pilot training during the Vietnam conflict. Advanced helicopter training for Vietnamese Air Force flight students was conducted at HAAF from 1970 to 1972. In 1975, the airfield became an important component of nearby Fort Stewart when the 24th Infantry Division was reactivated and stationed at the Fort Stewart/Hunter Army Airfield complex.

1.2.3 Previous Investigations

The USAEHA conducted Waste Disposal Engineering Study (WDES) No. 37-24-J2KZ-94 at the old PDO Yard site from November of 1993 to January of 1994. Samples were collected from soil borings and hydropunch locations. The USAEHA concluded that soil and groundwater at the PDO Yard contains contamination which required further assessment. The contaminants of concern identified by the USAEHA were total petroleum hydrocarbons (TPH) in the soils and tetrachloroethene and metals in the groundwater.

Based on the results of the site assessment, the USAEHA conducted a WDES, No. 38-26-K2KZ-94 for groundwater assessment at the PDO Yard in April 1994. Seven monitoring wells were installed during this investigation. **Figure 2** shows the locations where samples were collected during the USAEHA studies. The USAEHA confirmed that tetrachloroethene was present in a groundwater sample collected from monitoring well 1-23 at a concentration of 145 ug/L; above the Maximum Contaminant Level (MCL) of 5 ug/L. Metals (antimony, iron, manganese, nickel, lead, and thallium) exceeded the MCL or Secondary Drinking Water Standards but may be naturally occurring as they were detected upgradient from the PDO Yard. Additional information on the findings of the two USAEHA studies is provided in Section 2.1 of this CSR.

SECTION 2.0

FIELD INVESTIGATION OVERVIEW

M&E's sampling activities for the SI at the PDO Yard were designed to determine if contamination exists above regulatory screening criteria, quantify concentrations, assess the horizontal and vertical extent of contamination, and determine whether contaminants constitute a potential threat to human health or the environment. This section summarizes the quantity and type of samples collected and their locations. A detailed discussion of sampling procedures was provided in the Chemical Data Acquisition Plan (CDAP). A copy of the field logbook which provides documentation of daily activity is furnished in **Appendix B**. Boring logs prepared during drilling activities are provided in **Appendix C**. Monitoring well construction diagrams are presented in **Appendix D**. Well development and sampling records are provided in **Appendix E**. Analytical results and data validation reports are provided in **Appendix F**. Topographic survey data are presented in **Appendix G**. A thorough discussion of soil, groundwater, and surface water quality is provided in Section 4.0 of this CSR.

2.1 Contaminant Source Investigation

M&E conducted a review of available records and performed interviews with HAAF personnel to obtain information about the potential source of contamination at the PDO Yard. According to interviews, no records were kept regarding waste types stored, their quantities, or any documentation of leak/spill history. The WDES No. 37-24-J2KZ-94 and No. 38-26-K2KZ-94 conducted by the USAEHA investigated soil and groundwater quality at the PDO Yard. Conclusions from the studies are noted below.

Based on WDES No. 37-24-J2KZ-94, surface soil samples collected within the bermed area containing two 20,000-gallon tanks for waste oil and one 18,000-gallon tank for JP-4 exceeded the Preliminary Remediation Goals (PRG) for TPH and BTEX (the sum of benzene,

toluene, ethylbenzene, and xylene) established by the Georgia DNR EPD. The average concentration of TPH in composite surface soil samples collected within the berm was 12,000 mg/kg. The average TPH concentration dropped to 1,900 mg/kg in the 6 to 18 inch below land surface (bls) composite samples. Arsenic, while not statistically exceeding background, exhibited an average concentration exceeding the PRG of 1.6 mg/kg. All other inorganics identified in the soil samples were below their respective PRGs used in the WDES.

Several inorganic constituents were identified in groundwater samples from PDO monitoring wells. Based on these studies, however, the PDO Yard is not a source of the nickel, lead, thallium, iron, and manganese identified in the groundwater. Further investigation into an antimony anomaly was recommended in WDES No.38-26-K2KZ-94. The groundwater was found to be contaminated with tetrachloroethene above the MCL for drinking water.

2.2 Overview of M&E's Site Investigation Activities

2.2.1 Soil Investigation

Twenty-five soil borings (ten hand auger and fifteen power auger locations) were advanced at the PDO Yard between August 14 and September 16, 1996. Two soil samples were collected at each of these locations. One sample was collected from a depth of 0 to 2.0 feet bls and the other sample was obtained from the sampling interval with the highest organic vapor analyzer (OVA) reading. In the absence of any OVA readings or visual contamination, the second sample was collected from the interval closest to the soil/groundwater table interface. A detailed discussion of the soil boring program is provided in Section 4.

2.2.2 Groundwater Investigation

Ten groundwater samples were collected using the Hydropunch II (HP-II) technology between August 15 and 18, 1996 as part of initial field activities at the PDO Yard. These samples were collected to define the outer boundaries of the contamination plume. Four new monitoring wells were installed. Seven existing wells were also sampled. Details of Hydropunch and monitoring well installation and sampling activities are provided in Section 4. Data collected

from the wells provided groundwater quality, groundwater flow direction and potential contaminant migration information. Two soil samples were also collected from each monitoring well boring based on the two highest OVA readings.

2.2.3 Surface Water And Sediment Investigation

Two sediment (upgradient and downgradient) and three surface water (upgradient, downgradient and crossgradient) were collected on September 18, 1996 from the drainage canal (Lamar Canal) located north of the PDO Yard. Surface water and sediment sampling locations are provided in Section 4. Analytical results from these samples were used to evaluate surface water and sediment quality in proximity to the PDO Yard.

SECTION 3.0

SITE CHARACTERISTICS

3.1 Demography, Surface Features And Land Use

The total population of Chatham County, taken from the 1990 census, is 216,935. This translates to a population density of 335.7 persons per square mile. There are 8,111 houses with approximately 12.5 houses per square mile. However, the area surrounding the Airfield is largely commercial, with the majority of the facilities located along Abercorn Extension.

Few surface features delineate the PDO Yard. Elevation is relatively flat except for a manmade hill (from a nearby lake excavation) located to the southeast and southwest. Trees are scattered along this hill. A railroad track runs along the northwest side of the PDO Yard. Further to the north lies the Lamar Canal which flows toward the west.

The PDO Yard was used as a storage facility for used oil and off-specification JP-4, scrap metal storage, and a temporary storage site for hazardous waste as discussed in Section 1.2.1.

3.2 Soils

The PDO Yard is underlain primarily by the Chipley-Leon-Ellabelle soil association. The Chipley-Leon-Ellabelle soil association consists of moderately well drained and poorly drained, sandy soils on broad, low ridges and very poorly drained soils that have loamy underlying layers in depressions and drainageways. Slopes range from about 0 to 2 percent. This association is comprised of about 30 percent Chipley soils, 25 percent Leon soils, 20 percent Ellabelle soils, and 25 percent minor soils (Olustee, Ocilla, Pelham soils) (USDA, 1974).

According to the United States Department of Agriculture (USDA) report, the texture of the Chipley soils is a fine sand to a depth of 6 feet or more. A seasonal high water table is 15 to

36 inches below ground surface. In some places within the investigation area, the soil profile has been altered by cutting, filling, grading, and landscaping. In this urban land, the identification of soils is impractical due to the presence of urban facilities. A generalized description of the near-surface soils can be found in **Table 1**.

3.2.1 Local Geology

The local geology has been documented by the collection of soil samples from numerous borings drilled to depths ranging from 4.5 to 19.0 feet bls. These borings were performed by M&E and others as part of previous investigation activities at HAAF. The lithology of the soil samples is described and recorded on boring logs presented in the Final Corrective Action Plan - Part A for former Building 728, M&E, 1996; Final Corrective Action Plan - Part B for the DAACG Facility, M&E, 1996; Final Completion Report - Former Building 133, M&E, 1995a; the Final Completion Report - Former Building 710, M&E, 1995b; and **Appendix C** of this CSR.

Lithology beneath these sites consisted predominantly of brown and tan, fine to very fine sand with a little silt (silty sand). Layers of clayey sand and silt were also present. The lithology beneath the PDO Yard consists of brown and gray, fine to medium sand, silty in places (20-25%). Layers of sandy clay were also present around 3-5 feet. The surficial lithology beneath the PDO Yard is consistent with undifferentiated alluvial deposits identified in previous investigations.

3.3 Groundwater

The previously described shallow lithologic units form the surficial aquifer at HAAF. Groundwater was encountered in previous investigations ranging in depth from about 1.6 feet to greater than 6.5 feet and generally flowed to the northwest. Hydraulic conductivity of the surficial aquifer ranged from 4.3×10^{-4} to 1.25×10^{-2} feet per minute (fpm) with an average hydraulic conductivity of 6.46×10^{-3} fpm (AT&E, 1992, 1993). The measured hydraulic

conductivities correspond to silty sand. Results of sieve analyses also indicated the sites were underlain by fine grained sands to silty sands (Metcalf & Eddy, 1996a, 1996b, 1996c). An average groundwater seepage velocity of 2.7×10^{-4} fpm for the movement of groundwater across the site has been calculated using the average hydraulic conductivity, a hydraulic gradient of 0.0083 feet per foot (ft/ft), and an assumed effective porosity of 0.20 (Metcalf & Eddy, 1996a, 1996b, 1996c).

All newly-installed and existing wells were surveyed to obtain accurate top of casing elevations. This elevation was then used to measure the depth to groundwater at each well. Groundwater was encountered at the PDO Yard at 5-7 feet bls. Soil boring samples were wet at approximately 3-5 feet. Initial measurements from monitoring wells estimated the groundwater level to be 6 feet bls. Based on the site potentiometric map, **Figure 3**, groundwater flow is north to northwest towards the Lamar Canal. Topographic survey information is provided in **Appendix G**.

3.4 Surface Water Hydrology

Surface water samples were taken in Lamar Canal as described in Section 2.4. Water depth of the canal averaged about 6 inches to 1 foot during sampling but is higher during periods of heavy rains. The water was clear with large amounts of aquatic plants growing along the banks. Flow was consistent with a low velocity.

SECTION 4.0

NATURE AND EXTENT OF CONTAMINATION

The site investigation at the Old PDO Yard was conducted to assess the potential nature and extent of soil and groundwater contamination. The investigation was conducted in accordance with EPD protocols. The PDO Yard falls under the Regulatory Compliance Unit of the EPD since HAAF does not have a RCRA permit and thus follows the Georgia Hazardous Site Response Act (HSRA) regulations.

Georgia Rule, Chapter 391-3-19, HSRA, identifies criteria for evaluating both soil and groundwater contamination levels at residential and non-residential (industrial) sites. Currently, the Regulatory Compliance Unit of the EPD has identified the PDO facility as a Class II site. Of the five RRS listed in Chapter 391-3-19, Type 3 RRS are most applicable to the PDO facility as soil and groundwater screening criteria. Rationale for selecting the appropriate RRS and related screening criteria are provided in the following sections.

4.1 Criteria for Evaluation of Soil, Sediment, Groundwater, and Surface Water

Criteria for evaluation of soil

Enforceable clean-up standards or regulatory levels for contaminants in soils are identified in HSRA, Rule 391-3-19 for residential and non-residential (industrial) sites. These risk standards specify criteria required to demonstrate compliance with HSRA for corrective action for any regulated substance releases at a site. This compliance does not preclude the requirement to comply with any stricter standards that may be applicable under other state or federal laws or regulations.

There are five RRS listed in the HSRA. Types 1 and 2 provide standards for regulated substance concentrations that pose no significant risk on the basis of standardized exposure

assumptions and defined risk levels (Type 1) and a site-specific risk assessment (Type 2) for residential properties. Type 3 RRS are based on standardized exposure assumptions using a carcinogenic risk level of 10^{-5} or non-carcinogenic hazard index of 1 for non-residential sites. Site-specific risk assessment criteria are used to develop Type 4 RRS for the non-residential use scenario (both carcinogenic and non-carcinogenic compounds are included). Type 5 RRS allow, in instances where Type 1-4 standards do not apply, the use of measures (i.e. engineering controls such as a fence, cap, slurry wall, etc.) to control the regulated substances or the property where the regulated substances are located.

The screening criteria used for the evaluation of soil and sediment at the PDO Yard are HSRA Type 3 standards. Type 3 RRS use non-site specific criteria to identify target soil concentrations for non-residential (industrial) sites. HSRA Type 3 standards consider carcinogenic and non-carcinogenic criteria and standard risk (exposure) assumptions for ingestion and inhalation. HSRA soil criteria are listed in **Table 2**.

Type 3 RRS have specific criteria for surface soil (within 2 feet of land surface) and soil in the unsaturated zone below the surficial soil. Contaminant concentrations at any point above the uppermost groundwater zone in soil affected by a release shall not exceed the higher of concentrations described in either item A or B below.

A.

- (I) Soil concentrations in Appendix I, Chapter 391-3-19;
- (II) Multiplication of the Type 1 groundwater concentration criteria by a factor of 100;
- (III) Demonstration through use of toxicity characteristic leaching procedure or other approved method by the Director that the concentration in soil will not generate leachate concentrations that exceed Type 1 groundwater criteria concentration.

or

B.

(I) Cannot exceed criteria listed in Table 2 of Appendix III, Chapter 391-3-19 (Type 1 soil criteria).

HSRA does not specify criteria for sediment in Type 3 RRS. Therefore, the criteria used to evaluate sediment quality at the PDO Yard will be the soil criteria (Type 3 RRS) listed in **Table 2.**

Criteria for Evaluation of Ground Water

HSRA also identifies risk reduction criteria for groundwater which are associated with one of five types of standards. Type 1 criteria for groundwater include, any point within groundwater affected by a release; concentrations of regulated substances in samples shall not exceed concentrations given in Table 1 of Appendix III of HSRA or, for those substances not listed, the background or detection limit concentration. Type 2 criteria include, the lesser of concentrations mathematically derived by Equations 1 and 2 set forth from Risk Assessment Guidance for Superfund (RAGS) Part B, or for those substances for which neither calculation can be made, the higher of concentrations in Table 1 of Appendix III of HSRA, background concentrations, or detection limit concentrations. Type 3 criteria for groundwater are the same as for Type 1. Type 4 criteria for groundwater are the same as for Type 2. Type 5 criteria for groundwater are measures expected to permanently assure that groundwater concentrations shall not exceed Type 1-4 criteria, where applicable. These groundwater criteria should be achieved throughout the entire contaminant plume except where the remedial measure provides for contaminated soil being left in place with concentrations in excess of applicable soil criteria under Types 1-4.

The PDO Yard falls under Type 3 standards which provide for regulated substance concentrations that pose no significant risk on the basis of standardized exposure assumptions and defined risk levels for the non-residential use scenario. HSRA criteria used for the evaluation of groundwater at the PDO Yard are listed in Table 3.

The State of Georgia has also promulgated instream water quality standards (IWQS) under Chapter 391-3-6-.03. These IWQS can be applied to all waters of the state. The chapter was enacted primarily to enforce the Georgia Water Quality Control Act with respect to wastewater treatment facilities. The water quality standards can also be applied as screening criteria for the general protection of surface water quality throughout Georgia. Screening criteria from Chapter 391-3-6 are also provided in Table 3.

The analytical methods employed under this investigation were based on the suspected source of contamination and matrix type. Analytical methods for soil, groundwater, surface water and sediment samples include volatile organic compounds (VOC) by Environmental Protection Agency (EPA) method 8260, semi-volatile organic compounds (SVOC) by EPA method 8270, TPH by EPA methods 8100M and 8015M (DRO and GRO, respectively), and priority pollutant metals by EPA methods 6000/7000. Gross alpha and beta radiation by EPA method 900.0/9310, were also analyzed in soil and sediment samples. The radiologic parameter samples were collected to assess any possible effect of past coal storage in the PDO Yard area on soil quality as mentioned in Section 1.2.1.

4.2 Background Samples

A background monitoring well (PDO-MW04) was installed to obtain a representative groundwater sample hydraulically upgradient of the PDO Yard. This background sample was used for data comparison to other samples to assess the potential degree of impact. Similarly, upgradient background soil samples were collected to establish background soil quality

conditions. Two soil samples (PDO-MWB0401 and PDO-MWB0402) were collected from the MW04 boring which represent background soil conditions.

Analytical results of the background groundwater sample collected from MW04 indicated that no COPCs were identified above the detection limits. Results of soil samples collected at MW04 identified only trace concentrations of metals; all well below the HSRA target soil concentration screening criteria.

Background surface water/sediment samples were collected from PDO-SW/SE01, an upgradient location in Lamar Canal. Analytical results of surface water and sediment samples indicate all organic and inorganic parameters were below HSRA target concentration limits with the exception of mercury. Mercury was identified in all sediment samples at concentrations which exceed the background soil concentration at MW04. The target soil concentration of 0.012 is applicable to surface soils (less than 2 feet bls). The HSRA target soil concentration for subsurface soil below 2 feet bls is 17 mg/kg. Concentrations of mercury in sediment samples are higher than the shallow soil standard but are significantly lower (two orders of magnitude) than the 17 mg/kg target soil concentration for depths greater than 2 feet bls. Direct exposure to sediments is unlikely because they are located below the surface water and would require wading for exposure to occur

4.3 Soil Quality

Twenty shallow soil samples were collected from 10 locations using hand augers. Hand augered soil samples can be identified by the "HA" incorporated into the sample ID (i.e., PDO-HA01). Stainless steel split spoons were used to collect soil samples from 4 monitoring well and 15 soil boring locations. Two soil samples were collected at each location at different depths. Soil samples collected at monitoring well locations include an "MW" and the sample ID (PDO-MW01). Soil samples from soil borings are identified using an "SB" in the sample identification (PDO-SB01). All soil samples were analyzed for VOCs, SVOCs, TPH-GRO,

TPH-DRO, priority pollutant metals, and gross alpha and beta radiation using methods described in Section 4.1. **Table 4** lists the contaminants of concern that were detected in soil samples. Analytical results for specific components that exceed the soil screening criteria are indicated by bold type and brackets on **Table 4**.

Several metals were detected in the surface and near-surface soil at the PDO Yard. Lead and mercury were the most common, ranging from 1.8 to 710 mg/kg and 0.012 to 1.4 mg/kg, respectively. Lead exceeded the HSRA (300 mg/kg) standard at 2 of 29 locations. **Figure 4** provides concentrations of lead identified in soil samples. The highest detection at each location is shown on the figure. Background levels for lead are 4.8 mg/kg for a depth of 2 feet and 3.5 mg/kg for a depth of 4 feet. Lead concentrations in sediment samples are also provided in

Figure 4.

Mercury surpassed the HSRA Standard of 0.012 mg/kg for shallow (<2 feet bls) soil in 24 of 29 locations. Mercury was detected at or above the shallow screening criteria at all 10 hand auger locations and 14 of 19 boring locations. Concentrations of mercury in soil samples are provided on **Figure 5** (again the highest detection at each location is shown). Mercury was not detected above the screening criteria at PDO-SB10, PDO-SB11, PDO-SB13, PDO-SB14. Background results from PDOMW04 indicate mercury concentrations of 0.012 mg/kg for 2 feet and 0.043 for a depth of 4 feet. No samples beyond a 2-foot depth exceeded the HSRA criterion.

Mercury was also detected in both sediment samples. PDO-SE01(0.079 mg/kg) was collected as a background sample and PDO-SE03 (0.13 mg/kg) was collected downgradient of the PDO Yard. Sediment sample results for mercury are also provided on **Figure 5**. Sediment sample analytical results for all compounds exceeding method detection limits are provided on **Table 5**.

No other inorganics exceeded HSRA criteria in soil samples. Similarly no VOCs or SVOCs exceeded HSRA soil criteria. No HSRA criteria exist for gross alpha and gross beta parameters. However, within the accuracy of the analytical method (namely when +/- is considered), the detections were fairly close to detection limits.

4.4 Groundwater Quality

Groundwater samples were collected by hydropunch methods and from permanent groundwater monitoring wells. **Table 6A** (hydropunch data) and **Table 6B** (monitoring well data) list the contaminants of concern that were identified by laboratory analysis of groundwater samples. Constituents at or above HSRA groundwater criteria included benzene, methylene chloride, tetrachloroethene, beryllium, chromium, and lead.

Volatile organic hydrocarbons were not detected in hydropunch samples with the exception of PDO-HP07 which contained 2.0 ug/L for benzene. Benzene was detected in the following monitoring well samples; PDO-GW01 (24 ug/L), PDO-GW02 (15 ug/L), PDO-GW23 (19 ug/L) and PDO-GW25 (48 ug/L). The HSRA groundwater screening criteria for benzene is 5.0 ug/L. **Figure 6** indicates the suspected source of benzene near the waste oil/JP4 bermed area. Tetrachloroethene was detected in groundwater samples from PDO-GW02 (13 ug/L), PDO-GW24 (15 ug/L), and PDO-GW03 (4.8 ug/L). Groundwater screening criteria for tetrachloroethene indicates two samples were above the HSRA groundwater criteria (5 ug/L). Tetrachloroethene concentrations presented in **Figure 7** seem to be localized between the railroad tracks and the storage bays outside the fenced area. Methylene chloride was detected in PDO-GW19 equipment rinsate sample and is believed to be a lab contaminant.

Metals were also present in the groundwater. Lead was detected above HSRA screening criteria of 15 ug/L in PDO-GW19 (99 ug/L), PDO-GW23 (16 & 19ug/L in duplicate), PDO-GW24 (46 ug/L) and PDO-GW25 (16 ug/L). A review of sampling records indicates that

these wells (all previously installed by the USAEHA) yielded slightly-turbid to turbid groundwater following the well purging activities. Turbidity in samples often leads to false-positive detection or elevated detected concentrations of metals when analyzing samples using an atomic adsorption analytical method (as was used in this investigation). Concentrations of lead in groundwater are illustrated on Figure 8. Beryllium was detected in PDO-GW24 (11 ug/L). The HSRA criteria for beryllium is 4 ug/L. Chromium was detected in PDO-GW24 (100 ug/L) equal to the HSRA criteria. No other metals were present at concentrations above the HSRA criteria.

4.5 Surface Water Quality

The State of Georgia DNR EPD has promulgated IWQS under Chapter 391-3-6. These standards are, in some cases, more stringent than the federal MCLs. The State IWQS are the criteria used to determine if contamination exists in the fresh waters of the State and may be applied as clean-up goals. State IWQS are listed in Table 7 for contaminants identified in surface water above their method detection limit.

Zinc was the only constituent found in the surface water samples above the Georgia EPD IWQS. PDO-SW02 indicated zinc was 130 ug/L, the screening criteria being 60 ug/L.

SECTION 5.0

CONTAMINANT FATE AND TRANSPORT

5.1 Potential Routes of Migration

The potential migration routes identified in the Work Plan conceptual site model included: air volatilization, overland surface flow, surface water flow, and groundwater flow. Factors affecting each potential route are discussed below.

Air volatilization potential is mainly a function of the physical properties of the chemical. A high vapor pressure chemical will volatilize faster than a low vapor pressure chemical and warmer weather increases volatilization. The amount of spilled chemical and elapsed time since the spill occurred also affect potential releases to air. There were no visible signs of stressed vegetation at the PDO Yard. However, visible contaminant staining was noted within the earthen bermed areas, especially around the JP-4 and waste oil tanks. There was no evidence of air volatilization in this area based on a lack of smell and no OVA readings. Volatile compounds identified in soil samples collected at depths ranging from 1-2 feet bls indicated ethylbenzene, toluene and m&p-xylene present in PDO-HA05, but concentrations were below HSRA criteria. Consequently, volatilization to air is not considered to be significant.

Overland surface flow at the site is primarily to the east into ditches along the railroad lines and roads and eventually into the Lamar Canal. Factors affecting overland flow are the amount of precipitation and rate of infiltration. Some local ponding was evident in the PDO Yard area, but it either evaporates or infiltrates into the soil rapidly. Topography around the PDO Yard suggests that surface runoff could eventually reach Lamar Canal. Surface soil analysis from hand auger samples indicates mercury and lead contamination above the HSRA criteria of 0.012 and 300 mg/kg, respectively. The background concentrations of 0.012 mg/kg mercury and 4.8 mg/kg lead were also exceeded at several locations in and around the earthen berm area. Since most surface contamination is within the earthen berm (PDO-HA05, PDO-

HA08, PDO-HA09, PDO-HA10) any heavy rainfall should be contained. Given that surface soil contamination was minimal, surface runoff is not considered to be significant.

Surface water contamination migration would typically not be considered for this SI because no contaminants were identified in three surface water samples at concentrations greater than HSRA criteria. However, groundwater contamination moving by advection toward Lamar Canal may adversely impact surface water quality. The adverse effects of groundwater contaminant discharge into Lamar Canal are dependent upon a number of variables. Chief among these variables are the concentration of groundwater in the discharge and the flow volume of water in Lamar Canal. Additional hydraulic factors that may affect surface water quality include the hydraulic gradient, groundwater flow velocity, canal leakage factors (base permeability), and seasonal variations in rainfall. The extent of both organic and inorganic contamination in the aquifer has been defined in proximity to the PDO Yard. This suggests that although groundwater advection has transported some contaminants downgradient of the source, they have not adversely affected surface water quality downgradient of the PDO Yard. At present, surface water contaminant migration is not considered significant because no contamination was identified in surface water samples.

Groundwater flow and contaminant migration within the groundwater is affected by many factors. Groundwater flow velocity is related to permeability and hydraulic conductivity. Porosity at the PDO Yard is determined to be intergranular in the soil. Historical data on permeability and hydraulic conductivity is discussed in Section 3.3. Chemical composition is also an important consideration in contaminant migration. Clayey soils generally have high ion-exchange capacities and electronegative forces which retard migration. In addition, finer-grained material has a higher tortuosity, leading to a greater dispersion factor. Contaminant migration in groundwater is the only route considered to potentially occur. Chemical analysis of groundwater samples suggest this is taking place.

Contaminants of concern in groundwater are benzene, tetrachloroethene, and lead. The presence of methylene chloride, 2-methylnaphthalene, and beryllium in groundwater samples is not considered significant for reasons mentioned in Chapter 4. Benzene appears to be migrating north towards Lamar Canal from the waste oil and JP4 berm area. PDO-GW25 shows the highest result (48 ug/L). Surface water samples did not detect benzene; indicating the plume has not reached the canal. Moreover, the concentration of benzene at PDO GW25 is below the IWQS of 71.28 ug/L. Lead also appears to be migrating towards the Lamar Canal but the source is outside the PDO Yard fence, near PDO-GW19 or further upgradient. PDO-GW19 shows the highest result (99 ug/L) for lead although its presence is suspect; possibly resulting from turbid groundwater samples. Lead was not detected in surface water samples. Tetrachloroethene does not seem to be migrating. It was locally detected in PDO-GW2, PDO-GW3, and PDO-GW24.

5.2 Physical and Chemical Properties

The fate and transport of metals and organic compounds are functions of both site characteristics and the physical and chemical interactions between the contaminants and the site media. The physical and chemical properties of the contaminants that influence these interactions include, but are not limited to, solubility in water, tendency to transform or degrade (usually described by an environmental half-life in a given medium), and chemical affinity for solids or organic matter (usually described as partitioning coefficient " K_d ," , organic carbon partitioning coefficient " K_{oc} ," , or octanol/water partitioning coefficient " K_{ow} "). These properties and how they affect the behavior of detected analytes at the PDO yard are described below.

5.2.1 Metals

Inorganic analytes detected at the PDO yard, when associated with the aqueous phase in a soil, are subject to movement with soil water. Aqueous transport mechanisms may result in metal migration through the vadose zone to groundwater. Metals, unlike organic compounds, cannot

be degraded. However, some metals, such as arsenic and chromium which are present at the PDO yard but below the HSRA criteria, can be transformed to other oxidation states in soil, reducing their mobility and toxicity. Metals may also react with soil particles or other solid surfaces by ion exchange, adsorption, precipitation, or complexation. Such reactions are affected by pH, oxidation-reduction conditions, and the type and amount of organic matter, clay, and hydrous oxides present. In general, these reactions cause an element's mobility to be retarded. The retardation factor is largely derived from the partitioning coefficient (K_d) but is affected by the soil bulk density and soil moisture content. The dissolved/aqueous fraction and its equilibrium fraction are of primary importance when considering the migration potential of metals associated with soils. The filterable inorganics represent the dissolved fraction, which is the more mobile and bioavailable fraction. Soluble compounds are transported in aqueous forms that are subject to retardation. Insoluble compounds remain as precipitates and limit the overall dissolution of a metal.

Table 8 shows the K_d value in sandy soil and loam for inorganics detected at the PDO Yard above the method detection limit. The table also indicates whether their concentrations were above or equal to the HSRA criteria.

5.2.2 Organic Compounds

The organic constituents detected at the PDO Yard include VOCs and SVOCs. Volatile organics are nonmethane organic compounds characterized by high vapor pressures and Henry's Law constants, moderate to low K_{ow} and low K_{oc} . As a result, these chemicals tend to be very mobile in the environment. These contaminants may be degraded in the environment by various processes including hydrolysis, oxidation/reduction, photolysis, or biodegradation. Environmental half-lives of organic compounds in various media can vary from minutes to years, depending on the chemical and on environmental conditions. Degradation usually reduces the toxicity but may not eliminate the threat to human health and the environment completely.

The mobility of an organic compound is affected by its volatility, its partitioning behavior between solids and water, water solubility, and concentration. Water solubility and the tendency to adsorb to particles or organic matter can correlate with retardation in groundwater transport. The organic carbon partition coefficient (K_{oc}) indicates the tendency of an organic chemical to be adsorbed to organic material in soil. A low K_{oc} value indicates that a chemical can easily be leached from soil to water. A high K_{oc} value indicates that a chemical has a strong affinity to bind to organic material in soil.

The octanol/water partition coefficient (K_{ow}) represents the distribution of a chemical between octanol and water phases under equilibrium conditions. These values are normally reported in logarithmic form and represent the tendency of a chemical to move between organic material, such as soil, and non-organic phases such as water. Values less than 1.0 tend to remain dissolved in water rather than adsorb onto organic material. Values greater than 4.0 are more likely to remain adsorbed to organic material rather than migrate to water.

Vapor pressure and Henry's Law constant are two measures of chemical volatility. Vapor pressure is a measure of the volatility of a chemical from its pure state at a specific temperature. A higher vapor pressure, $> 1\text{ mm Hg}$, indicates a greater tendency for movement of a chemical from water or soil into air. Henry's Law constant considers the interaction between water solubility and vapor pressure and is an important predictor of a chemical's volatilization from water to air. A large Henry's Law constant, $> 1 \times 10^{-3} \text{ atm-m}^3/\text{mole}$, indicates a tendency for a chemical to readily move from water into air.

Chemicals with relatively high water solubilities and low adsorption coefficients (e.g., acetone, methyl ethyl ketone, methylene chloride, etc) are expected to remain primarily as dissolved phases and be transported at the same rate as the groundwater flow. Chemicals with lower water solubilities and higher adsorption coefficients (e.g., polynuclear aromatic

hydrocarbons--PAHs) are expected to remain primarily adsorbed to the surface of the soils and their transportation with the groundwater would be very limited and at a much slower rate.

In groundwater, biodegradation or decay of organic compounds is controlled by a variety of factors including: the chemical structure of the compound and its susceptibility to biological breakdown, the presence and population size of microorganisms capable of metabolizing the chemical, nutrient availability (e.g., oxygen, water, mineral ions) and the presence or absence of inhibitory substances. The decay or break down rates are described by the substance's half-life. Contaminants with long half-lives have a greater potential for contaminating groundwater than do those with shorter half-lives.

At the PDO yard, benzene and tetrachloroethene were the only organic compounds contaminants found to be above the HSRA screening criteria. Benzene, an aromatic volatile, possess similar physical and chemical properties which influences its fate and transport. A high K_{ow} and moderate K_{oc} causes benzene to readsorb to the soil surface. Degradation of benzene by hydrolysis is minimal in the subsurface. Benzene is less dense than water and when it comes in contact with groundwater will tend to float on top of the water column. Tetrachloroethene, a chlorinated aliphatic, has a tendency to leach rapidly to groundwater rather than to adsorb to soil particles because of a low K_{oc} and high water solubilities. Once in groundwater tetrachloroethene is very mobile because of its low K_{oc} and K_{ow} . A major mechanism for removal of these chemicals from groundwater is volatilization, as indicated by high Henry's Law constants. Being denser than water, tetrachloroethene may migrate vertically through a saturated medium as a separate phase. Table 9 shows these physical and chemical properties of benzene, tetrachloroethene, and methylene chloride (a suspected laboratory contaminant as mentioned in Section 4.4); compounds found in the groundwater above HSRA screening criteria.

5.3 Qualified Health Risk for Potential Receptors

To qualify the risks to human health due to the contamination at the PDO Yard, receptors must be selected based on current land use and potential future scenarios. Following the selection of individual receptors, health hazards are estimated for each pathway/receptor combinations.

There are three possible mechanisms by which contaminants in groundwater may be released to potential receptors. Contaminated groundwater may eventually discharge to surface water; potential users of groundwater wells may draw in contaminants from a migrating plume; and site workers may become exposed to contaminated groundwater in excavations. The most likely scenario is the latter. Surface and groundwater in the immediate vicinity of the PDO yard are not used for human consumption. Therefore, groundwater and surface waters are an incomplete pathway.

Sixteen water supply wells were identified within a 3-mile radius of the PDO Yard (USAEHA, 1994. Waste Disposal Engineering Study No. 38-26-K2KZ-94). Five of these wells provide water for the City of Savannah and nine other wells supply water to Hunter Army Airfield. One well was for emergency use, and another well was used for vehicle wash; neither of these wells are currently in use. The total depths of the in-use wells identified range from 300 to 1000 feet and most are completed in the Floridan Aquifer. The solid casing on the wells extend to a minimum depth of 90 feet bls. Two confining units exist between the shallow aquifer and deeper aquifers (Upper Floridan) thereby limiting the vertical migration of contaminants toward the wells' production zone. The most shallow unit is Miocene unit A, encountered approximately 60 feet bls in the Savannah, Georgia area having a vertical hydraulic conductivity of approximately 3.7×10^{-4} feet/day. This unit is approximately 20 feet thick near Savannah. Miocene unit B, located directly below unit A, ranges in vertical hydraulic conductivity from 6.7×10^{-5} to 1.3×10^{-2} feet/day and is approximately 30 feet

thick near Savannah (Clarke, et al, 1990). Human consumption of groundwater in contact with the shallow aquifer near the study area is unlikely and is not considered a completed exposure pathway.

Site workers may come in contact with contaminants during excavation and construction activities. Excavations which continue into the groundwater or operations where groundwater is withdrawn (i.e., dewatering projects) are the most likely methods of exposure to site workers. Contact with soil and surface water runoff is not considered to be significant. This is a restricted area and is fenced with little access for humans. Surface staining is limited to areas within the locked fence boundary. On a daily basis no more than two vehicles are stored inside the fenced area near the gate. Contact with surface soils near PDO-HA02, PDO-HA04, PDO-HA05, PDO-HA08, PDO-HA09 and PDO-HA10 may result in exposure to lead at concentrations which exceed HSRA criteria. However, access within the bermed areas should be limited. Surface exposure to stained soils may occur within the berm and therefore is considered a completed exposure pathway.

SECTION 6.0

SUMMARY AND CONCLUSIONS

The soil and groundwater sampling activities conducted at the PDO Yard and background locations provided data on the types and extent of constituents present at these locations. These data were used to evaluate the human health risks associated with any residual contamination remaining at the waste unit.

6.1 Summary of Source

The materials present in the PDO Yard were considered primary sources. Based on a site inspection trip by the Georgia Department of Natural Resources on April 21, 1993, several areas within the fenced PDO Yard generated concern and a consent order which initiated two assessments from the U.S. Army Environmental Hygiene Agency and this site investigation. The amount of spilled contaminant is not well documented. However, the DNR trip report dated May 18, 1993 documented that containers of freon, liquid petroleum gas, industrial debris, and waste solvent existed within the PDO yard. Containers of antifreeze, paint, acetone, electrolyte (KOH), PCB waste, JP pads and filters were present in the 90 day storage area (DRMO). Six transformers were also being stored in the DRMO area.

Areas within the PDO yard that were used within the temporary storage of chemicals/hazardous waste were well defined in the project record. Although there was no physical evidence of source material present during M&E's investigation, constituent levels are elevated around the bermed areas (in soils) and outside the fenced area (monitoring wells) toward Lamar Canal. Mercury and lead concentrations are above the HSRA criteria for surface and near-surface soils around the bermed area where waste oil and JP4 fuel was stored. Benzene and tetrachloroethylene concentrations in groundwater are above the HSRA criteria as well. A likely source of benzene is the bermed area. Tetrachloroethene is confined to a cluster of wells outside the fenced area near the railroad tracks. Lead was also found to be above the HSRA criteria for groundwater but appears to have a source outside the PDO Yard.

However, turbidity in groundwater samples may have some effect on the concentration of lead detected by laboratory analysis.

6.2 Summary of Exposure Pathways

Surface soils and groundwater are the focus of the exposure pathway investigation. Although surface soils were contaminated within the bermed area, limited access within the berm will reduce the health risk to a minimum. Concentrations below 5 feet are not known, but possible exposure to these soils is limited. Currently there is no completed pathway for exposure to groundwater. Construction activities previously mentioned may cause site worker exposure if performed without adequate protection. Groundwater contaminant migration through advection toward Lamar Canal is unlikely to occur at such a rate that surface water quality will be adversely affected.

The water table aquifer was the only exposure unit sampled. The likelihood of benzene migrating vertically is less than tetrachloroethene. Tetrachloroethene in pure liquid phase tends to travel downward more than horizontally because of its density. However, concentrations of tetrachloroethene in groundwater at the PDO Yard are more indicative of a trace level release than a release of pure product. Lead appears to have originated upgradient from the PDO Yard. PDO-GW19, located upgradient and outside the fence, had a value of 99 ug/L. Lead was also identified downgradient to a lesser extent.

6.3 Summary of Fate and Transport Pathways

Analytical data confirm that metals are present in the soil and VOCs and metals in the groundwater at concentrations above screening criteria. Fate and transport analyses indicate that tetrachloroethene may have been leached from the contaminated soils into the groundwater.

Adsorption of tetrachloroethene on to sediments does not readily occur. Benzene has a strong tendency to leach into groundwater because of high water solubilities. Adsorption to soils is dependent on the amount of organic matter present in the soils. Benzene is relatively resistant to degradation by hydrolysis. Migration of lead in groundwater is limited due to a high retardation factor and is therefore not very mobile.

Inorganics are relatively insoluble. Mercury is not very soluble, but it can volatilize from water to air. Cation exchange of metals by soils and sediments is the dominant fate mechanism in natural systems.

6.4 Conclusions

This investigation has provided an expanded understanding of the nature and extent of contamination and the potential impacts to groundwater and human health. PDO Yard soil and groundwater sample results indicate elevated levels of contamination in soil and groundwater exist with respect to HSRA criteria. The complete horizontal and vertical extent of benzene and tetrachloroethene in groundwater has not been completely defined. However, the maximum concentration of both benzene and tetrachloroethene identified in groundwater samples was within one order of magnitude of their respective MCL's of 5 ug/L. Additional characterization associated with the tetrachloroethene/benzene plume may be necessary to verify the extent of contamination. Lead contamination in groundwater (if it is not a result of analytical interferences associated with turbid samples) is apparently coming from a source or sources upgradient. Additional characterization may be needed to delineate its source and boundaries.

The source of shallow contamination in soil is apparently confined to the AST berm area. Treatment of this soil in place to RRS Type 3 would be infeasible because of the ASTs located within the berm area. These soils may also be sources for groundwater contamination observed in several monitoring wells located hydraulically downgradient of the bermed area.

The existence of the berm and ASTs make it impossible to determine the vertical extent of soil contamination. However, soil contamination would only likely extend to the water table (approximately 6.5 feet bls) if this was the source area for both benzene and tetrachloroethene contamination in groundwater. **Figures 6 and 7** indicate the berm area is the probable source of the benzene in groundwater and less likely the source of the tetrachloroethene contamination.

Elevated concentrations of inorganic elements, namely mercury and lead, were identified at concentrations above HSRA standards. Mercury is somewhat ubiquitous at the PDO Yard in lower concentrations but it appears to be concentrated, as is lead in soil, near the AST berm area; particularly near HA10. The concentrations at HA10 are several orders of magnitude higher than site-wide averages. However, mercury is only significantly elevated at HA10 as compared to elevated concentrations of lead in several AST berm area samples. This suggests that mercury concentrations above HSRA standards may be a natural (or at least a regional) phenomena whereas lead levels are more likely attributable to past storage/disposal practices. The elevated concentrations of both mercury and lead at HA10 appear to be associated with liquid storage in the AST berm area.

Elements of compliance with Type 5 RRS already exist at the PDO Yard. The AST berm area is located within a fenced, locked gate, restricted area. Direct contact with contaminated material is limited by access restrictions.

6.5 RECOMMENDATIONS

M&E recommends the installation and sampling of one shallow and one deep well down-gradient of MW1-25 and MW02, respectively. **Figure 9** provides an illustration of proposed well locations. The shallow well, installed between MW1-25 and Lamar Canal, will be used to define the horizontal extent of benzene in groundwater. The new shallow well construction will be similar to the four shallow wells installed during this investigation. A deep well is

recommended directly north of MW02 to assess the vertical extent of tetrachloroethene contamination. Locating the new deep well adjacent to the proposed shallow well results in a well nest capable of determining if contamination in shallow or intermediate portions of the aquifer is reaching Lamar Canal.

Compliance with Type 5 RRS allows such measures as removal and fencing to eliminate or restrict access to potentially contaminated areas. The Ft. Stewart/HAAF installation has already designed a project to construct a concrete containment facility capable of holding the three ASTs currently located in the PDO Yard. This facility will be constructed on the north side of the PDO yard (i.e., current location of storage bays) and is scheduled for construction in September 1997. Upon completion of the facility, the ASTS will be cleaned, painted, and moved to the north side of the PDO yard. Once the ASTS have been removed from their current location, HAAF Department of Public Works will remove the existing berms to a depth of 3 feet bls. Confirmation samples will be collected during the excavation/interim removal action and analyzed for VOCs, SVOCs, and RCRA Metals. The results will then be compared to Type 3 RRS to determine whether or not compliance has been achieved. Upon completion of all excavation work, clean fill material shall be hauled to the site, placed in the excavated area, and compacted to a minimum of 90%.

In addition to performing the soil interim removal action and installing two new wells, the installation proposes to initiate a long-term monitoring plan to document site conditions. If approved, the monitoring plan would be submitted to the Georgia EPD and would require the Installation to begin monitoring by December 1997. The Installation would have each groundwater sample collected with a low flow peristaltic pump (to prevent sample agitation and associated erroneously elevated metal levels) and would have the samples analyzed for VOCs, SVOCs, and RCRA Metals. In addition, 10% of the samples would be analyzed for filtered metals to give a better indication of naturally occurring metal concentrations. Sample analytical results would be submitted to the Georgia EPD for review. This monitoring plan would be programmed for a minimum of 2 years, and based on the results of eight quarterly sampling events, the Installation would work with the EPD to either continue monitoring on an agreed upon frequency or consider other appropriate further action.

As the Installation has no future plans for this site other than use as a 90 day storage facility, the Installation will place a restrictive covenant on development of the PDO Yard in accordance with Rule 391-3-19.08 (7).

TABLE 1
NEAR-SURFACE SOIL PROFILE (CHIPLEY-URBAN LAND COMPLEX)

Depth (in.)	Soil Description	Percentage Passing Sieve Number			Permeability (in/hr)
		#4 % Passing	#40 % Passing	#200 % Passing	
0-65	Fine sand	100	95-100	5-15	6.3-10.0

Source - USDA, 1974.

TABLE 2

**SCREENING CRITERIA FOR THE EVALUATION OF
SOIL AND SEDIMENT AT THE PDO YARD**

SOIL CONTAMINANT UNITS	HSRA TYPE 3 STANDARD (1) (mg/kg)
INORGANICS	
ARSENIC	41
CADMIUM	39
CHROMIUM	1200
COPPER	1500
LEAD	300
MERCURY	0.012/17 (a)
SILVER	10
ZINC	2800
VOLATILE ORGANICS	
ACETONE	400
ETHYLBENZENE	70
METHYLENE CHLORIDE	0.5
TETRACHLOROETHYLENE	0.5
TOLUENE	100
TOTAL XYLENES	1000
SEMIVOLATILE ORGANICS	
BENZO(a)ANTHRACENE	5
BENZO(a)PYRENE	1.64
BENZO(b)FLUORANTHENE	5
BENZO(g,h,i)PERYLENE	500
BENZO(k)FLUORANTHENE	5
CHRYSENE	5
FLUORANTHENE	500
INDENO(1,2,3-c,d)PYRENE	5
2-METHYLNAPHTHALENE	-
NAPHTHALENE	100
PHENANTHRENE	100
PYRENE	500

(-) - No level is listed

(1) - Hazardous Site Response Act, GA DNR, EPD, Chapter 391-3-19, Guidance on Target Soil Risk Reduction Standards, March 9, 1995, Figure 2.

(a) - HSRA Standard for soil less than 2 ft. BLS is 0.012 mg/kg, HSRA Standard for soil greater than 2 ft. BLS is 17 mg/kg.

TABLE 3**CRITERIA FOR EVALUATION OF CONTAMINANTS
IN GROUNDWATER AND SURFACE WATER
AT THE PDO YARD**

CONTAMINANT	HSRA GW CRITERIA (1)	GA EPD IWQS (2)
UNITS	ug/L	ug/L
INORGANICS		
ARSENIC	50	0.14
BERYLLIUM	4	-
CHROMIUM (Total)	100	120 (a)
COPPER	1,300	12 (a)
LEAD	15	1.3 (a)
NICKEL	100	88 (a)
ZINC	2,000	60 (a)
VOLATILE ORGANICS		
ACETONE	4,000	-
BENZENE	5	71.28
2-BUTANONE (MEK)	2000	4.42
CARBON DISULFIDE	4000	98.6
ETHYL BENZENE	700	28,718
METHYL ISOBUTYL KETONE (MIB)	200	41.99
METHYLENE CHLORIDE	5	-
TETRACHLOROETHYLENE	5	8.85
TOLUENE	1,000	200,000
TOTAL XYLENES	10,000	-
SEMIVOLATILE ORGANICS		
NAPHTHALENE	20	-
2-METHYL NAPHTHALENE	-	-

(1) HSRA GW CRITERIA - Georgia Hazardous Site Response Act, 391-3-19, Groundwater Criteria for State Waters, Standard Type III Exposure Assumptions, Appendix III, Table 1.

(2) GA EPD IWQS - Georgia DNR, EPD, Water Quality Control, Instream Water Quality Standards, ch 391-3-6-.03 sec 5(d)(ii)&(iii) 5/29/94

(a) - based on hardness (CaCO₃) of < 100 mg/L in freshwater

(-) Not Listed

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:	PDO-HA01					
SAMPLE ID:	HSRA ¹	PDO-HA0101	PDO-HA0102	PDO-HA02	PDO-HA02	PDO-HA03
DATE:	8/29/96	8/29/96	8/29/96	8/29/96	8/29/96	8/29/96
DEPTH (ft):	1	5	1	4	1	5
CONCENTRATIONS (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CONSTITUENT:						
Acetone	< 0.058	< 0.06	< 0.052	< 0.06	< 0.056	< 0.058
Ethyl benzene	< 0.0058	< 0.006	< 0.0052	< 0.006	< 0.0056	< 0.0058
Methylene chloride	< 0.0058	< 0.006	< 0.0052	< 0.006	< 0.0056	< 0.0058
Tetrachloroethene	< 0.0058	< 0.006	< 0.0052	< 0.006	< 0.0056	< 0.0058
Toluene	< 0.0058	< 0.006	< 0.0052	< 0.006	< 0.0056	< 0.0058
m&p-Xylene	< 0.0058	< 0.006	< 0.0052	< 0.006	< 0.0056	< 0.0058
Benzol(a)anthracene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Benzol(a)pyrene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Benzol(g,h,i)perylene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Benzol(k)fluoranthene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Bis(2-ethylhexyl)phthalate	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Benzol(b)fluoranthene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Chrysene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Fluoranthene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Indeno(1,2,3-cd)pyrene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
2-Methylnaphthalene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
m&p-Cresol	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Naphthalene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Phenanthrene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
Pyrene	< 0.38	< 0.4	< 0.34	< 0.39	< 0.36	< 0.38
GRO	< 0.21	< 0.21	< 0.18	< 0.21	< 0.2	< 0.2
DRO	16	< 12	16	< 16	< 28	< 12
Gross Alpha	< 14	< 14	< 12	< 14	< 13	< 14
Gross Beta	< 12	< 22+/-8.2	< 1.1	< 1.1	< 12	< 12
Arsenic	1.3	< 1.2	1.1	< 1.1	8.1	< 1.1
Cadmium	< 0.58	< 0.6	< 0.52	< 0.6	< 0.56	< 0.58
Chromium	3.8	7.8	6.9	< 1.1	3.1	3.2
Copper	4.3	< 3	9.1	< 3	8.5	< 3
Lead	27	8.6	110	4.1	24	4.5
Mercury	0.012/17 ²	0.075	[0.044]	0.035	[0.024]	0.018
Nickel	< 4.8	< 4.8	< 4.2	< 4.8	< 4.4	< 4.6
Silver	< 1.1	< 1.2	< 1	< 1.1	< 1.1	< 1.1
Zinc	12	< 2.4	24	< 2.3	16	< 2.3

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.

[] - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		PDO-HA04									
SAMPLE ID:	HSRA ¹	PDO-HA0401									
DATE:	TARGET SOIL	PDO-HA0402									
DEPTH (ft):	CONCENTRATIONS	9/16/96									
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CONSTITUENT:											
Acetone	400	< 0.056	< 0.057	J	< 0.064	< 0.06	< 30	< 0.056			
Ethyl benzene	70	< 0.0056	< 0.0058	J	0.018	1.3	3.5	< 0.0056			
Methylene chloride	0.5	< 0.0056	< 0.0058	J	< 0.0064	< 0.006	J	< 0.0056	J		
Tetrachloroethene	0.5	< 0.0056	< 0.0058	J	< 0.0064	0.043	< 3	< 0.0056			
Toluene	100	< 0.0056	< 0.0058	J	0.043	3.4	< 3	< 0.0056			
m&p-Xylene	1000	< 0.0056	< 0.0058	J	0.077	5.4	20	< 0.0056	J		
Benzol(a)anthracene	5	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	< 0.0056			
Benzol(a)pyrene	1.64	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	0.53			
Benzol(g,h,i)perylene	500	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	0.59			
Benzol(k)fluoranthene	5	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	< 0.38			
Bis(2-ethylhexyl)phthalate	50	< 0.36	< 0.38		< 0.93	< 3.9	< 7.8	< 0.38			
Benzol(b)fluoranthene	5	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	< 0.38			
Chrysene	5	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	< 0.38			
Fluoranthene	500	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	0.78			
Indeno(1,2,3-cd)pyrene	5	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	0.61			
2-Methylnaphthalene	-	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	1			
m&p-Cresol	3.8	< 0.36	< 0.38		3.2	22	23	0.38	J		
Naphthalene	100	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	< 0.38	J		
Phenanthrene	100	< 0.36	< 0.38		1.1	10	11	< 0.38	J		
Pyrene	500	< 0.36	< 0.38		< 0.84	< 3.9	< 7.8	0.59	J		
GRO	-	< 0.2	< 0.2	J	< 0.84	< 3.9	< 7.8	0.93	J		
DRO	-	26	< 11		70	6900	4800	< 0.2			
Gross Alpha	-	< 13	< 14		1200	4600	4700	< 92	J		
Gross Beta	-	< 12	< 12		15	< 14	< 14	< 14			
Arsenic	41	1.3	< 1.1		1.4	< 13	< 13	< 12			
Cadmium	39	< 0.56	< 0.58		1.3	< 1.1	< 1.1	< 3.1			
Chromium	1200	4.4	1.6		< 0.64	< 0.6	< 0.6	< 0.56			
Copper	1500	8.4	< 2.8		11	8.8	4.7	5.8			
Lead	300	120	17		4.9	< 3	< 3	6.3			
Mercury	0.012/17 ²	[0.062]	[0.027]		51	84	200	45			
Nickel	420	< 4.4	< 4.6		< 0.012	[0.015]	[0.013]	[0.027]			
Silver	10	< 1.1	< 1.1		< 5.1	< 4.8	< 4.8	< 4.6			
Zinc	2800	20	< 2.2		< 1.2	< 1.1	< 1.1	< 1.1			
					36	30	28	23			

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.

[] - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:	HSRA ¹	PDO-HA06	PDO-HA07	PDO-HA07	PDO-HA08	PDO-HA08	PDO-HA08
SAMPLE ID:	TARGET SOIL	PDO-HA0602	PDO-HA0701	PDO-HA0702	PDO-HA0801	PDO-HA0802	PDO-HA0802
DATE:	CONCENTRATIONS	9/16/96	9/16/96	9/16/96	9/16/96	9/16/96	9/16/96
DEPTH (ft):	(mg/kg)	5	1	5	1	5	5
CONSTITUENT:		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acetone	400	< 0.06	< 0.056	< 0.06	< 0.058	< 0.058	< 0.058
Ethyl benzene	70	< 0.006	< 0.0056	< 0.006	< 0.0058	< 0.0058	< 0.0058
Methylene chloride	0.5	< 0.006	< 0.0056	< 0.006	< 0.0058	< 0.0058	< 0.0058
Tetrachloroethene	0.5	< 0.006	< 0.0056	< 0.006	< 0.0058	< 0.0058	< 0.0058
Toluene	100	< 0.006	< 0.0056	< 0.006	< 0.0058	< 0.0058	< 0.0058
m&p-Xylene	1000	< 0.006	< 0.0056	< 0.006	< 0.0058	< 0.0058	< 0.0058
Benzol(a)anthracene	5	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Benzol(a)pyrene	1.64	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Benzol(g,h,i)perylene	500	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Benzol(k)fluoranthene	5	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Bis(2-ethylhexyl)phthalate	50	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Benzol(b)fluoranthene	5	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Chrysene	5	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Fluoranthene	500	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Indene(1,2,3-cd)pyrene	5	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
2-Methylnaphthalene	-	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
m&p-Cresol	3.8	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Naphthalene	100	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Phenanthrene	100	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
Pyrene	500	< 0.4	< 0.38	< 0.39	< 0.38	< 0.38	< 0.38
GRO	-	< 0.21	< 0.2	< 0.21	< 0.2	< 0.21	< 0.21
DRO	-	< 12	23	< 12	< 12	< 12	< 12
Gross Alpha	-	< 14	< 14	< 14	< 14	< 14	< 14
Gross Beta	-	19 +/- 7.5	< 12	16 +/- 7.9	< 12	21 +/- 8.0	< 12
Arsenic	41	< 1.2	1.8	< 1.1	2.3	< 1.1	< 1.1
Cadmium	39	< 0.6	< 0.56	< 0.6	< 0.58	< 0.58	< 0.58
Chromium	1200	6.4	4.6	5.2	3.4	6.5	6.5
Copper	1500	< 3	5.6	3	4.8	< 3	< 3
Lead	300	6.3	29	6.4	230	< 29	< 29
Mercury	0.012/17 ²	0.018	[0.026]	0.023	[0.039]	0.027	0.027
Nickel	420	< 4.8	< 4.6	< 4.8	< 4.6	< 4.8	< 4.8
Silver	10	< 1.2	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Zinc	2800	< 2.4	20	< 2.3	6.8	< 2.3	< 2.3

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		PDO-HA09					PDO-HA10		PDO-HA1002		PDO-HA10	
SAMPLE ID:	HSRA ¹	PDO-HA0901					PDO-HA1001		PDO-HA1002		PDO-HA10	
DATE:	TARGET SOIL	9/16/96					9/16/96		9/16/96		9/16/96	
DEPTH (ft):	CONCENTRATIONS	1					1		3		3	
	(mg/kg)	(mg/kg)					(mg/kg)		(mg/kg)		(mg/kg)	
CONSTITUENT:												
Acetone	400	< 0.056	< 0.058	< 0.058	< 0.058	< 0.058	< 0.06	< 0.062	< 0.062	< 0.06	< 0.06	< 0.06
Ethyl benzene	70	< 0.0056	< 0.0058	< 0.0058	< 0.0058	< 0.0058	< 0.006	< 0.0061	< 0.0061	< 0.006	< 0.006	< 0.006
Methylene chloride	0.5	< 0.0056	< 0.0058	< 0.0058	< 0.0058	< 0.0058	< 0.006	< 0.0061	< 0.0061	< 0.006	< 0.006	< 0.006
Tetrachloroethene	0.5	< 0.0056	< 0.0058	< 0.0058	< 0.0058	< 0.0058	< 0.006	< 0.0061	< 0.0061	< 0.006	< 0.006	< 0.006
Toluene	100	< 0.0056	< 0.0058	< 0.0058	< 0.0058	< 0.0058	< 0.006	< 0.0061	< 0.0061	< 0.006	< 0.006	< 0.006
m,p-Xylene	1000	< 0.0056	< 0.0058	< 0.0058	< 0.0058	< 0.0058	< 0.006	< 0.0061	< 0.0061	< 0.006	< 0.006	< 0.006
Benzolanthracene	5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Benzol(a)pyrene	1.64	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Benzol(g,h,i)perylene	500	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Benzol(k)fluoranthene	5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Bis(2-ethylhexyl)phthalate	50	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	1.1	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Benzol(b)fluoranthene	5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Chrysene	5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Fluoranthene	500	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Indeno(1,2,3-cd)pyrene	5	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
2-Methylnaphthalene	-	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
m&p-Cresol	3.8	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Naphthalene	100	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Phenanthrene	100	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
Pyrene	500	< 0.38	< 0.38	< 0.38	< 0.38	< 0.38	< 0.39	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
GRO	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.21	< 0.22	< 0.22	< 0.21	< 0.21	< 0.21
DRO	-	20	< 12	< 12	< 12	< 12	25	< 12	< 12	< 12	< 12	< 12
Gross Alpha	-	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14
Gross Beta	-	< 12	< 12	< 12	< 12	< 12	< 13	< 14	< 14	< 14	< 14	< 14
Arsenic	41	1.8	1.5	1.5	1.5	1.5	7	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Cadmium	39	< 0.56	< 0.58	< 0.58	< 0.58	< 0.58	8.5	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Chromium	1200	1.9	4.1	4.1	4.1	4.1	39	1.9	1.9	1.9	1.9	1.9
Copper	1500	< 2.8	< 3	< 3	< 3	< 3	120	< 3	< 3	< 3	< 3	< 3
Lead	300	[310]	140	140	140	140	[710]	9.4	9.4	9.4	9.4	9.4
Mercury	0.012/17 ²	[0.042]	0.03	0.03	0.03	0.03	[1.4]	0.068	0.068	0.068	0.068	0.068
Nickel	420	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	19	< 5	< 5	< 5	< 5	< 5
Silver	10	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Zinc	2800	12	< 2.3	< 2.3	< 2.3	< 2.3	830	11	11	11	11	11

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		HSRA ¹		PDO-MW01		PDO-MW01		PDO-MW02		PDO-MW02		PDO-MW02	
SAMPLE ID:	TARGET SOIL	PDO-MW0101		PDO-MW0102		PDO-MW0201		PDO-MW0202		PDO-MW0205			
DATE:	CONCENTRATIONS	8/26/96		8/26/96		8/26/96		8/26/96		8/26/96			
DEPTH (ft):	(mg/kg)	2		4		4		6		6			
		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)			
CONSTITUENT:													
Acetone	400	< 0.054		< 0.057		0.084		< 0.058		0.11			
Ethyl benzene	70	< 0.0054		< 0.0058		< 0.006		< 0.0058		< 0.0058			
Methylene chloride	0.5	< 0.0054		< 0.0058		< 0.006		< 0.0058		0.036			
Tetrachloroethene	0.5	< 0.0054		< 0.0058		< 0.006		< 0.0058		< 0.0058			
Toluene	100	< 0.0054		< 0.0058		< 0.006		< 0.0058		< 0.0058			
m&p-Xylene	1000	< 0.0054		< 0.0058		< 0.006		< 0.0058		< 0.0058			
Benzolanthracene	5	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Benzolaperylene	1.64	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Benzol(g,h,i)perylene	500	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Benzol(k)fluoranthene	5	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Bis(2-ethylhexyl)phthalate	50	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Benzol(b)fluoranthene	5	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Chrysene	5	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Fluoranthene	500	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Indeno(1,2,3-cd)pyrene	5	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
2-Methylnaphthalene	-	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
m&p-Cresol	3.8	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Naphthalene	100	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Phenanthrene	100	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
Pyrene	500	< 0.36		< 0.38		< 0.4		< 0.38		< 0.38			
GRO	-	< 0.2		< 0.2		< 0.21		< 0.2		< 0.2			
DRO	-	18		12		20		29		23			
Gross Alpha	-	< 13		< 14		< 14		< 14		< 14			
Gross Beta	-	< 12		< 12		< 13		< 12		< 12			
Arsenic	41	28		1.6		< 1.2		< 1.1		< 1.1			
Cadmium	39	< 0.54		< 0.58		< 0.6		< 0.58		< 0.58			
Chromium	1200	2.5		4.6		2		2		1.6			
Copper	1500	3.6		< 2.8		3		< 3		< 3			
Lead	300	13		5.8		6.1		4.4		5			
Mercury	0.012/17 ²	[0.041]		0.018		0.026		0.021		0.015			
Nickel	420	< 4.3		< 4.6		< 4.8		< 4.6		< 4.6			
Silver	10	< 1		< 1.1		< 1.2		< 1.1		< 1.1			
Zinc	2800	3.8		< 2.2		3.8		2.5		< 2.3			

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- POC YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		PDO-MW03				PDO-MW04		PDO-MW04	
SAMPLE ID:	HSRA ¹	PDO-MW0301		PDO-MW0302		PDO-MW0401		PDO-MW0402	
DATE:	TARGET SOIL	8/26/96		8/26/96		8/27/96		8/27/96	
DEPTH (ft):	CONCENTRATIONS	2		4		2		4	
	(mg/kg)	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
CONSTITUENT:									
Acetone	400	< 0.054		0.074		< 0.052		< 0.06	
Ethyl benzene	70	< 0.0053		< 0.0058		< 0.0052		< 0.006	
Methylene chloride	0.5	< 0.0053		< 0.0058		< 0.0052		< 0.006	
Tetrachloroethene	0.5	< 0.0053		< 0.0058		< 0.0052		< 0.006	
Toluene	100	< 0.0053		< 0.0058		< 0.0052		< 0.006	
m&p-Xylene	1000	< 0.0053		< 0.0058		< 0.0052		< 0.006	
Benzol(a)anthracene	5	< 0.35		< 0.38		< 0.34		< 0.4	
Benzol(a)pyrene	1.64	< 0.35		< 0.38		< 0.34		< 0.4	
Benzol(g,h,i)perylene	500	< 0.35		< 0.38		< 0.34		< 0.4	
Benzol(k)fluoranthene	5	< 0.35		< 0.38		< 0.34		< 0.4	
Bis(2-ethylhexyl)phthalate	50	< 0.35		< 0.38		< 0.34		< 0.4	
Benzol(b)fluoranthene	5	< 0.35		< 0.38		< 0.34		< 0.4	
Chrysene	5	< 0.35		< 0.38		< 0.34		< 0.4	
Fluoranthene	500	< 0.35		< 0.38		< 0.34		< 0.4	
Indeno(1,2,3-cd)pyrene	5	< 0.35		< 0.38		< 0.34		< 0.4	
2-Methylnaphthalene	-	0.54		< 0.38		< 0.34		< 0.4	
m&p-Cresol	3.8	< 0.35		< 0.38		< 0.34		< 0.4	
Naphthalene	100	< 0.35		< 0.38		< 0.34		< 0.4	
Phenanthrene	100	< 0.37		< 0.38		< 0.34		< 0.4	
Pyrene	500	< 0.35		< 0.38		< 0.34		< 0.4	
GRQ	-	< 0.2		< 0.2		< 0.18		< 0.21	
DRO	-	44		20		10		14	
Gross Alpha	-	< 12		< 14		< 12		< 14	
Gross Beta	-	13 +/- 6.6		< 12		< 11		< 13	
Arsenic	41	3.3		< 1.1		< 1		< 1.2	
Cadmium	39	< 0.53		< 0.58		< 0.52		< 0.6	
Chromium	1200	3.4		1.8		2		4.7	
Copper	1500	7.8		< 2.8		< 2.6		< 3	
Lead	300	12		2.7		4.8		3.5	
Mercury	0.012/17 ²	[0.031]		0.023		[0.012]		0.043	
Nickel	420	< 4.3		< 4.6		< 4.1		< 4.8	
Silver	10	< 1		< 1.1		< 1		< 1.2	
Zinc	2800	6.2		< 2.2		3.8		3.4	

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		PDO-SB01		PDO-SB01		PDO-SB02		PDO-SB02		PDO-SB03		PDO-SB03	
SAMPLE ID:		PDO-SB0101		PDO-SB0102		PDO-SB0201		PDO-SB0202		PDO-SB0301		PDO-SB0302	
DATE:		8/14/96		8/14/96		8/15/96		8/15/96		8/15/96		8/15/96	
DEPTH (ft):		2		4		2		4		2		4	
CONCENTRATIONS (mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
CONSTITUENT:													
Acetone	400	< 0.058	J	0.21	< 0.057	< 0.06	< 0.057	< 0.06	< 0.057	< 0.057	< 0.06	< 0.06	< 0.06
Ethyl benzene	70	< 0.0058	J	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.0058	< 0.006	< 0.006	< 0.006
Methylene chloride	0.5	< 0.0058	J	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.0058	< 0.006	< 0.006	< 0.006
Tetrachloroethene	0.5	< 0.0058	J	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.0058	< 0.006	< 0.006	< 0.006
Toluene	100	< 0.0058	J	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.0058	< 0.006	< 0.006	< 0.006
m&p-Xylene	1000	< 0.0058	J	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.006	< 0.0058	< 0.0058	< 0.006	< 0.006	< 0.006
Benzol(a)anthracene	5	1.3	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Benzol(a)pyrene	1.64	1.6	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Benzol(g,h,i)perylene	500	1.3	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Benzol(k)fluoranthene	5	1.4	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Bis(2-ethylhexyl)phthalate	50	< 0.38	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Benzol(b)fluoranthene	5	1.3	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Chrysene	5	1.4	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Fluoranthene	500	0.88	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Indene(1,2,3-cd)pyrene	5	1.2	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
2-Methylnaphthalene	-	< 0.38	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
m&p-Cresol	3.8	< 0.38	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Naphthalene	100	< 0.38	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Phenanthrene	100	< 0.38	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
Pyrene	500	1.9	< 0.39	< 0.39	< 0.38	< 0.39	< 0.38	< 0.39	< 0.38	< 0.38	< 0.39	< 0.38	< 0.38
GRO	-	< 0.2	< 0.21	< 0.21	< 0.2	< 0.21	< 0.2	< 0.21	< 0.2	< 0.21	< 0.2	< 0.21	< 0.21
DRO	-	26	< 12	< 12	< 11	< 12	< 11	< 12	< 11	< 11	< 12	< 12	< 12
Gross Alpha	-	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14
Gross Beta	-	< 12	< 13	< 13	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14	< 14
Arsenic	41	1.4	< 1.1	< 1.1	< 1.3	< 1.3	< 1.3	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Cadmium	39	0.59	< 0.6	< 0.6	< 0.58	< 0.58	< 0.58	< 0.6	< 0.6	< 0.58	< 0.58	< 0.58	< 0.58
Chromium	1200	12	6.1	6.1	6.3	6.3	6.3	6.6	6.6	2.8	2.8	2.8	2.8
Copper	1500	10	< 3	< 3	< 2.8	< 2.8	< 2.8	< 3	< 3	< 2.8	< 2.8	< 2.8	< 2.8
Lead	300	67	< 2.1	< 2.1	< 7.6	< 7.6	< 7.6	< 2.7	< 2.7	< 5.5	< 5.5	< 5.5	< 5.5
Mercury	0.012/17 ²	[0.022]	< 0.022	< 0.022	[0.026]	< 0.026	< 0.026	< 0.024	< 0.024	[0.012]	< 0.012	< 0.012	< 0.012
Nickel	420	4.9	< 4.8	< 4.8	< 4.6	< 4.6	< 4.6	< 4.8	< 4.8	< 4.6	< 4.6	< 4.6	< 4.6
Silver	10	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Zinc	2800	48	< 2.3	< 2.3	< 2.2	< 2.2	< 2.2	< 2.3	< 2.3	< 2.5	< 2.5	< 2.5	< 2.5

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.

(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:											
SAMPLE ID:		HSRA ¹									
DATE:		TARGET SOIL									
DEPTH (ft):		CONCENTRATIONS									
		(mg/kg)	PDO-SB04	PDO-SB0401	PDO-SB04	PDO-SB0402	PDO-SB16	PDO-SB05	PDO-SB0501	PDO-SB06	
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
CONSTITUENT:											
Acetone	400		0.13	0.11	0.13	0.18	0.11	< 0.056	< 0.056	< 0.056	
Ethyl benzene	70	< 0.0056	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.0056	< 0.0056	
Methylene chloride	0.5	< 0.0056	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.0056	< 0.0056	
Tetrachloroethene	0.5	< 0.0056	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.0056	< 0.0056	
Toluene	100	< 0.0056	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.0056	< 0.0056	
m&p-Xylene	1000	< 0.0056	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.006	< 0.0056	< 0.0056	
Benzol(a)anthracene	5	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Benzol(a)pyrene	1.64	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Benzol(g,h,i)perylene	500	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Benzol(k)fluoranthene	5	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Bis(2-ethylhexyl)phthalate	50	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Benzol(b)fluoranthene	5	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Chrysene	5	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Fluoranthene	500	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Indeno(1,2,3-cd)pyrene	5	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
2-Methylnaphthalene	-	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
m&p-Cresol	3.8	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Naphthalene	100	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Phenanthrene	100	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
Pyrene	500	< 0.36	< 0.4	< 0.4	< 0.4	< 0.4	< 0.39	< 0.39	< 0.38	< 0.38	
GRO	-	< 0.2	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.2	< 0.46	J
DRO	-	< 31	< 12	< 12	< 12	< 12	< 12	< 12	< 0.2	< 0.2	J
Gross Alpha	-	< 13	< 12	< 12	< 12	< 12	< 12	< 12	< 14	< 14	J
Gross Beta	-	< 13 +/- 7.1	< 13	< 13	< 13	< 13	< 13	< 13	< 12	< 14	J
Arsenic	41	< 3.8	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.3	< 2.3	< 4.3	J
Cadmium	39	< 0.56	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.56	< 0.56	J
Chromium	1200	< 2.7	< 4.2	< 4.2	< 4.2	< 4.2	< 4.2	< 5.7	< 2	< 4.1	J
Copper	1500	< 3.5	< 3	< 3	< 3	< 3	< 3	< 3	< 2.8	< 9.5	J
Lead	300	< 20	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 3.3	< 33	< 17	J
Mercury	0.012/17 ²	< [0.03]	< 0.031	< 0.031	< 0.031	< 0.031	< 0.031	< 0.031	< 0.026	< [0.024]	J
Nickel	420	< 4.4	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.6	< 4.6	J
Silver	10	< 1.1	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.1	< 1.1	< 1.1	J
Zinc	2800	< 3.2	< 2.4	< 2.4	< 2.4	< 2.4	< 2.4	< 2.3	< 4.8	< 22	J

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.

(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:											
SAMPLE ID:		HSRA ¹		PDO-S806		PDO-S807		PDO-S807		PDO-S808	
DATE:		TARGET SOIL		PDO-S80602		PDO-S80701		PDO-S80702		PDO-S80801	
DEPTH (ft):		CONCENTRATIONS		4		2		4		4	
		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)	
CONSTITUENT:											
Acetone	400	<	0.06	<	0.056	<	0.06	<	0.06	<	0.14
Ethyl benzene	70	<	0.006	<	0.0056	<	0.006	<	0.006	<	0.0058
Methylene chloride	0.5	<	0.006	<	0.0056	<	0.006	<	0.006	<	0.0058
Tetrachloroethene	0.5	<	0.006	<	0.0056	<	0.006	<	0.006	<	0.0058
Toluene	100	<	0.006	<	0.0056	<	0.006	<	0.006	<	0.0058
m&p-Xylene	1000	<	0.006	<	0.0056	<	0.006	<	0.006	<	0.0058
Benzo(a)anthracene	5	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Benzo(a)pyrene	1.64	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Benzo(g,h,i)perylene	500	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Benzo(k)fluoranthene	5	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Bis(2-ethylhexyl)phthalate	50	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Benzo(b)fluoranthene	5	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Chrysene	5	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Fluoranthene	500	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Indeno(1,2,3-cd)pyrene	5	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
2-Methylnaphthalene	-	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
m&p-Cresol	3.8	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Naphthalene	100	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Phenanthrene	100	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
Pyrene	500	<	0.39	<	0.38	<	0.39	<	0.4	<	0.39
GRO	-	<	0.21	J	0.2	J	0.21	J	0.21	J	0.2
DRO	-	<	12	R	18	J	12	R	12	R	12
Gross Alpha	-	<	14 +/- 8.9	J	<	12	<	14	<	12	<
Gross Beta	-	<	14	<	12	<	14	<	14	<	14
Arsenic	41	<	1.1	<	1.4	<	1.1	<	1.2	<	1.1
Cadmium	39	<	0.6	<	0.56	<	0.6	<	0.6	<	0.58
Chromium	1200	<	1.4	<	1.6	<	5	<	8.1	<	7.3
Copper	1500	<	5.8	<	5.5	<	3	<	3	<	3
Lead	300	<	0.6	J	2.8	J	2.6	J	2.4	J	2.3
Mercury	0.012/17 ²	<	0.011	[0.024]	0.028	<	0.028	<	0.035	<	0.045
Nickel	420	<	4.8	<	4.6	<	4.8	<	4.8	<	4.8
Silver	10	<	1.1	<	1.1	<	1.1	<	1.2	<	1.1
Zinc	2800	<	2.3	<	2.5	<	4.4	<	5.4	<	5.2

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:	HSRA ¹	PDO-SB09	PDO-SB10	PDO-SB10	PDO-SB10	PDO-SB11	PDO-SB11	PDO-SB11	PDO-SB12
SAMPLE ID:	TARGET SOIL	8/16/96	8/17/96	8/17/96	8/17/96	8/17/96	8/17/96	8/17/96	8/17/96
DEPTH (ft):	CONCENTRATIONS	4	2	4	4	2	4	2	2
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
CONSTITUENT:									
Acetone	400	< 7.5	J	< 0.056	< 0.06	< 7	< 0.06	< 0.06	1
Ethyl benzene	70	< 0.75		< 0.0056	< 0.006	< 0.7	< 0.006	< 0.006	< 0.028
Methylene chloride	0.5	< 0.75		< 0.0056	< 0.006	< 0.7	< 0.006	< 0.006	< 0.028
Tetrachloroethene	0.5	< 0.75		< 0.0056	< 0.006	< 0.7	< 0.006	< 0.006	< 0.028
Toluene	100	< 0.75		< 0.0056	< 0.006	< 0.7	< 0.006	< 0.006	< 0.028
m&p-Xylene	1000	< 0.75		< 0.0056	< 0.006	< 0.7	< 0.006	< 0.006	< 0.028
Benzol(a)anthracene	5	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Benzol(a)pyrene	1.64	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Benzol(g,h,i)perylene	500	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Benzol(k)fluoranthene	5	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Bis(2-ethylhexyl)phthalate	50	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Benzol(b)fluoranthene	5	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Chrysene	5	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Fluoranthene	500	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Indene(1,2,3-cd)pyrene	5	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
2-Methylnaphthalene	-	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
m&p-Cresol	3.8	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	1.3
Naphthalene	100	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.38
Phenanthrene	100	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	< 0.62
Pyrene	500	< 0.4		< 0.38	< 0.39	< 0.37	< 0.39	< 0.39	1
GRO	-	< 0.21	J	< 0.2	< 0.21	< 0.2	< 0.21	< 0.21	0.45
DRO	-	< 12	R	< 13	< 12	< 11	< 12	< 12	< 0.2
Gross Alpha	-	< 12		< 14	< 12	< 13	< 14	< 14	260
Gross Beta	-	< 13		< 11	< 13	< 11	< 11	< 11	< 14
Arsenic	41	< 1.2		< 1.5	< 2.9	< 14	< 4	< 4	< 13
Cadmium	39	< 0.6		< 0.56	< 0.6	< 0.56	< 0.6	< 0.6	< 0.58
Chromium	1200	7.4		< 1.8	< 2.6	< 1.1	< 3.4	< 3.4	5.3
Copper	1500	3.3		< 2.8	< 3	< 2.8	< 3	< 3	7.1
Lead	300	3.2	J	< 5.1	< 2.7	< 3.3	< 2.2	< 2.2	18
Mercury	0.012/17 ²	0.044		< 0.011	< 0.011	< 0.012	< 0.011	< 0.011	[0.082]
Nickel	420	< 4.8		< 4.6	< 4.8	< 4.4	< 4.8	< 4.8	< 4.6
Silver	10	< 1.2		< 1.1	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Zinc	2800	3		< 2.3	< 2.3	< 2.2	< 2.3	< 2.3	10

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.

(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:	HSRA ¹	PDO-SB12	PDO-SB13	PDO-SB13	PDO-SB13	PDO-SB13	PDO-SB13	PDO-SB14
SAMPLE ID:	TARGET SOIL	PDO-SB1202	PDO-SB1301	PDO-SB1301	PDO-SB1301	PDO-SB1302	PDO-SB1401	
DATE:	CONCENTRATIONS	8/17/96	8/17/96	8/17/96	8/17/96	8/17/96	8/17/96	
DEPTH (ft):	(mg/kg)	4	2	2	2	4	2	
CONSTITUENT:		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	
Acetone	400	< 0.058	< 6.8	J	0.18	0.17	< 0.056	< 0.056
Ethyl benzene	70	< 0.0058	< 0.68		< 0.0056	< 0.011	< 0.0056	< 0.0056
Methyl chloride	0.5	< 0.0058	< 0.68		< 0.0056	< 0.011	< 0.0056	< 0.0056
Tetrachloroethene	0.5	< 0.0058	< 0.68		< 0.0056	< 0.011	< 0.0056	< 0.0056
Toluene	100	< 0.0058	< 0.68		< 0.0056	< 0.011	< 0.0056	< 0.0056
m&p-Xylene	1000	< 0.0058	< 0.68		< 0.0056	< 0.011	< 0.0056	< 0.0056
Benzol(a)anthracene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Benzol(a)pyrene	1.64	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Benzol(g,h,i)perylene	500	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Benzol(k)fluoranthene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Bis(2-ethylhexyl)phthalate	50	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Benzol(b)fluoranthene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Chrysene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Fluoranthene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Indeno(1,2,3-cd)pyrene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
2-Methylnaphthalene	5	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
m&p-Cresol	3.8	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Naphthalene	100	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Phenanthrene	100	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
Pyrene	500	< 0.38	< 0.36		< 0.36	< 0.38	< 0.37	< 0.37
GRO	-	< 0.21	< 0.2	J	< 0.2	< 0.2	< 0.37	< 0.37
DRO	-	< 12	< 10		< 11	< 11	< 0.2	J
Gross Alpha	-	< 12	< 13		< 13	< 13	< 39	
Gross Beta	-	< 12	< 13		< 11	< 11	< 11	
Arsenic	41	< 1.1	11		7	< 1.1	< 26	
Cadmium	39	< 0.58	< 0.54		< 0.56	< 0.58	< 0.56	
Chromium	1200	6.4	3.8		4.4	2.7	3	
Copper	1500	11	< 2.8	J	7.8	< 2.8	< 2.8	J
Lead	300	2.2	12		6.7	1.6	6.6	
Mercury	0.012/17 ²	0.032	< 0.011		[0.016]	< 0.011	< 0.011	
Nickel	420	< 4.8	< 4.3		< 4.4	< 4.6	< 4.4	
Silver	10	< 1.1	< 1		< 1.1	< 1.1	< 1.1	
Zinc	2800	10	< 2.1		2.6	< 2.2	< 2.2	

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

I] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet: BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 4

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SOILS

SITE:		PDO-SB14		PDO-SB15		PDO-SB15	
SAMPLE ID:	HSRA ¹	PDO-SB1402	PDO-SB1501	PDO-SB1502			
DATE:	TARGET SOIL	8/17/96	8/17/96	8/17/96			
DEPTH (ft):	CONCENTRATIONS	4	2	4			
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)			
CONSTITUENT:							
Acetone	400	0.096	< 0.056	< 0.06			
Ethyl benzene	70	< 0.006	< 0.0056	< 0.006			
Methylene chloride	0.5	< 0.006	< 0.0056	< 0.006			
Tetrachloroethene	0.5	< 0.006	< 0.0056	< 0.006			
Toluene	100	< 0.006	< 0.0056	< 0.006			
m&p-Xylene	1000	< 0.006	< 0.0056	< 0.006			
Benzolanthracene	5	< 0.39	< 0.36	< 0.4			
Benzo(a)pyrene	1.64	< 0.39	< 0.36	< 0.4			
Benzo(g,h,i)perylene	500	< 0.39	< 0.36	< 0.4			
Benzo(k)fluoranthene	5	< 0.39	< 0.36	< 0.4			
Bis(2-ethylhexyl)phthalate	50	< 0.39	< 0.36	< 0.4			
Benzo(b)fluoranthene	5	< 0.39	< 0.36	< 0.4			
Chrysene	5	< 0.39	< 0.36	< 0.4			
Fluoranthene	500	< 0.39	< 0.36	< 0.4			
Indeno(1,2,3-cd)pyrene	5	< 0.39	< 0.36	< 0.4			
2-Methylnaphthalene	-	< 0.39	< 0.36	< 0.4			
m&p-Cresol	3.8	< 0.39	< 0.36	< 0.4			
Naphthalene	100	< 0.39	< 0.36	< 0.4			
Phenanthrene	100	< 0.39	< 0.36	< 0.4			
Pyrene	500	< 0.39	< 0.36	< 0.4			
GRO	-	< 0.21	< 0.36	< 0.4			
DRO	-	< 12	< 0.2	< 0.21	J		
Gross Alpha	-	< 14	< 20	< 12			
Gross Beta	-	< 14	< 13	< 14			
Arsenic	41	< 14	< 11	< 11			
Cadmium	39	2.1	5	< 1.2			
Chromium	1200	< 0.6	< 0.56	< 0.6			
Copper	1500	4	3.7	8			
Lead	300	< 3	4.2	< 3	J		
Mercury	0.012/17 ²	3.2	7.8	1.8			
Nickel	420	< 0.011	[0.018]	0.035			
Silver	10	< 4.8	< 4.4	< 4.8			
Zinc	2800	< 1.1	< 1.1	< 1.2			
		3.4	6.8	3.1			

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards. Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 5

HUNTER ARMY AIRFIELD- PDO YARD
CONSTITUENTS DETECTED IN SEDIMENTS

SITE:	HSRA ¹	PDO-SE01	PDO-SE03	PDO-SE03
SAMPLE ID:	TARGET SOIL	PDO-SE01	PDO-SE03	PDO-SE04
DATE:	CONCENTRATIONS	9/18/96	9/18/96	9/18/96
DEPTH (ft):	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
		0	0	0
CONSTITUENT:				
Acetone	400	< 0.071	0.096	0.085
Toluene	100	< 0.0071	0.019	0.021
Bis(2-ethylhexyl)phthalate	50	< 0.47	0.94	1
Benzol(b)fluoranthene	5	< 0.47	0.64	< 0.44
Fluoranthene	500	< 0.47	0.98	< 0.44
m&p-Cresol	3.8	< 0.47	< 0.49	0.44
Phenanthrene	100	< 0.47	0.76	< 0.44
Pyrene	500	< 0.47	1	0.48
GRO	-	< 0.36	0.53	0.76
DRO	-	25	130	61
Gross Beta	-	< 16	21 +/- 9.1	< 14
Cadmium	39	< 0.71	1.4	1.2
Chromium	1200	3.6	13	15
Copper	1500	< 3.6	8.8	7.5
Lead	300	16	32	25
Mercury	0.012/17 ²	[0.079]	[0.13]	[0.081]
Silver	10	< 1.4	2	1.5
Zinc	2800	24	59	51

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] GREATER THAN ACTION LEVEL

(1) - HSRA Target Soil Concentrations from Georgia DNR, EPD Hazardous Site Response Program guidance for Type 1 and Type 3 Risk Reduction Standards, Figure 2.
(2) - HSRA standard for soil less than 2 feet BLS is 0.012 mg/kg; HSRA standard for soils greater than 2 feet BLS is 17 mg/kg.

TABLE 6 A

HUNTER ARMY AIRFIELD - PDO YARD
CONSTITUENTS DETECTED IN HYDROPUNCH GROUNDWATER

SITE:	HSRA ¹								
SAMPLE ID:	GROUNDWATER	PDO-HPW01	PDO-HPW02	PDO-HPW03	PDO-HPW05	PDO-HPW06			
DATE:	CRITERIA	8/15/96	8/15/96	8/18/96	8/18/96	8/18/96			
CONSTITUENT ² :		ug/L	ug/L	ug/L	ug/L	ug/L			
Benzene	5	< 1	< 1	< 1	< 1	< 1			
SITE:	HSRA ¹								
SAMPLE ID:	GROUNDWATER	PDO-HPW07	PDO-HPW08	PDO-HPW09	PDO-HPW11	PDO-HPW10			
DATE:	CRITERIA	8/18/96	8/18/96	8/18/96	8/18/96	8/18/96			
CONSTITUENT ² :		ug/L	ug/L	ug/L	ug/L	ug/L			
Benzene	5	2	< 1	< 1	< 1	< 1			

1 - HSRA groundwater criteria; GA Hazardous Site Response Act, 391-3-19, Groundwater Criteria for State Waters, Appendix III, Table 1.
2 - METHODS: EPA SW-846 8010, 8020

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] Greater than Groundwater Criteria

TABLE 6 B

HUNTER ARMY AIRFIELD - PDO YARD
CONSTITUENTS DETECTED IN GROUNDWATER

SITE: SAMPLE ID: DATE:	HSRA ¹ GROUNDWATER CRITERIA	PDO-GW01 PDO-GW0101 9/18/96 ug/L	PDO-GW02 PDO-GW0201 9/18/96 ug/L	PDO-GW03 PDO-GW0301 9/18/96 ug/L	PDO-GW04 PDO-GW0401 9/18/96 ug/L	PDO-GW19 PDO-ER02 9/17/96 ug/L	PDO-GW19 PDO-GW1901 9/17/96 ug/L
CONSTITUENT ² :							
Acetone	4000	110	120	< 25	< 25	< 25	25
Benzene	5	[24]	[15]	< 1	< 1	< 1	1
2-Butanone (MEK)	2000	170	160	< 10	< 10	< 10	10
Carbon disulfide	4000	< 1	< 1	< 1	< 1	< 1	1
Ethyl benzene	700	4.2	< 1	< 1	< 1	< 1	1
Methyl isobutyl ketone (MIBK)	2000	39	< 10	< 10	< 10	< 10	10
Methylene chloride	5	< 5	< 5 J	< 5	< 5	< 10	5
Tetrachloroethene	5	< 1	[13]	4.8	< 1	[210 J]	1
Toluene	1000	15	1.2	< 1	< 1	< 1	1
m&p-Xylene	10000	14	< 1	< 1	< 1	< 1	1
o-Xylene	10000	8.5	< 1	< 1	< 1	< 1	1
Naphthalene	20	< 10	< 10	< 10	< 10	< 10	10
2-Methylnaphthalene	-	< 10	< 10	< 10	< 10	< 10	10
GRO	-	77	< 50	< 50	< 50	< 50	50
DRO	-	1000	320	< 100	< 100	< 100	100
Arsenic	50	< 10	< 10	< 10	< 10	< 10	32
Beryllium	4	< 4	< 4	< 4	< 4	< 4	4
Chromium	100	16	< 10	< 10	< 10	< 10	80
Copper	1300	< 26	< 26	< 26	< 26	< 26	26
Lead	15	6.4	< 5	< 5	< 5	< 5	[99]
Nickel	100	55	< 40	< 40	< 40	< 40	40
Zinc	2000	340	< 20	89	< 20	< 20	74

1 - HSRA groundwater criteria; GA Hazardous Site Response Act, 391-3-19, Groundwater Criteria for State Waters, Appendix III, Table 1.
2 - METHODS: EPA SW-846 8260, 8270, 8100M, 8015M, 6010/7000 (PPMETALS).

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] Greater than Groundwater Criteria

TABLE 6 B

HUNTER ARMY AIRFIELD - PDO YARD
CONSTITUENTS DETECTED IN GROUNDWATER

SITE:	HSRA ¹ GROUNDWATER CRITERIA	PDO-GW20 PDO-GW2001 9/18/96 ug/L	PDO-GW21 PDO-GW2101 9/18/96 ug/L	PDO-GW22 PDO-GW2201 9/18/96 ug/L	PDO-GW23 PDO-GW2301 9/17/96 ug/L	PDO-GW23 PDO-GW05 9/17/96 ug/L	PDO-GW24 PDO-GW2401 9/17/96 ug/L	PDO-GW25 PDO-GW2501 9/17/96 ug/L
CONSTITUENT ² :								
Acetone	4000	< 25	< 25	< 25	< 25	< 25	50	91
Benzene	5	< 1	< 1	< 1	< 1	[17]	4.8	[48]
2-Butanone (MEK)	2000	< 10	< 10	< 10	< 10	< 10	60	49
Carbon disulfide	4000	< 1	< 1	< 1	< 1	< 1	1.8	< 2
Ethyl benzene	700	< 1	< 1	< 1	< 1	8.8	1	3.2
Methyl isobutyl ketone (MIBK)	2000	< 10	< 10	< 10	< 10	< 10	10	< 20
Methylene chloride	5	< 5	< 5	< 5	< 5	< 5	5 J	[12 J]
Tetrachloroethene	5	< 1	< 1	< 1	< 1	< 1	1.4	< 2
Toluene	1000	< 1	< 1	< 1	< 1	< 1	1.5	36
m&p-Xylene	10000	< 1	< 1	< 1	< 1	< 1	1	9.1
o-Xylene	10000	< 1	< 1	< 1	< 1	< 1	1	7.3
Naphthalene	20	< 10	< 10	< 10	< 10	8	10	< 10
2-Methylnaphthalene	-	< 10	< 10	< 10	< 10	37	10	< 10
GRO	-	< 50	< 50	< 50	< 50	150	92	< 10
DRO	-	< 100	< 100	< 100	< 100	1600	200	110
Arsenic	50	< 10	< 10	< 10	< 10	< 10	34	820
Beryllium	4	< 4	< 4	< 4	< 4	< 4	< 10	< 10
Chromium	100	< 10	< 10	< 10	< 10	< 10	[11]	< 4
Copper	1300	< 26	< 26	< 26	< 26	< 10	[100]	< 4
Lead	15	< 5	< 5	< 5	< 5	< 26	35	24
Nickel	100	< 40	< 40	< 40	[16]	[19]	[46]	< 26
Zinc	2000	66	88	28	< 20	< 40	40	[16]
							150	< 40
								41

1 - HSRA groundwater criteria; GA Hazardous Site Response Act, 391-3-19, Groundwater Criteria for State Waters, Appendix III, Table 1.
2 - METHODS: EPA SW-846 8260, 8270, 8100M, 8015M, 6010/7000 (PPMETALS).

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] Greater than Groundwater Criteria

TABLE 7

HUNTER ARMY AIRFIELD - PDO YARD
CONSTITUENTS DETECTED IN SURFACE WATER

SITE:	GA INSTREAM	PDO-SW01	PDO-SW02	PDO-SW03	PDO-SW03
SAMPLE ID:	WQS ¹	PDO-SW01	PDO-SW02	PDO-SW03	PDO-SW03
DATE:	ug/L	9/18/96	9/18/96	9/18/96	9/18/96
CONSTITUENT ² :		ug/L	ug/L	ug/L	ug/L
Trichloroethene	80.7	1.3	1.1	< 1	< 1
Zinc	60 *	< 20	[130]	< 20	< 20

1 -GA Instream WQS- GA DNR EPD, Water Quality Control, Instream Water Quality Standards, Chapter 391-3-6.03, Section 5 (d)(ii) & (iii), 10/23/95

* At hardness (CaCO₃) levels less than 100 mg/L.

2 - METHODS: EPA SW-846 8260, 8270, 8100M, 8015M, 6010/7000 (PPMETALS).

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

[] Greater than WQS

Table 8. Physical and Chemical Properties of Inorganic COPCs in Groundwater

Site Related Analytes	K _d ^a in Sandy soil (mL/kg)	K _d ^a in Loam (mL/kg)	Above or Below HSRA Criteria
Beryllium	N/A	N/A	Above (one location)
Chromium	70(1.7 to 1.73E+03)	30(2.2 to 1.0E+03)	Equal
Lead	270(19 to 1,405)	1.6E+04(100 to 5.9E+04)	Above

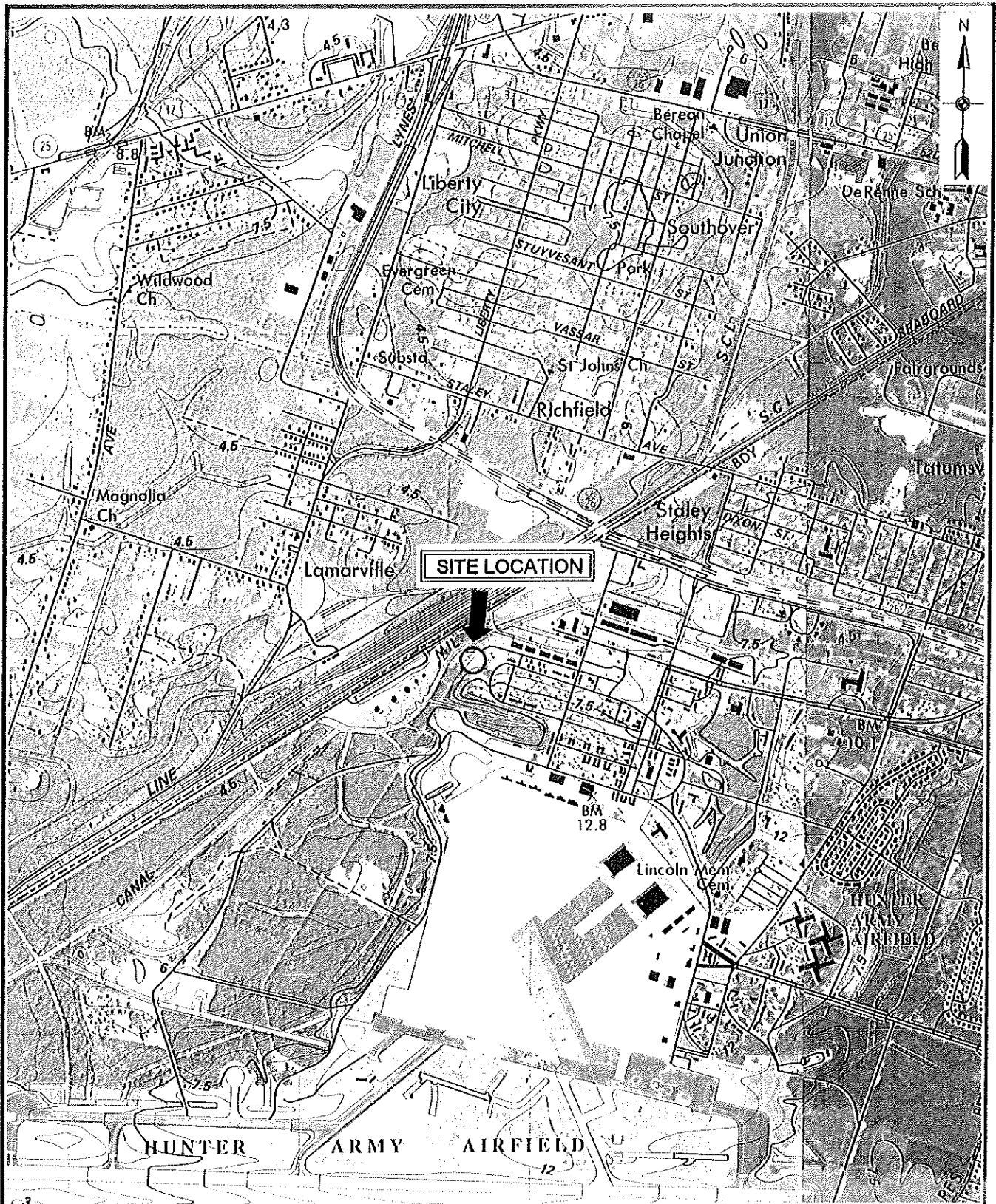
N/A Not Available

^a K_d values taken from Sheppard and Thibault (1990) unless otherwise noted; range provided in ().

^b K_d values obtained from Baes et al. (1984).

Table 9 Physical and Chemical Properties of Organic COPCs in Groundwater

Constituents	Molecular Weight	Solubility S_w (mg/L)	Henry's Constants atm.m ³ /mol	K_{oc} (ml/g)	Biodeg. half-life (day)	Log (K_{ow})
VOCs						
Benzene	78.1	1.78E+03	5.55E-03	6.20E+01	720	2.13
Methylene chloride	84.9	1.67E+04	3.19E-03	2.20E+01	112	1.25
Tetrachloroethene	165.8	1.50E+02	2.87E-02	3.17E+02	1653	2.53



US ARMY
ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

PDO YARD LOCATION MAP

Hunter Army Airfield

Savannah, Georgia

SCALE: 1"=2000'

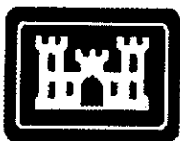
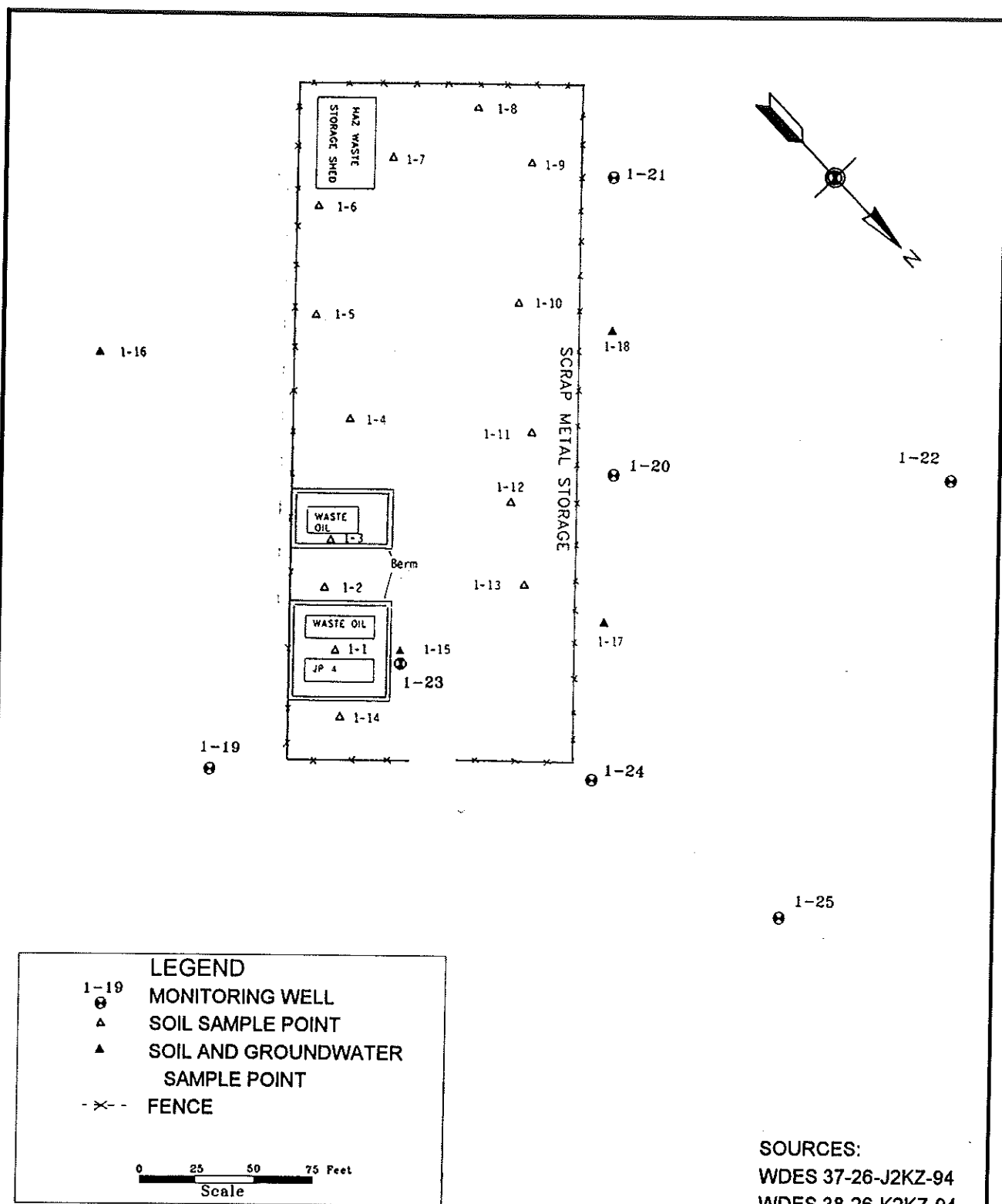
0 Feet 2000

DATE:

APPROVED:

FIGURE 1

M&E
Metcalf & Eddy



US ARMY
ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

USAEHA SITE INVESTIGATION MAP PDO YARD

Hunter Army Airfield

Savannah, Georgia

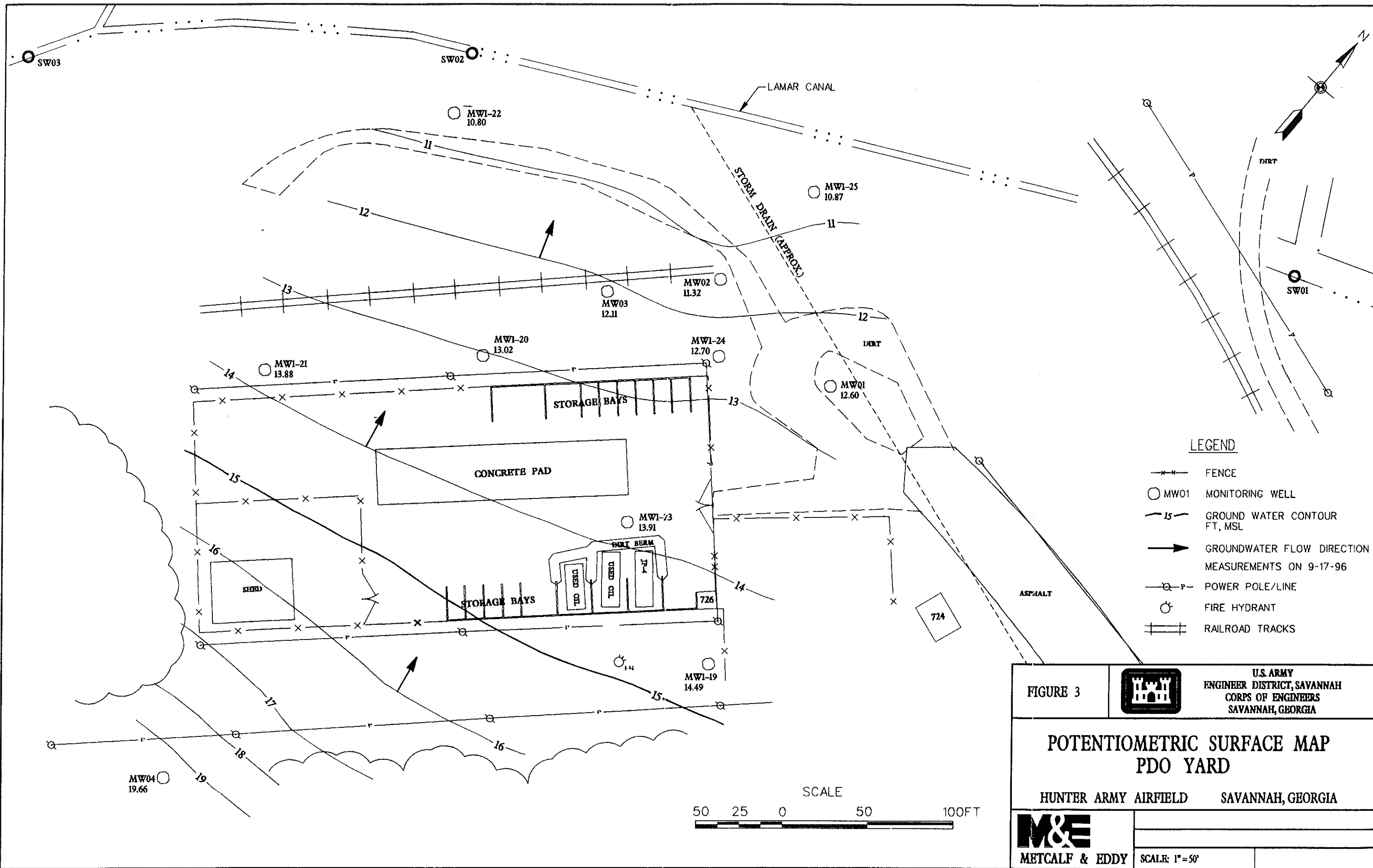
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DATE:

APPROVED:

FIGURE 2





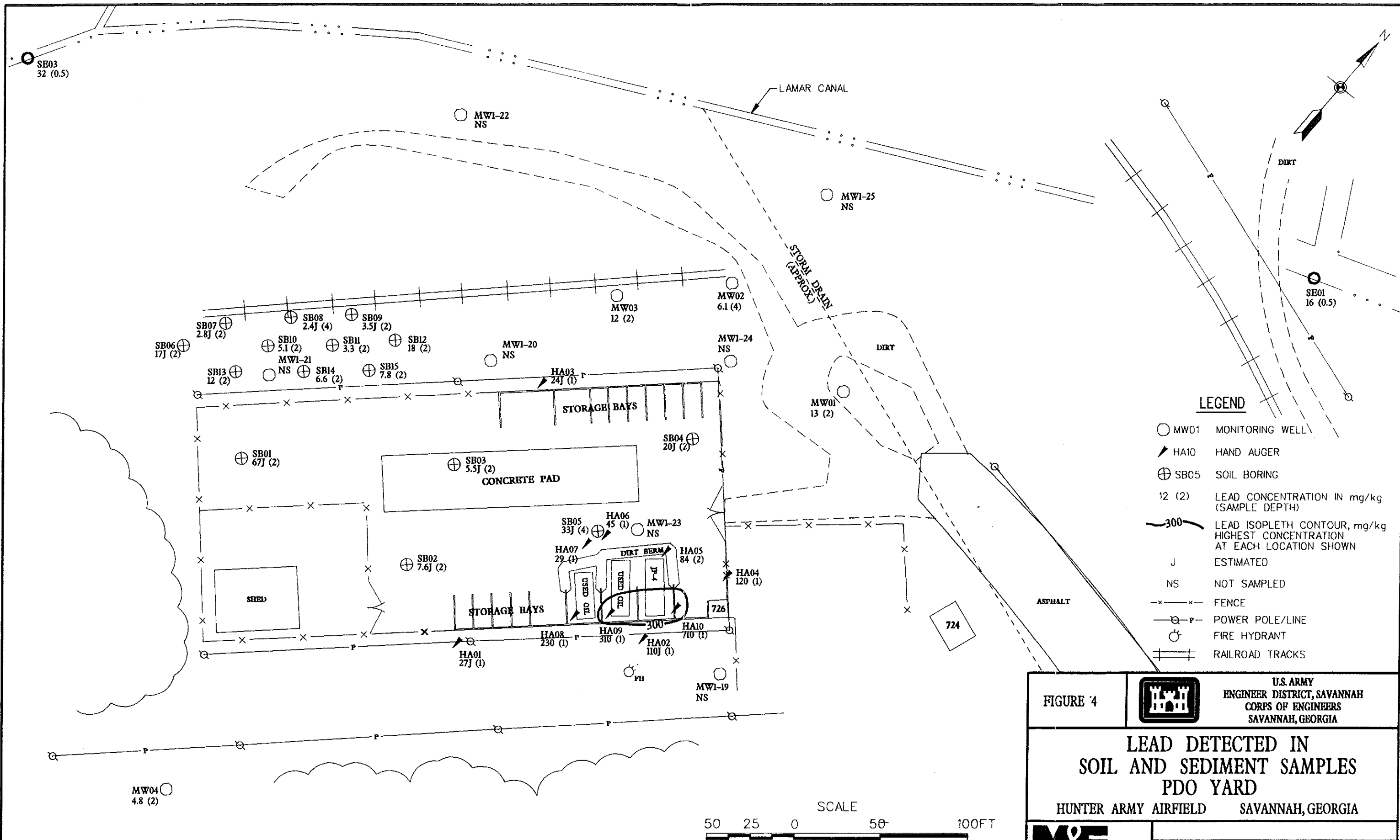


FIGURE 4



U.S. ARMY
ENGINEER DISTRICT, SAVANNAH
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

LEAD DETECTED IN SOIL AND SEDIMENT SAMPLES PDO YARD

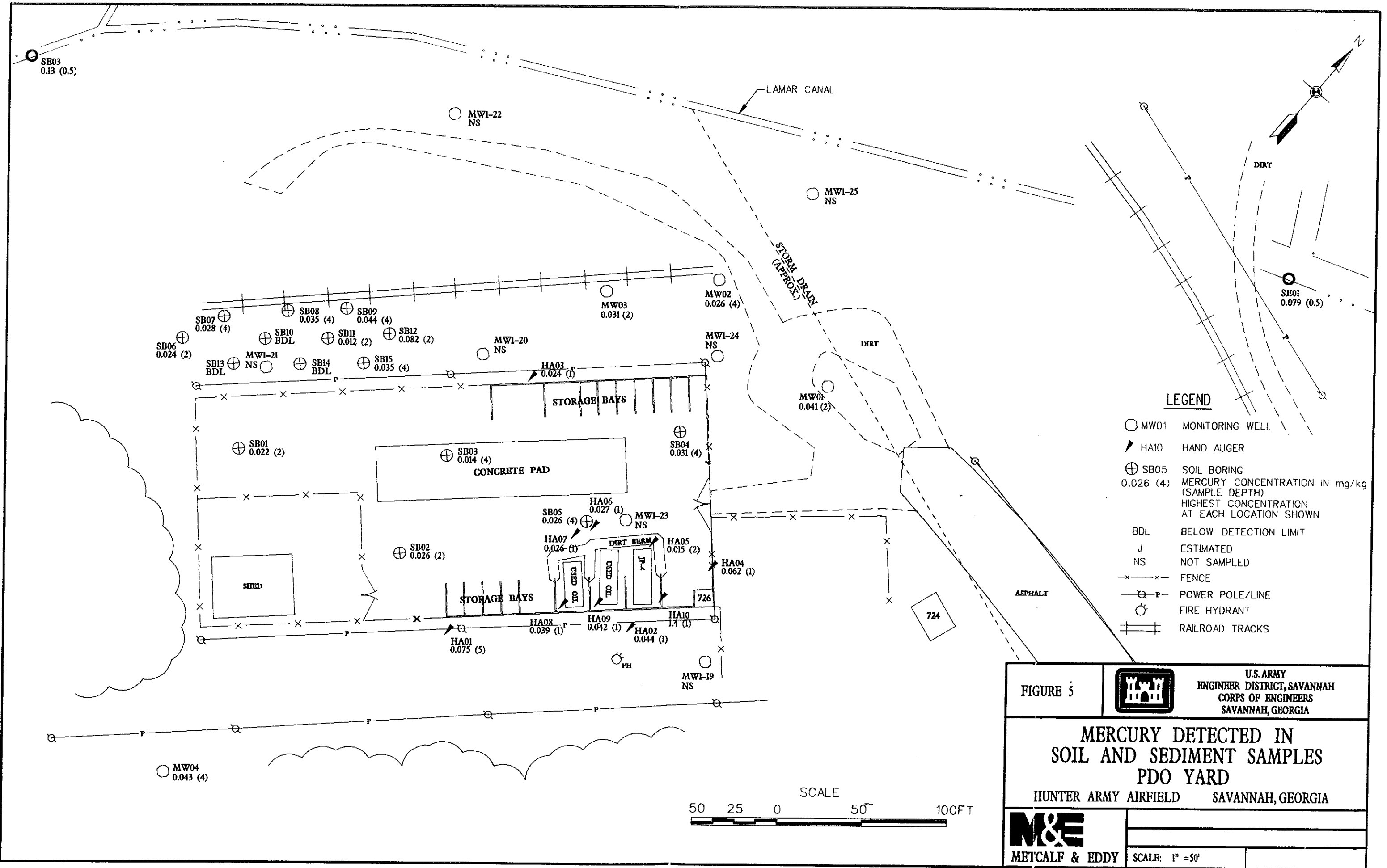
HUNTER ARMY AIRFIELD SAVANNAH, GEORGIA

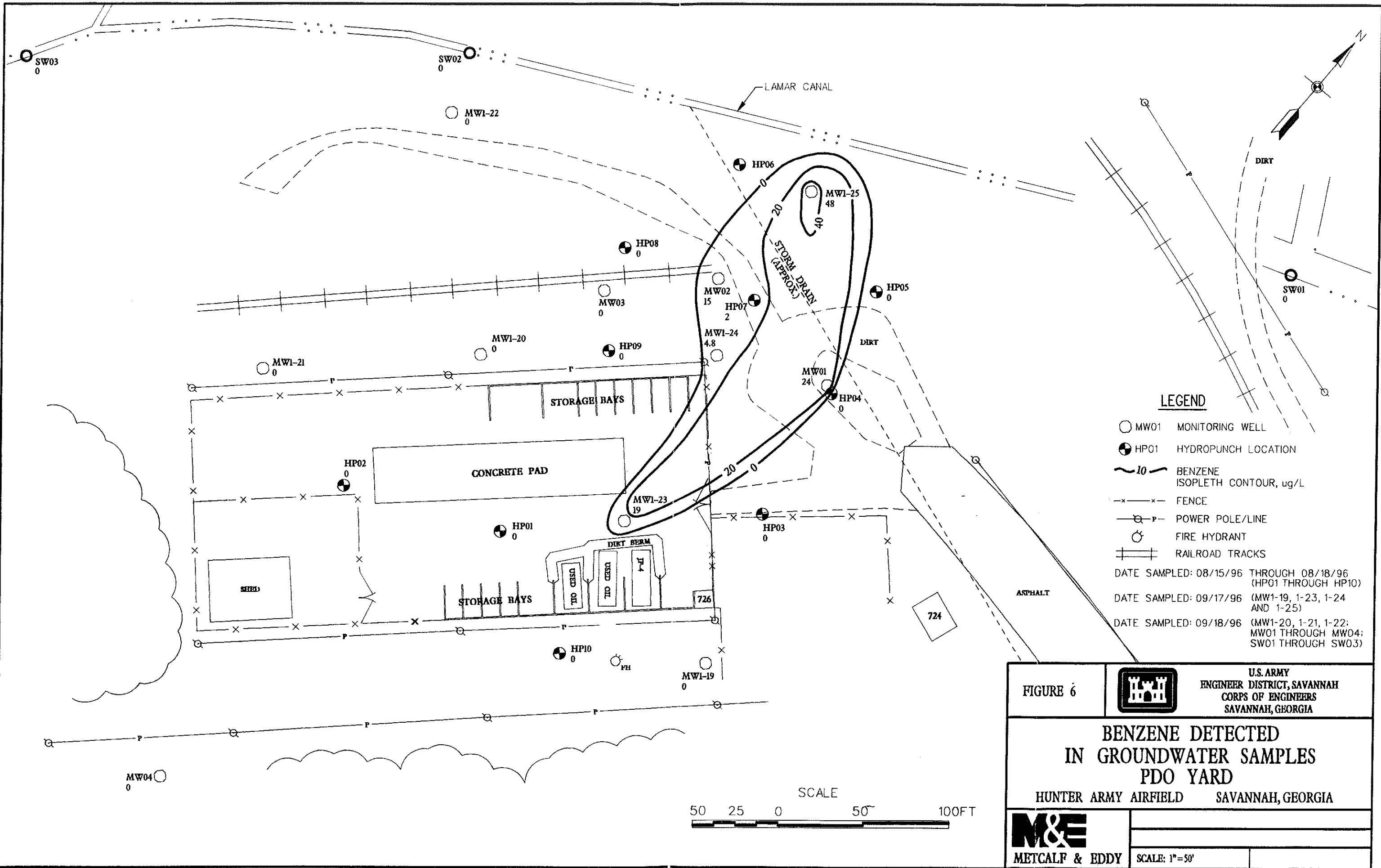


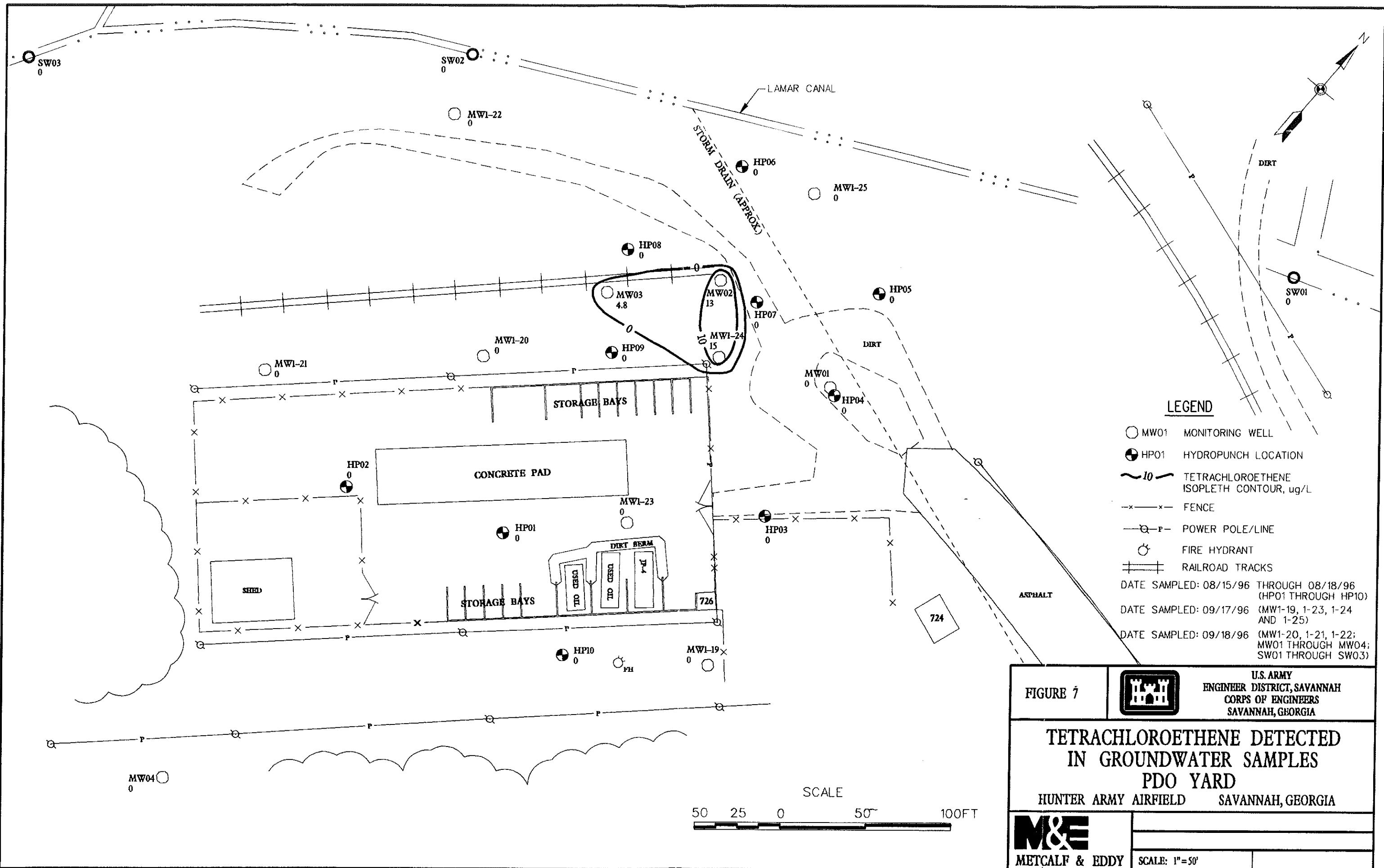
METCALF & EDDY

SCALE: 1" = 50'

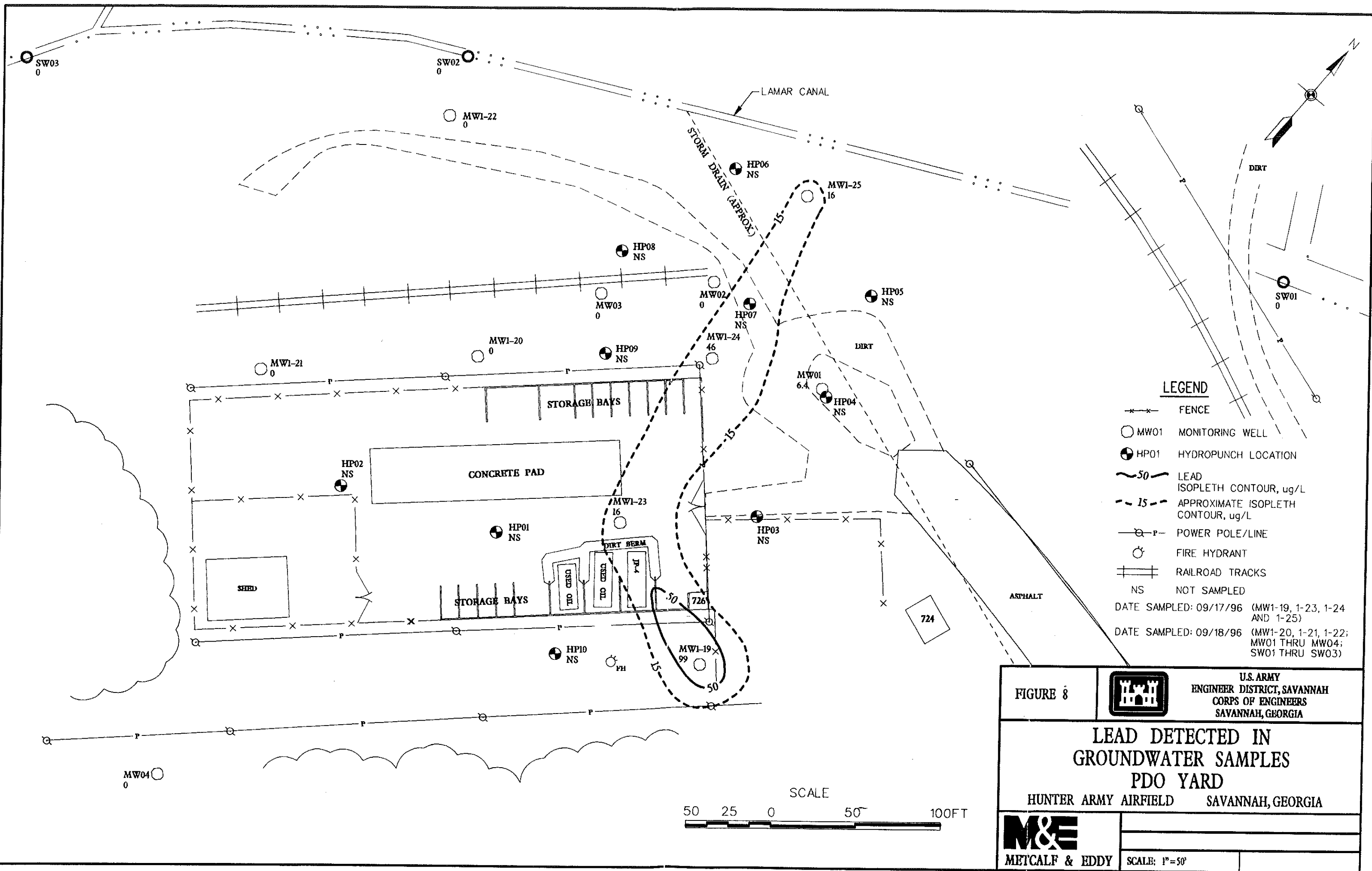
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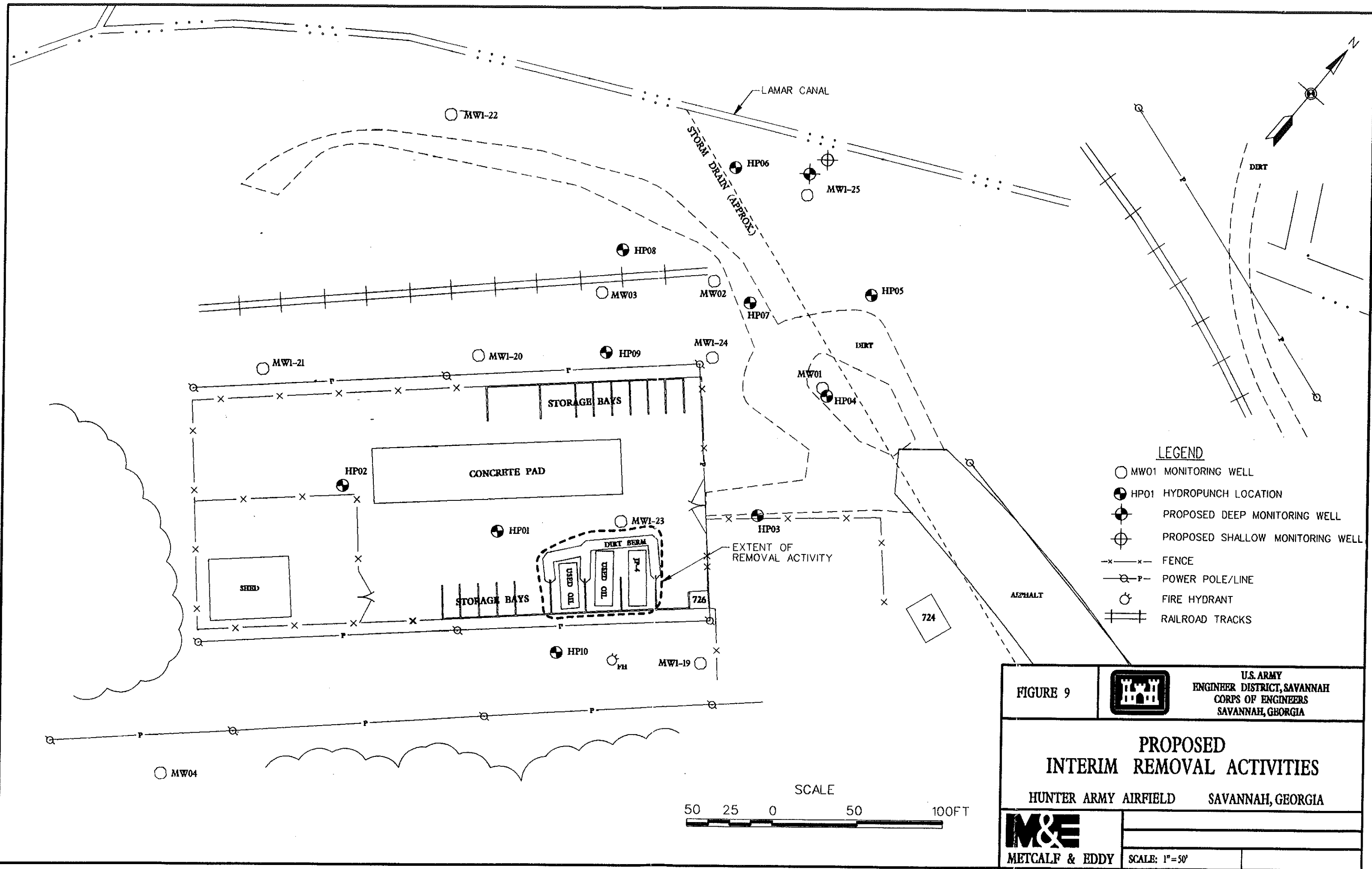




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LOC: p:\proj\17830HAF\PD0\C\CHAF008.DGN DATED: 04-24-97 BY: M.A. FRANK



APPENDIX B
FIELD LOGBOOK

WED. 8/17/66 P.S. warm, humid

0640 AT 1310 - gate locked - call # - not a good # apparently - Go to HP stationing make call. 260 hr QM.

0730 gate unlocked - W.C. @ MW3 $\approx$ 2-2 bgs. - Resume drilling to 134' ON 1482=0. Set faced MW3 see schematic for yesterday.

815 Hydrate Bentonite

845 Clean up site

845 Move to PDO Yard. Unload drums from 1310

0945 - Construct Decon Pad. Greg Rowell offsite to Lab.

1000 COE onsite

Wes Smith - Wes says 1310 wells good as is.

Francis F.

Kathleen Miles

1115 COE offsite

(Wed) Kathleen Miles Home:

833 drums to go offsite need relabeling writing washing off

1130 } Lunch

1220 }

1230 Take Egg Blank PDO 2" spool

1300 PST onsite - mob to 1310 to do pads

1330 COE onsite

Tom Neel onsite - give H&S briefing

1409 COE O.H.A. to

1500 AT PDO Yard. set up on SB1 = Not Yet

Decon riggers

Setup SB1

1610 Heavy Rain - all offsite - move to Lab.

D. Thompson

THURS 8/15/96 PM - PC, hot humid
 - AM - clear, warm, humid
 G. Powell, D. Humphreys, Tom Neal, PSI (3)
 0705 On-site - wait QDDW for Doug Swanson
 for keys to PDD.

0715 in PDD - cleanup @ SBA. 6000-2 bags
 0800 Setup on PDD-SB02 Drum 6
 0900 Grout PDD SB02 2 bag grout.
 0906 Decon.

0955 Setup on PDD-SB03 Drum 7
 1058 Cleanup
 - Call Wilburian - progress report - Also,
 Borings depth to 10' not 15'.

1110 Move to PDD-SB04 Drum 8 1/2
 1210 Grout SB04
 1230 Lunch PSI covers up r.i.d.
 1330 - Stop by 1310 to let folks know we'll be in
 tomorrow - don't park trucks in the way.
 - PSI decons augers
 1410 Setup on SB05 Use Drum 8
 1450 Setup on PDD-HP01

(Hours)

Auger to 4', Push HP to 7'
 W.L. = 3-4' Drum 9

Take VST Sample 800/8020
 replace sample w/ barite

1540 Setup on HP-02 - Auger to 4'
 Push HP to 7' bags Drum 8

1630 Decon - use Drum 3 PDD
 Pick sample

1740 To lab

D. Humphreys

FRI 8/16/96 8:45 mostly sunny, hot, humid

0200 Onsite - @ 1310

0720 Setup on HP01 (kg) 1" concrete

Anger to 3', hammer HP 18" refrod

Sample -

0805 Setup on 1310 HP02 4" concrete

Smelly hole - OVA in BZ-0-10

Fluorocarbon Anger to 3', hammer

18" - refrod

1st HP bit

0900 sample

0905 Move to HP03 (disregard...)

Anger to 4' concrete 4"

drive spdm HP to 5'

sample

1000 Move to HP04 by tanks

Anger to 4', push HP to 7'

Sample + split + MS/MSD

1020 Call SPAC - they will be there for SPAC data

(FRI Cont'd)

1100 Move to P20 Yard

Decon

Lunch

1115 }
1215 }

1245 Setup on P20-SB06 G&S Pk

P20 10'

Drum 10

1340 Setup on P20-SB07 X-mid

1425 - PSI theme + Kony to get ice.

Sample 2-4 / 0-2 G&S No Sample

1600 Move on P20-SB08 - then SB09

- Wes Smith visits - says D4/Kony sand ok

Wes going OK.

1630 Clean up site.

PSI Decons

MTE sample pack.

1730 To Lab

1800 OFF

D. Humphrey

12

SAT 8/17/96	Mostly sunny, hot, humid
0705	Onsite - Prep & Drill
0720	Setup PDD-SB10
0800	Setup PDD-SB11
0845	Decon
0910	Setup on PDD-SB12
0945	Setup on PDD-SB13
1035	Clean up
1040	Decon - unload drums off trailer
	Fix trailer Flat tire
	Use DS drums PDD/SB14
1115 } 1215 }	Lunch
1230	Setup on PDD-SB14
1315	Setup on PDD-SB15
	Grout up holes

Start
Drum 11

13

(Sat cont)	1405	Grout R offset Decon augers
	1430	Offsite

J. Thompson

Sun	8/18/96	PC bot, buried	
0650	Onsite		
0700	PST onsite		
0720	Setup on 1310 HPO5		(Cont'd from 9)
0745	Sample 800/8020	HA to 3', push to 6'	
0800	Setup on 1310 HPO6		
0820	Sample 800/8020	+ Trip Blank	
0840	Setup on PDD-HPO3		
		Anger to 5', Push HP to 7'	
		DRY - let sit open hole / H1109'	
0915	PDD-HPO4		
0930	Sample 800/8020		
		Anger to 7', Push to 9'	tsplit
1015	Man to PDD-HPO5		
1030	Sample 800/8020	Anger to 7', Push HR to 9'	

(Sun Cont'd)			
1053	Setup on PDD-HPO6		
		Anger to 8', Hammer to 10'	
1115	Sample 800/8020		
1135	Cleanup		
1140	} - Lunch		
1255			
		Re-ice samples	
		W.L. in HPO6 $\approx 7'$ bgs	
		(in well 1-25' $\approx 7'$ bgs)	
1330	Setup on PDD-HPO7		
		Anger to 9', Hammer to 11'	
1350	Sample 800/8020		
1400	Setup on PDD-HPO8		
		Anger to 9', Hammer to 11'	
1415	Sample 800/8020		
		- Decant	
1435	Man to PDD-HPO9		
		Anger to 6', Hammer to 8'	
1450	Sample + DWP		

D. Humphreys

8/18/16
(Sun 6:4)

1510 Setup on PDO - HPID (background)

Handlayer due to utilities to 4'

Auger to 8', drive HP to 10'

Sample 15 #2 8010/8020

1555 Decon

Use DL Drum

1620 All offsite

D. Humphreys

Mon 8/19/16

0700 Onsite - repack samples

CAR OWA, Hydco

0800 PSI onsite Prep to Develop

0815 AT 1310. MW01

W.D. = 2.27' TDC 2.5' _{3.5}

1 vol = 15.2 gal

5 vol = 76

+ 35 gal (5 x 7 gal added)

Total = 111

Construct Surge block & down pump.

0910 D. Wilkerson calls -

Says do not develop - we'll need the day next week between wells.

Packing

1015 PSI offsite

I conduct a windshield survey of area about 1310.

Take Samples to Lab + FedEx

1215 Drive to AT.

D. Humphreys

18

MON 8/26/96 PS, low humid, sl. breeze

0700 On-site - get water, unbad drums

0800 Setup on PDO - MW1

add 7 gal water

red pt. 11 w/ plug

Drum 12

Drums 12, F

Sand - 30 lbs $4\frac{1}{2}$

Bark - $\frac{1}{4}$ bag

Grout - 5 gallon

Hydrate bombastic w/ 3 gal potable water

0930

19

(Mon cont)

1000 Setup on PDO - MW102

add 7 gal water

Drum 13

Hydrate w/ 3 gal pot water

Clean up site

- 45 drums from DAG - soil emptied

empty drums stored upside down

1130 - Car D Wildman about drums - be

exp's Doug Swanson was supposed to

take care of the drums

- Decora - use Drum 17

1200 Lunch

1300

(Mon 6/1)

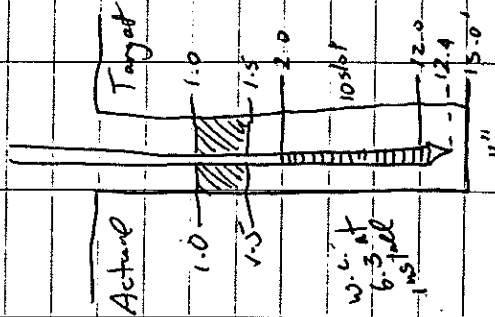
1300 PSI onsite

Setup on MW03

P20

Drum 14, 15, 16

No added water



H20 Hydrate w/ 3 gal pot. water

Clean up site

- Dry summer visits - ask about drums

1505 Gravel MW01 - 5 gal

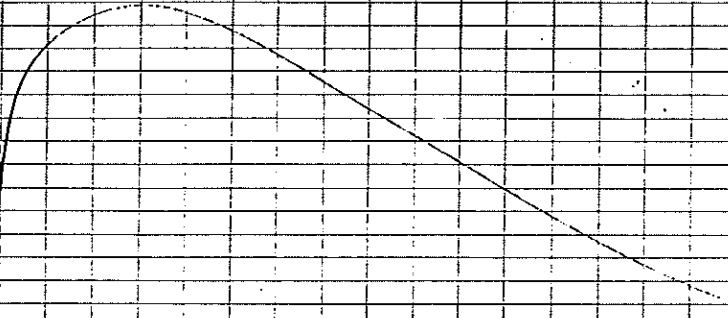
Cut Pro covers to fit

(Mon 6/1)

1600 Set Pro cover on MW02

1800 Set Pro cover on MW03

1710 Offsite



Dr. Humphreys

TUES 8/27/96 PC, hot humid

0700 Chomp out sock @ B. 133

Measure product in 728 MW8 tank.

8" water 17 1/2" product

0715 At PDD yard - PSI unloads drums.

0745 Setup on PDD - MW 04 (background)

Cont Drum 15

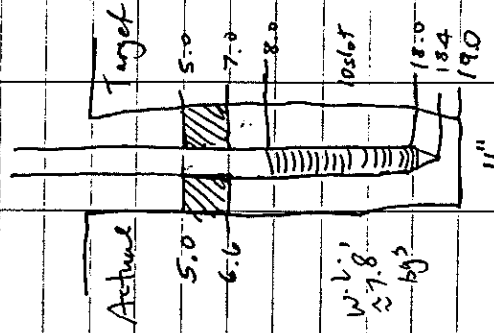
Drum 16

Chesse Angers 10 gals

Sand - 6 bag

Bart - 3/4 bag

Grout - 2 bag

W.V. 1
~ 7.8
kg9.95
2.2/1.5

(Tues Cont)

0912 Call Wes Smith - (D. W. Herman not in)

discuss clay @ MW 4 + where to set

well - we decide on section 8-18'

1' sand, 2' bentonite 7-5' to sand

well in clay. Will still probably have a

submerged screen

0925 set well

0945 Hydrate w/ 3 gals pot. water

clean up site - PSI pickup has flat

1015 At Leam - PSI to Home Depot + mechanic

1040 M4E to Lab

1100 Lunch

1215 PSI unster - in bond drums @ PDD.

Got machine to make pads

1230 Grout PDD - MW 04

1255 AT 13.0 - No seen water on

1315 whole pump hose - Kenny goes to

1410 Dev Clap 1310 - MW 01

110 600 - photo - clear

V. 50, milk

but can read thru 50 Hk

(Friesant)

1600

Survey 1310

PSI offsite

PAC offsite

WED 8/28/96 PC, bot, humid PMHWS
 0630 Galvanize OVA + Hydacs
 0700 Onsite, prep to develop
 0705 PSI onsite
 Wackon surge block
 0750 AT P20-MW01 - prep to develop
 W.C. 8.05 - 2.8 sticking - 5.3 bgs
 (Drum 21, 23)
 1016 End - Effort / Photo
 Decon
 1058 W.C. P20-MW03 8.40' TOC
 - 2.7' sticking
 5.7' bgs
 1 vol = 10.1 gal 5 vol = 50.5 gal
 (Drums 25) 20
 - dry @ 9' and every 3-4 gal thereafter
 after 3-4 min recharge period
 1220 End PSI block
 1300 } Lunch
 1320 Onsite, PSI painting boards
 + pad on P20 MW04
 MFE cleans pumps

(Wed Gen 4)

1340

Move to PDD-MW04

9.76' TOC - 34" stick = 6.9' bgs

1.6 gal / ft x 10 ft = 16 gal = 1 vol + 1.2 gal

1 vol = 16.2 gal

5 vol = 81 + 50 gal removed

= 131 gal to be removed

Drum 27, 28, 30

1430 PSI to decompress

1450 Rain

1725 Offsite - Rain

Stopped PDD-MW04 @ 100 gal

Lacking 30 gal.

D. Humphreys

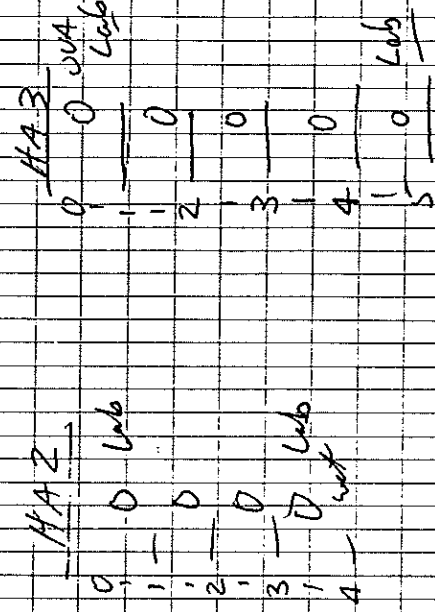
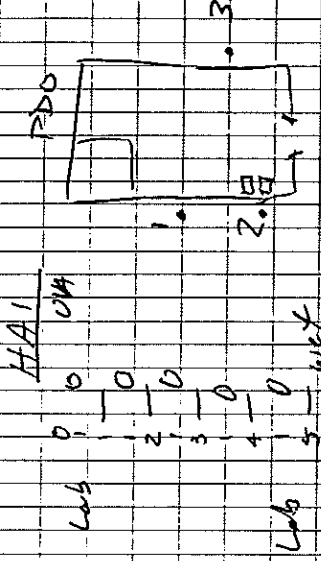
THURS 8/20/83

0650 Onsite, PSI onsite, resume

development @ PDD-MW04

0810 Setup for HAs, PSI looking down

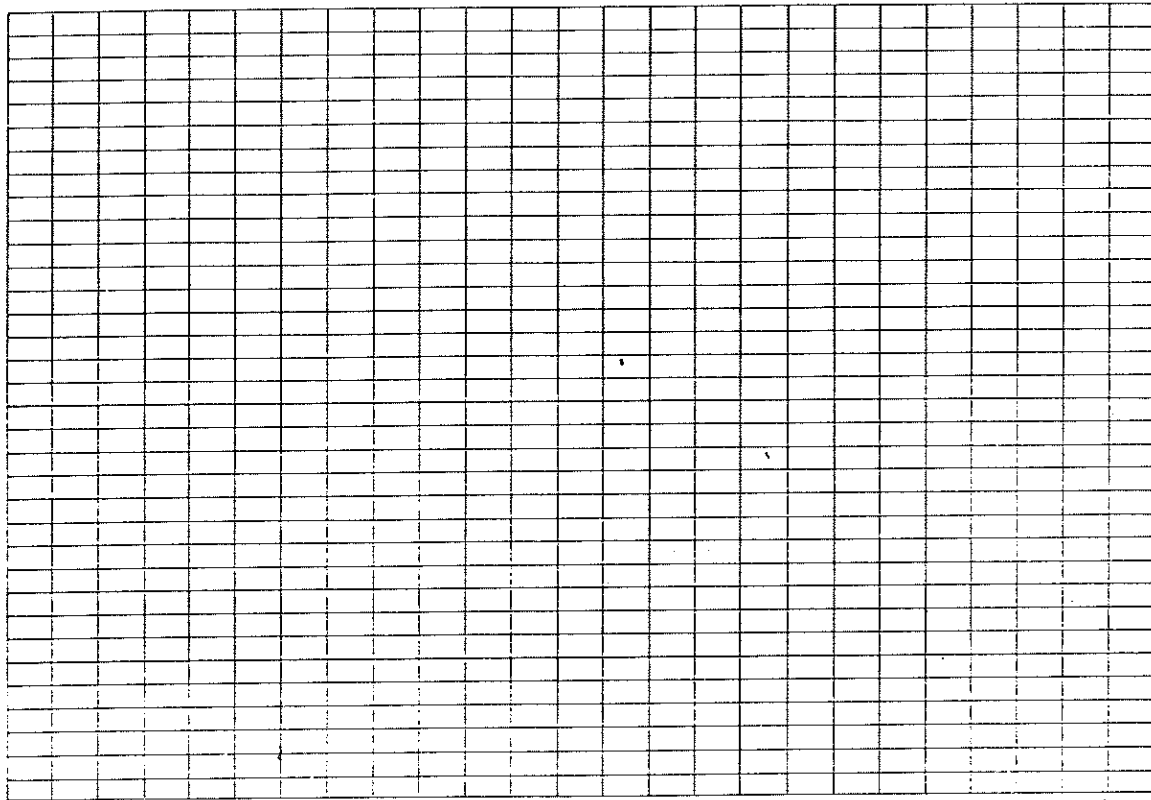
Drum 31



(Thurs Cont.)

1100 Offsite - to hotel.
 1225 AT Lab - drop off samples
 1235 To ATL

D. Humphreys



8-13-96

2

Tues.

HAAF

1615. Setup on 1310-MW803

Time

Sample

OVA

Lab #

1635

0-2'

30

1310-MW80301 *

1645

2'-4'

21000

1310-MW80302

1655

4'-6'

360

1310-MW80302

* Dug - 1310-MW806 collected at 1310-MW80301 location.

Prodd

J.

8-14-96

3

HAAF - Saw. GA.

Wed.

Arrive: 0640

1245. Collected equip blank at

PDO-JB01 location. PDO-GR01.

1515. Setup on PDO-SB01

Time Sample

OVA

Lab #

1530

0-2'

25

PDO-SB0101

1540

2'-4'

25

PDO-SB0102 *

* Collected core lab split

Prodd

J.

8-15-96

4

Time	Sample	OVA	Lab #
0800	Set up on PDO-SB002		
* 0815	0-2'	1.5	PDO-SB0001
0830	2-4'	25	PDO-SB0002
* PDO-SB0001	is 115/1450		
0950	Set up on PDO-SB003		
1000	0-2'	0	PDO-SB0001
1015	2-4'	60	PDO-SB0002
1115	Set up on PDO-SB04		
Time	Depth	OVA	Lab #
1125	0-2	1.5	PDO-SB0401
* 1140	2-4		PDO-SB0402
* PDO-SB0402	taken as dup PDO-SB16		
1400	Set up on PDO-SB05		
Time	Sample	OVA	Lab #
1415	0-2'	8	PDO-SB0501
* 1425	2-4'	22	PDO-SB0502
* Core	lab split sample		

5

1515	Set up on PDO-HPW01		
1520	Collected PDO-HPW01 sample		
1500	"	"	Tri p Blank
1550	Set up on PDO-HPW02		
1600	Collected PDO-HPW02 sample		

M. J. J.

8 16-86

H.A.A.F.

6 Fri.

5 A.V. 653

0650 - Arrive

0715 - Set up on 1310 - HPW01

0745 - Collected 1310 - HPW01

0800 - Set up on 1310 - HPW02

0825 - Collected 1310 - HPW02 + ~~HPW03~~ ^{HPW04}

0900 - Set up on 1310 - HPW03

0930 - Collected 1310 - HPW03 + 5p/14

1000 - Set up on 1310 - HPW04

1030 - Collected 1310 - HPW04

" " 1310 - HPW07 (DWP)

" " MS/MSD

1240 - Set up on PDO-SB06

Time Sample O.V.A. Lab #

1300 0-2 3 PDO-SB0601

1305 2-4 5 PDO-SB0602

1330 - Set up on PDO-SB07

Time Sample O.V.A. Lab #

1340 0-2 0 PDO-SB0701

1350 2-4 18 PDO-SB0702

1455 - Set up on PDA-SB08

Time Sample O.V.A. Lab #

* 1505 0-2 ~~PDO-SB0801~~ ^{GR}

* 1520 2-4 4.5 PDO-SB0801

* Collected dup at PDO-SB0801 (PDO-SB17)

7

1550 - Set up on PDO-SB09

Time Sample O.V.A. Lab #

1600 0-2 14 PDO-SB0901

1610 2-4 100 PDO-SB0902

[Handwritten signature]

P-17-94

8 SAT. H.A.F. Saw. G.A.

0655 - Arrive
 0720 - Set up on PDO-SB10
 Time Sample O.V.A. Lab #
 * 0825 0-2 4.5 PDO-SB1001
 0840 2-4 5 PDO-SB1002

* Collected split at PDO-SB1001

0800 - Set up on PDO-SB11
 Time Sample O.V.A. Lab #
 0810 0-2 9 PDO-SB1101
 0815 2-4 31 PDO-SB1102

0855 - Set up on PDO-SB12
 Time Sample O.V.A. Lab #
 0905 0-2 3.5 PDO-SB1201
 * 0915 2-4 22 PDO-SB1202
 * MS/MSD

0940 - Set up on PDO-SB13
 Time Sample O.V.A. Lab #
 * 0950 0-2 3 PDO-SB1301
 1000 2-4 55 PDO-SB1302
 * Dup PDO-SB13 at PDO-SB1301

1230 - Set up on PDO-SB14
 Time Sample O.V.A. Lab #
 1235 0-2 3 PDO-SB1401
 1245 2-4 26 PDO-SB1402

1310 - Set up on PDO-SB15
 Time Sample O.V.A. Lab #
 1315 0-2 1.5 PDO-SB1501
 1325 2-4 5 PDO-SB1502

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8-26-96

10

Mon

H.A.A.F.

Saw. GA

Arrive: 0700

0800 - Set up on PDO-mwB01

Time Sample OVA Lab #

0835 0-2 .5 PDO-mwB0101

* 0845 2-4 2 PDO-mwB0102

* Corps Lab split taken PDO-mwB0102

1000 - Set up on PDO-mwB02

Time Sample OVA Lab #

1010 0-2 1.5

1015 2-4 50 PDO-mwB0201

* 1025 4-6 50 PDO-mwB0202

* Dup PDO-mwB05

1320 - Set up on PDO-mwB03

Time Sample OVA Lab #

* 1330 0-2 2 PDO-mwB0301

1340 2-4 2 PDO-mwB0302

* 1345/mid

D. Powell

8-27-96

11

Tuesday

Tues

Arrive: 0650

0745 Set up on PDO-mwB04

Time Sample OVA Lab #

0755 0-2 1 PDO-mwB0401

0805 2-4 7 PDO-mwB0402

~~4-6 ok~~

D. Powell

8/28/96

12 Wed 1 Hunter, AAF Saw, GFA
 Arrive: 0700
 0745 Set up on 1310-mw03 for development.
 0810 - Completed development
 1020 - Set up on P20-mw02
 1200 - Completed development

Revised

9-16-96 Mon 13

Hunter, AAF Saw, GFA
 1300 - Arrive at P20 yard.
 1410 - Commenced P20-HA0701
 Time Depth DV/A Lab #
 1415 0-1 0 P20-HA0701
 1425 1-2 0 P20-HA0702
 * Collected split @ P20-HA0702

1450 - Set up on P20
 Time Depth DV/A Lab #
 1455 0-1 140 P20-HA0701
 1505 1-2 >1000 P20-HA0702
 * Collected Dup P20-HA11

1525 - Set up on P20-HA060
 Time Depth DV/A Lab #
 1530 0-1 2.5 P20-HA0601
 1535 1-2 2.5
 1545 2-3 0
 1555 3-4 0
 1605 4-5 10 P20-HA0602

1630 - Set up on P20-HA070
 Time Depth DV/A Lab #
 1635 0-1 0 P20-HA0701
 1640 1-2 1.5
 1650 2-3 1.5
 1655 3-4 5.5
 1700 4-5 7
 P20-HA0702

8125196

12

Wed

Hunter AAF

SAW

Get

Arrive: 0700

0745 - Set up on 1310-mw03 for development

0910 - Completed development

1020 - Set up on 700-mw02

1200 - Completed development

[Large handwritten flourish or signature]

9-16-96

13

Sat

Hunter AAF

Get

Mon

1300 - Arrive at PDO yard

1410 - Commence PDO-HA001

Time Depth OVA Lab #

1415 0-1 0 PDO-HA001

* 1425 1-2 0 PDO-HA002

* Collected split @ PDO-HA002

1450 - Set up on HA05

Time Depth OVA Lab #

1455 0-1 140 PDO-HA05

* 1505 1-2 1000 PDO-HA05

* Collected Dup PDO-HA11

1525 - Set up on PDO-HA06

Time Depth OVA Lab #

1530 0-1 2.5 PDO-HA06

1535 1-2 1.5

1545 2-3 0

1555 3-4 0

1605 4-5 10 PDO-HA06

1630 - Set up on PDO-HA07

Time Depth OVA Lab #

1635 0-1 0 PDO-HA07

1640 1-2 1.5

1650 2-3 1.5

1655 3-4 5.5

1700 4-5 7

PDO-HA07

9-16-86

14 Mon

Hunter AAP

Time	Depth	OVA	Lab #
1730	0-1	Ø	PDO-HA0801
1735	1-2	Ø	
1740	2-3	Ø	
1745	3-4	Ø	
1750	4-5	1.5	PDO-HA0802

1810 - Set up on PDO-HA09

Time	Depth	OVA	Lab #
1815	0-1	Ø	PDO-HA0901
1820	1-2	Ø	
* 1825	2-3	Ø	PDO-HA0902
OK	3-4		
OK	4-5		

* Collected Split Sample

1855 - Set up on PDO-HA10

Time	Depth	OVA	Lab #
1900	0-1	Ø	PDO-HA1001
1905	1-2	Ø	
* 1910	2-3	Ø	PDO-HA1002
* Collected Dup - PDO-HA12			

A. Lovell

9-17-86

15

Tues.

Hunter AAP

0800 - Arrive			
0835 - Commence gauging MW's @ B.1310			
	MW	DTW	OVA
	1310-MW01	2.28	70
	1310-MW02	1.10	420
	1310-MW03	2.10	460
0930 - Set up on 1310-MW01			
1050 - Collected 1310-MW01 Sample			
0930 - Set up on 1310-MW02			
1100 - Collected 1310-MW02 Sample			
0945 - Set up on 1310-MW03			
1120 - Collected 1310-MW03 Sample			
1040 - Collected 1310-EH02			
1030 - " 1310-TB03			
1430 - Commence gauging MW's @ PDO yard			
	MW	DTW	OVA
	1-19	6.54	3020
	1-20	3.65	25
	1-21	3.85	40
	1-22	5.40	30
	1-23	6.15	70
	1-24	6.91	55
	1-25	9.46	100
	PDO-MW01	9.84/5.59	83
	PDO-MW02	9.84/11.14	70
	PDO-MW03	9.84/5.87	88
	PDO-MW04	9.84/7.08	20

9-17-94

16

Tues

Jav. G3A

1550 - Set up on 1-19

1715 - Collected 1-19 sample

1610 - Set up on 1-23

1730 - Collected 1-23 sample + dup P20-6005

1625 - Set up on 1-24

1745 - Collected 1-24 sample + spl.4

1650 - Set up on 1-25

1805 - Collected 1-25 sample + MS/MSD

1550 - Collected P20-ER02

Rowell

9-18-94

Wed 17

Hunter Aff

0700 - Arrive	
0745 - Set up on 1-21	
0840 - Sampled well # 1-21	
0810 - Set up on 1-20	
0950 - Sampled well # 1-20	
0825 - Set up on # 1-22	
1005 - Sampled well # 1-22	
0845 - Set up on P20-mw04	
1015 - Sampled "	
0855 - Set up on P20-mw01	
1025 - Sampled "	
0905 - Set up on P20-mw02	
1035 - Sampled "	
0915 - Set up on P20-mw03	
1045 - Sampled "	
1330 - Set up @ P20-SW/SE03 + dup SW/SE04	
1340 - Sampled P20-	
1400 - Set up on P20-SW02	
1415 - Sampled P20-	
1430 - Set up on P20-SW/SE01	
1440 - Sampled "	
1520 - Gauged Prod. Per Tank @ B. 228	
Water = 7" Total Vol = 29.5"	
1530 - Changed sock in P20 @ B. 133	

C. Rowell

18

1-23-97

Hunter ATF, SAV. GA

1115 - Arrive onsite

1130 - Chatham Const onsite to empty
IDW drums 28 drums 420 into
tank truck and spread 12
drums soil on ground.

1330 - Commence emptying tank truck
into 55
PH was measured @ 6.9.

1430 - Re-labeled sorbent sock drum.

1445 - Gauged tank at B. 728

Product = 5"

Water = 2.5"

1500 - Changed sock at FTA. MW07

1515 - " " B. 133 - PH 01

1520 - Stacked pallets at FTA yard
+ checked labels on phosphoric
drums.

1600 - Depart

GR

19

1-24-97

Hunter ATF, SAV. GA

0800 - Arrive.

0810 - Fortier Beckaling onsite to
remove empty drums as scrap
metal

0830 - Fortier departs w/ 40 empty
drums.

1020 - Laid low arrives to remove
5 drums (4 non Haz, 1 Haz)

1110 - DPW signs manifests, laid low
departs.

1200 - Depart site

GR

APPENDIX A
LEGAL DESCRIPTION

State of Georgia
County of Chatham

Personally before the undersigned officer authorized to administer oaths appeared Thomas D. Houston, REP., who being duly sworn, does state on oath the following:

This affidavit is given on the basis that the following described tract of land belonging to the United States of America and located at Hunter Army Airfield, Chatham County, Georgia, has been listed as site number 10105 on the Hazardous Site Inventory list prepared by the Environmental Protection Division, Department of Natural Resources, State of Georgia:

LEGAL DESCRIPTION OF THE HAZARDOUS SITE

The hazardous site consists of a parcel or tract containing 0.9552 acres more or less which is a part of a larger parent parcel or tract designated as Tract Number I-900 conveyed by Warranty Deed dated 29 September 1950 from the Mayor and Aldermen of the City of Savannah to the United States of America as recorded in Deed Book 52-J Office of the Clerk of Superior Court, Chatham County, Georgia. The hazardous site is more particularly described as follows:

Beginning at a point which is the Northwest corner at Longitude $81^{\circ}:08':24.32''$ West $32^{\circ}:01':50.30''$ North, thence S $46^{\circ}:00':00''$ W 300.58 feet to a corner at Longitude $81^{\circ}:08':26.84''$ West $32^{\circ}:01':48.25''$ North which is the Southwest corner, thence S $40^{\circ}:00':00''$ E 134.90 feet to a corner at Longitude $81^{\circ}:08':25.84''$ West $32^{\circ}:01':47.22''$ North which is the Southeast corner, thence N $47^{\circ}:00':00''$ W 311.08 feet to a corner at Longitude $81^{\circ}:08':23.20''$ West $32^{\circ}:01':49.33''$ North which is the Northeast corner thence N $44^{\circ}:00':00''$ W 137.56 feet to the point of beginning. The said parcel being locally designated as the Old PDO yard being enclosed by a Chain Link Fence located on Hunter Army Airfield, Chatham County, Georgia.

"This property has been listed on the state's hazardous site inventory and has been designated as needing corrective action due to the presence of hazardous waste, hazardous constituents, or hazardous substances regulated under state law. Contact the property owner or the Georgia Environmental Protection Division for further information concerning this property. This notice is provided in compliance with the Georgia Hazardous Site Response Act." Georgia Rules for Hazardous Site Response, Chapter 391-3-19.08(1).

Signature Thomas D. Houston REP

Title: Chief, Environmental &
Natural Resources Div
Directorate of Public Works
Fort Stewart, Georgia

Sworn to and subscribed before
me this 26 day of AUGUST, 1994.

Gwendolyn L. Myers
Notary Public

GWENDOLYN L. MYERS
Notary Public, Liberty County, Georgia
My Commission Expires Nov. 24, 1995

APPENDIX C
BORING LOGS

Hole No. PDO-HA01

DRILLING LOG		DIVISION SAV.	INSTALLATION HAAF	SHEET / OF 1 SHEETS
1. PROJECT HAAF PDO/1310		10. SIZE AND TYPE OF BIT 3" Hand auger		
2. LOCATION (Coordinates or Station) PDO		11. DATUM FOR ELEVATION SHOWN (BSM or AMSL) MSL		
3. DRILLING AGENCY M&E		12. MANUFACTURER'S DESIGNATION OF DRILL —		
4. HOLE NO. (As shown on drawing title and file number) PDO-HA01		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5	UNDISTURBED 0
5. NAME OF DRILLER D. Humphris / G. Rowell		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED — DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 5.0'		16. DATE HOLE STARTED 8/29/96 COMPLETED 8/29/96		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 20.4		
9. TOTAL DEPTH OF HOLE 5.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
19. SIGNATURE OF INSPECTOR D. Humphris				

ELEVATION •	DEPTH b	LEGEND V c V	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY •	BOX OR SAMPLE NO. i	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SAND: med-fine; Yell Br 10YR 5/6, silty- 20%, well-sorted, dry (SM)	—	1	OVA, ppm 0 Lab
	1		as above, w/ Yell-Rd 5YR 5/6 mottling (SM)	—	2	0
	2		CLAY: Lt Br 6Y 10YR 6/2, sandy 35% dry, low-med plastic, (CL)	—	3	0
	3		SAND: med-fine, clayey 30%, Yell Br + Yell Red mottling. Well-sorted (SC)	—	4	0
	4		as above, Lt. Br. 6Y 10YR 6/2, tr. glauconite + mica, clayey 30% (SC)	—	5	0 Lab
	5		E.O.B. @ 5.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-HA 02

DRILLING LOG		DIVISION SAV	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT HAAP PDO/1310		10. SIZE AND TYPE OF BIT 3" Hand Auger		
2. LOCATION (Coordinates or Station) PDO, SAV 6A		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY MFE		12. MANUFACTURER'S DESIGNATION OF DRILL —		
4. HOLE NO. (As shown on drawing title and file number) PDO-HA 02		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 4 UNDISTURBED 0		
5. NAME OF DRILLER D. Humphris / G. Rowell		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 4.0'		16. DATE HOLE STARTED 8/29/96 COMPLETED 8/29/96		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 20.3		
9. TOTAL DEPTH OF HOLE 9.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
		19. SIGNATURE OF INSPECTOR D. Humphris		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SAND: med-fine; dk GY Br 10YR 4/2 well sorted, silty 20%, dry (SM)	—	1	DVA, ppm 0 Lab
	1		: as above, GY 10YR 5/1, silty 5-10%, well sorted, dry (SW)	—	2	0
	2		: as above	—	3	0
	3		: dk Br 7.5YR 3/2, silty 10-15% moist-wet.	—	4	0 Lab
	4		(SW/SM) G.O.B. @ 4.0' by	—	—	
	5					
	6					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-HA03

DRILLING LOG		DIVISION SAV.	INSTALLATION HAFF	SHEET 1 OF 1 SHEETS
1. PROJECT HAFF PDO/1310			10. SIZE AND TYPE OF BIT 3" Hand Auger	
2. LOCATION (Coordinates or Station) SAV, 6A			11. DATUM FOR ELEVATION SHOWN (BSM or MSL) MSL	
3. DRILLING AGENCY MRE			12. MANUFACTURER'S DESIGNATION OF DRILL	
4. HOLE NO. (As shown on drawing title and file number) PDO-HA03			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER D. Humphris / G. Rowell			14. TOTAL NUMBER CORE BOXES	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 5.0'			16. DATE HOLE	STARTED 8/29/96 COMPLETED 8/29/96
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 17.7'	
9. TOTAL DEPTH OF HOLE 5.0'			18. TOTAL CORE RECOVERY FOR BORING	
19. SIGNATURE OF INSPECTOR D. Humphris				

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0	11 c/vr	SAND: med-fine; Black/Y. dk. GY 2.5% 2.5/1, dry, well sorted, silty 20% (SM)	—	1	OVA, ppm 0 Lab
	1		dk Yell Br. 10YR 5/4, silty 20% (SM)	—	2	0
	2		10YR 6/2 Lt Br GY + Yell Br - 5/6 mottling, moist, clayey 10%, well sorted tr. glauconite (SC)	—	3	0
	3		mostly Lt Br GY 10YR 6/2, clayey- 20-40%, well sorted, tr. glauconite + mic. moist (SC)	—	4	0
	4		as above, wet (SC)	—	5	0 Lab
	5		E.O.B. @ 5.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. P00-HA04

DRILLING LOG		DIVISION SAV.	INSTALLATION NAAF		SHEET 1 OF 1 SHEETS	
1. PROJECT P00/1310 (P00)			10. SIZE AND TYPE OF BIT 3" SS HAND AUGER			
2. LOCATION (Coordinates or Station) SAV. GA.			11. DATUM FOR ELEVATION SHOWN (TBM or BSL) MSL			
3. DRILLING AGENCY NA			12. MANUFACTURER'S DESIGNATION OF DRILL NA			
4. HOLE NO. (As shown on drawing title and file number) P00-HA04			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 2	UNDISTURBED 0
5. NAME OF DRILLER NA			14. TOTAL NUMBER CORE BOXES —			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —			
7. THICKNESS OF OVERBURDEN 2.0'			16. DATE HOLE		STARTED 9-16-96	COMPLETED 9-16-96
8. DEPTH DRILLED INTO ROCK NA			17. ELEVATION TOP OF HOLE 18.2'			
9. TOTAL DEPTH OF HOLE 2.0'			18. TOTAL CORE RECOVERY FOR BORING — %			
			19. SIGNATURE OF INSPECTOR <i>John B. [unclear]</i>			

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	10		Sand; fine-med; black to brown. 10YR 2/1 to 5/3 Silty - 30-35% well sorted	-	1	DVA, ppm Lab
	20		As above. dry wet.		2	0 Lab.
			E.D.B. = 2.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No.

P00-HA05

DRILLING LOG		DIVISION SAV	INSTALLATION HAAF	SHEET OF 1 SHEETS
1. PROJECT P00/1310 (P00)		10. SIZE AND TYPE OF BIT 3" SS HAND AUGER		
2. LOCATION (Coordinates or Station) SAV, GA		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY NA		12. MANUFACTURER'S DESIGNATION OF DRILL NA		
4. HOLE NO. (As shown on drawing title and file number) P00-HA05		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		14. TOTAL NUMBER CORE BOXES
5. NAME OF DRILLER NA		15. ELEVATION GROUND WATER		16. ELEVATION TOP OF HOLE
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		17. DATE HOLE		18. DATE HOLE
7. THICKNESS OF OVERBURDEN 2.0'		19. ELEVATION TOP OF HOLE 18.7'		20. ELEVATION TOP OF HOLE
8. DEPTH DRILLED INTO ROCK NA		21. TOTAL CORE RECOVERY FOR BORING		22. TOTAL CORE RECOVERY FOR BORING
9. TOTAL DEPTH OF HOLE 2.0'		23. SIGNATURE OF INSPECTOR <i>[Signature]</i>		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: fine-med; Gray to black 10YR 6/1 to 2/1 Well sorted, dry to wet (6") silty. 25% 1.30%		1	OVA, PPM Lab
	2.0		As above; black 10YR 2/1 wet to saturated. E.D.B. = 2.0'		2	140 Lab
	3.0					
	4.0					
	5.0					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-HA06

DRILLING LOG		DIVISION SAV	INSTALLATION HAARF	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310 (PDO)			10. SIZE AND TYPE OF BIT 3" SS HAND AUGER	
2. LOCATION (Coordinates or Station) SAV. GA			11. DATUM FOR ELEVATION SHOWN (SEA - MSL) MSL	
3. DRILLING AGENCY NA			12. MANUFACTURER'S DESIGNATION OF DRILL NA	
4. HOLE NO. (As shown on drawing title and file number) PDO-HA06			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 5
5. NAME OF DRILLER NA			14. TOTAL NUMBER CORE BOXES	UNDISTURBED 0
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 5.0'			16. DATE HOLE	STARTED 9-16-96
8. DEPTH DRILLED INTO ROCK NA			COMPLETED 9-16-96	
9. TOTAL DEPTH OF HOLE 5.0'			17. ELEVATION TOP OF HOLE 18.0'	
			18. TOTAL CORE RECOVERY FOR BORING %	
			19. SIGNATURE OF INSPECTOR <i>[Signature]</i>	

ELEVATION e	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: Reddish yellow to strong Brown to Black 7.5YR 6/6 - 4/6 to 2.5/1 fine to med well sorted dry silty - 25%		1	OVA, ppm 2.5 Lab
	2.0		1.5' - clay: Lt gray - yellow - gray 10YR 7/1 - 7/8 - 5/1 Low - med plasticity increasing sand 15% to 30% with depth dry		2	, 5
	3.0		As above moist		3	φ
	4.0				4	φ
	5.0		Sand: white - very pale br - light gray 10YR 8/1 - 8/3 7/1 Fine to med well sorted wet silty - 20% E.D.B - 5.0'		5	70% 9-16-96 110 LAB.

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-HA07

DRILLING LOG		DIVISION SAV	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT PDD/1310 (PDD)			10. SIZE AND TYPE OF BIT 3" SS HAND AUGER	
2. LOCATION (Coordinates or Station) SAV, GA			11. DATUM FOR ELEVATION SHOWN (BSM or MSL) MSL	
3. DRILLING AGENCY NA			12. MANUFACTURER'S DESIGNATION OF DRILL NA	
4. HOLE NO. (As shown on drawing title and file number) PDD-HA07			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 5 UNDISTURBED 0	
5. NAME OF DRILLER NA			14. TOTAL NUMBER CORE BOXES —	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —	
7. THICKNESS OF OVERBURDEN 5.0'			16. DATE HOLE STARTED 9-16-96 COMPLETED 9-16-96	
8. DEPTH DRILLED INTO ROCK NA			17. ELEVATION TOP OF HOLE 18.3'	
9. TOTAL DEPTH OF HOLE 5.0'			18. TOTAL CORE RECOVERY FOR BORING %	
			19. SIGNATURE OF INSPECTOR J. B. J.	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: Reddish yellow to str. br. to dk. 7.5YR 6/6-4/6-2.5/1 fine to med. well sorted dry silty. 15-20%		1	OVA, ppm Lab
	2.0		As Above		2	.5
	3.0		Clay: lt. gray-yellow-gray 10YR 7/1-7/8-5/1 Low-Med plasticity increasing sand 15%-30% with depth dry		3	1.5
	4.0		As Above		4	5.5
	5.0		Sand: white - very pale br. lt. gray 10YR 8/1-8/3-7/ Fine to med. well sorted wet silty. 15-20% E.O.B. - 5.0'		5	7.5 Lab.

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. P00-4A08

DRILLING LOG		DIVISION SAU	INSTALLATION HAAT	SHEET 1 OF 1 SHEETS
1. PROJECT P00/1310 (P00)		10. SIZE AND TYPE OF BIT 3" SS HAND AUGER		
2. LOCATION (Coordinates or Station) SAU, GA.		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY NA		12. MANUFACTURER'S DESIGNATION OF DRILL NA		
4. HOLE NO. (As shown on drawing title and file number) P00-4A08		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED: 5 UNDISTURBED: 0		
5. NAME OF DRILLER NA		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 5.0'		16. DATE HOLE STARTED 9-16-96 COMPLETED 9-16-96		
8. DEPTH DRILLED INTO ROCK NA		17. ELEVATION TOP OF HOLE 19.1'		
9. TOTAL DEPTH OF HOLE 5.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
		19. SIGNATURE OF INSPECTOR [Signature]		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: Reddish yellow - to blk 7.5YR 4/1-2.5/1 Fine-med. well sorted dry silty. 20%		1	OVA, FPM 0 Lab
	2.0		As Above		2	0
	3.0		Clay: Lt gray - yellow-gray 10YR 7/1-7/2.5/1 Low-Med Plasticity increasing sand with depth 15%-30%		3	0
	4.0		As above		4	.5
	5.0		As above moist Sand: white-very pal. brown lt. gray 10YR 8/1-9/3 7/1 Fine-med. Well sorted silty 15% wet		5	1.5 Lab
			E.O.B. 5.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-HA08

DRILLING LOG		DIVISION <u>SAV</u>	INSTALLATION <u>HAAF</u>	SHEET 1 OF 1 SHEETS
1. PROJECT <u>PDD/1310 (PDD)</u>			10. SIZE AND TYPE OF BIT <u>3" HAND AUGER SS</u>	
2. LOCATION (Coordinates or Station) <u>SAV. 6A</u>			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) <u>MSL</u>	
3. DRILLING AGENCY <u>NA</u>			12. MANUFACTURER'S DESIGNATION OF DRILL <u>NA</u>	
4. HOLE NO. (As shown on drawing title and file number) <u>PDD-HA08</u>			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED <u>3</u>
5. NAME OF DRILLER <u>NA</u>			UNDISTURBED <u>0</u>	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			14. TOTAL NUMBER CORE BOXES <u>—</u>	
7. THICKNESS OF OVERBURDEN <u>3.0'</u>			15. ELEVATION GROUND WATER <u>—</u>	
8. DEPTH DRILLED INTO ROCK <u>—</u>			16. DATE HOLE STARTED <u>9-16-96</u> COMPLETED <u>9-16-96</u>	
9. TOTAL DEPTH OF HOLE <u>3.0'</u>			17. ELEVATION TOP OF HOLE <u>19.4'</u>	
			18. TOTAL CORE RECOVERY FOR BORING <u>—</u> %	
			19. SIGNATURE OF INSPECTOR <u>[Signature]</u>	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: Lt gray - Black 10YR 7/1-2/1 Fine-med well sorted dry silty (10%)		1	<u>OVA, PPM</u> <u>0</u> Lab
	2.0		As Above Moist		2	<u>0</u>
	3.0		Sand: Black 10YR-2/1 Fine med well sorted Clayey (15%) wet.		3	<u>0</u> Lab
			E.O.B. 3.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-HA10

DRILLING LOG		DIVISION SAU	INSTALLATION HAAF		SHEET 1 OF 1 SHEETS
1. PROJECT PDD/1310 (PDD)			10. SIZE AND TYPE OF BIT 3" SS HAND AUGER		
2. LOCATION (Coordinates or Station) SAU, GA			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY NA			12. MANUFACTURER'S DESIGNATION OF DRILL NA		
4. HOLE NO. (As shown on drawing title and file number) PDD-HA05			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 3 UNDISTURBED 0
5. NAME OF DRILLER NA			14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 3.0'			16. DATE HOLE STARTED 9-16-96		COMPLETED 9-16-96
8. DEPTH DRILLED INTO ROCK —			17. ELEVATION TOP OF HOLE 19.1'		
9. TOTAL DEPTH OF HOLE 3.0'			18. TOTAL CORE RECOVERY FOR BORING — %		
			19. SIGNATURE OF INSPECTOR [Signature]		

ELEVATION e	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	1.0		Sand: Black 10YR 2/1 Fine-med, subnd well Sorted dry silt -15%		1	DVA, PPM φ Lab
	2.0		As above moist		2	φ
	3.0		As Above wet		3	φ Lab
	4.0					
	5.0					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-SB1

DRILLING LOG		DIVISION SAV.	INSTALLATION HAAF	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310 PDO			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA	
2. LOCATION (Coordinate or Station) SAV 6A			11. DATUM FOR ELEVATION SHOWN (BSM or MSL) MSL	
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) PDO-SB1			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN DISTURBED 5 UNDISTURBED 0	
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES -	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 15.0'			16. DATE HOLE STARTED 8/14/96 COMPLETED 8/14/96	
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 16.8'	
9. TOTAL DEPTH OF HOLE 15.0'			18. TOTAL CORE RECOVERY FOR BORING - %	
			19. SIGNATURE OF INSPECTOR D. Humphreys	

ELEVATION c	DEPTH b	LEGEND V C V	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0	0.6.0.	GRAVEL + SAND: fine-med. silty 25%, Gray 7.5YR 5/1 Poor sorting. damp.	Post Hole 101.5'	1	Blows 3 1/2 spoons 1535 Lub OVA 1 ppm
	2	0.6.0.	Gray 5Y 5/1, firm, sand (SM)			14/6 HS=25 BZ=0
	4		SAND: fine-med; Gray 5Y 6/1, silty 25%, well-sorted, moist-wet, loose-firm fr. glauconite (SM)	79	2	8-11-12-14 1542 Lub 2" interval sample HS=25 BZ=0
	6		as above; clay 10%-2mm balls. loose-wet (SM)	58	3	2" spoons 6-7-9-7 HS=NA BZ=0
	8		Cuttings as above	-	-	Auger
	10		SAND: med-fine, Reddish 7.5YR 4/6 silty 30%, well-sorted. v. loose. wet (SM)	50	4	4-6-6-6 Auger BZ=0
	12		Cuttings as above - runny sands	-	-	Auger
	14		dk gray 5Y 4/1, silty 30% as above (SM)	75	5	5-7-7-5
	16		E.O.B. @ 15.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-5802

DRILLING LOG		DIVISION SAU	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT PDD/1310 PDD		10. SIZE AND TYPE OF BIT 4 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAU 6A		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDD-5802		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☐ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 15.0'		16. DATE HOLE		STARTED 8/15/96 COMPLETED 8/15/96
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 18.1'		
9. TOTAL DEPTH OF HOLE 15.0'		18. TOTAL CORE RECOVERY FOR BORING —		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0.0		Gravel & Sand: Lt. Yell Br 10YR 6/4, silty- clay 30%, loose, firm, dry, poorly sorted (GC/GM)	67	1	BLOWS 0814 5-16-9-4 3" spoons Lab HS-1.5 B2-0
	2		SAND: med-fine, v. Pale Br 10YR 7/3, silty/clay 25%, firm-v. firm, most-wet at bottom, well sorted. (SC) (SM)	71	2	12-17-20-22 0830 Lab HS-22 B2-0 2 initial wet sample
	4		as above, less silty 10%	71	3	5-7-7-6 2" spoons B2-0
	6		Cuttings as above	—	—	↑ Auger
	8		Yell 10YR 7/6, silty 10%, tr. mica, tr. glauconite, well sorted, wet, v. base-loose (SW)	71	4	4-7-10-8 B2-0
	10		Cuttings as above, runny sands	—	—	↑ Auger
	12		Same as above	—	—	↓
	14		(SW)	50	5	4-7-6-4 B2-0
	16		E.O.B. @ 15.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-5B03

DRILLING LOG		DIVISION SAV	INSTALLATION HAAF		SHEET 1 OF 1 SHEETS
1. PROJECT HAAF PDD/1310			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAV 6A			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDD-5B03			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 5 UNDISTURBED 0
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 15.0'			16. DATE HOLE STARTED 8/15/96 COMPLETED 8/15/96		
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 17.0'		
9. TOTAL DEPTH OF HOLE 15.0'			18. TOTAL CORE RECOVERY FOR BORING — %		
			19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		Concrete: 6" SAND: med-fine; str. br 7.5YR 7/6. silty 10%, well sorted, damp, loose-firm. tr. glauconite + mica (SW)	77	1	13 BLOWS 3" spoons 1000 Lab Drive 18" 7-12-72 OVA. ppm HS = 0 BZ = 0
	4		clay by 7.5YR 6/1 to 4.5YR 6/1 + Br mottling, clay 20%, loose (SW)	75	2	10' Lab 6-8-8-8 # initial wet sample HS = 60 BZ = 0
	6		CLAY - sandy 35%, dry, plastic, firm (CL) as above	75	3	2" spoons 3-6-9-16 HS = NA BZ = 0
	8		SAND: med-fine, yell 2.5Y 8/6, glauc + mica (SW) cuttings as above	—	—	↑ Auger ↓
	10		CLAY: 10YR 5/6 YH Br, plastic, sandy 20% (CL) stiff. SAND: med-fine, white 10YR 8/1, well sorted, silty 5%, tr. glauconite + mica (SW)	83	4	9-12-9-8 BZ = 0
	12		cuttings mix of clay + sand	—	—	↑ Auger ↓
	14		as above 2" clay layer 6-11-8-7	50	5	8-11-8-7 BZ = 0
	16		E.O.B. @ 15.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-5B04

DRILLING LOG		DIVISION SAU	INSTALLATION HAAR	SHEET OF 1 SHEETS
1. PROJECT HAAR 130/PDO		10. SIZE AND TYPE OF BIT 4 1/4" ID HSA		
2. LOCATION (Coordinates or Station) PDO 5N GA		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CM75		
4. HOLE NO. (As shown on drawing title and file number) PDO-5B04		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 10'		16. DATE HOLE	STARTED 8/15/96	COMPLETED 8/15/96
8. DEPTH DRILLED INTO ROCK		17. ELEVATION TOP OF HOLE 17.2'		
9. TOTAL DEPTH OF HOLE 10.0'		18. TOTAL CORE RECOVERY FOR BORING —		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0.0	✓	GRAVEL & SAND: Black 10YR 2/1; poorly sorting, clay. (GC) firm-v. firm.	75	1	Blous 1125 OVA, ppm 3' spoons HS 1.5 17-22-19-17 BZ=0
	2.0		SAND: med-fine, Yell-B 10YR 5/4 to dk by - 9/1 well sorted, damp, silty 20% (SM)	58	2	3' spoon 2 initial 3-3-3-5 1140 wet sample HS: 2.5 BZ=0
	4.0		: Gy Br 10YR 5/2, silt 10% wet well sorted, v. loose (SW)	80	3	2' spoons 7-9-9-5 BZ=0
	6.0		CLAY - Wood pieces, Gy Br, sandy 40% plastic, soft, moist (CL)			
	8.0		fingerroot			
	10.0		SAND - clayey 25%, med-fine, well sorted wet, Gy Br 10YR 5/2 (SC)			
	12.0		as above			
	14.0		as above, clayey 30% (SC)			
	16.0		clayey clay 5%, Lt. Gy 10YR 7/2, well sorted (SW) wet, loose, fr. glauconite + mica. E.O.B. @ 10.0'			
	18.0					
	20.0					
	22.0					
	24.0					
	26.0					
	28.0					
	30.0					
	32.0					
	34.0					
	36.0					
	38.0					
	40.0					
	42.0					
	44.0					
	46.0					
	48.0					
	50.0					
	52.0					
	54.0					
	56.0					
	58.0					
	60.0					
	62.0					
	64.0					
	66.0					
	68.0					
	70.0					
	72.0					
	74.0					
	76.0					
	78.0					
	80.0					
	82.0					
	84.0					
	86.0					
	88.0					
	90.0					
	92.0					
	94.0					
	96.0					
	98.0					
	100.0					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-5805

DRILLING LOG		DIVISION SAV		INSTALLATION HAAF		SHEET 1 OF 1 SHEETS	
1. PROJECT PDO/1310				10. SIZE AND TYPE OF BIT 4 1/4" ID HSM			
2. LOCATION (Coordinates or Station) SAV 6A				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL			
3. DRILLING AGENCY PSS				12. MANUFACTURER'S DESIGNATION OF DRILL CME75			
4. HOLE NO. (As shown on drawing title and file number) PDO-5805				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4 UNDISTURBED 0	
5. NAME OF DRILLER K. Durham				14. TOTAL NUMBER CORE BOXES —			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER —			
7. THICKNESS OF OVERBURDEN 10.0'				16. DATE HOLE STARTED 8/15/96 COMPLETED 8/15/96			
8. DEPTH DRILLED INTO ROCK 0				17. ELEVATION TOP OF HOLE 17.7'			
9. TOTAL DEPTH OF HOLE 10.0				18. TOTAL CORE RECOVERY FOR BORING — %			
				19. SIGNATURE OF INSPECTOR D. Humphries			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	2		SAND: med-fine; v. dk gy Br 10YR 4/2, tr. gravel, silty 20%, poor sorting, damp. v. loose-firm. (SM)	79	1	Blows 3" spurs 1415 6-11-16-13	QA, ppm HS=8 BZ=0
	4		SAND: med-fine; Lt. Br gy 10YR 6/2, clayey 10-30%, wet, loose, well sorted, tr. glauconite & mica, massive. (SM)	79	2	6-11-12-13 2" spurs initial wet sample 5-6-5-6	1424 HS=22 BZ=0
	6		SAND: med-fine; Lt. Br gy 10YR 6/2, clayey 10-30%, wet, loose, well sorted, tr. glauconite & mica, massive. (SM)	58	3	5-6-5-6	BZ=0
	8		Cuttings as above	—	—	↑ Auger ↓	
	10		SAND: med-fine, Lt. Br gy 10YR 7/2, well sorted, uniform, tr. glauconite, silty 5%, v. loose-loose. wet. (SW)	50	4	3-5-7-4	BZ=0
	12		G.O.B. @ 10.0' bgs	—	—		
	14					NA	
	16						

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-5306

DRILLING LOG		DIVISION SAV		INSTALLATION HAAF		SHEET 1 OF 1 SHEETS	
1. PROJECT PDO/1310 PDO				10. SIZE AND TYPE OF BIT 4 1/4" ID HSA			
2. LOCATION (Coordinates or Station) SAV 6A				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL			
3. DRILLING AGENCY PSI				12. MANUFACTURER'S DESIGNATION OF DRILL CME 75			
4. HOLE NO. (As shown on drawing title and file number) PDO-5306				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4 UNDISTURBED 0	
5. NAME OF DRILLER K. Durham				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN 10.0'				16. DATE HOLE		STARTED 8/16/96 COMPLETED 8/16/96	
8. DEPTH DRILLED INTO ROCK				17. ELEVATION TOP OF HOLE 16.1'			
9. TOTAL DEPTH OF HOLE 10.0'				18. TOTAL CORE RECOVERY FOR BORING %			
				19. SIGNATURE OF INSPECTOR D. Humphris			
ELEVATION a	DEPTH V b y	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	2		SAND: med-fine; v. dk gy 10YR 3/1, dk yel Br - 4/6 mottling, coal pieces, silty 20% tr. gravel, poor sorting, loose-firm, dry (SM/SP)	100	1	BLOWS 1258 lb OVA, ppm 3" spoons 8-11-15-13 HS=3 BZ=0	
	4		Lf. gy 10YR 7/1, well sorting, wet. tr. glauconite + mica, silty 5% loose-firm, massive. (SW)	63	2	1-18-18-19 1305 Lab wet sample initial BZ=0 HS=5	
	6		as above, gy 10YR 5/1, silty 15% (SM)	88	3	2" spoons 8-12-13-12	
	8		runny sands	—	—	Auger	
	10		as above, silty 5-10% (SW)	25	4	5-7-15-17 BZ=0	
			G.O.B. @ 10.0'				

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. P20-5807

DRILLING LOG		DIVISION SAV	INSTALLATION HAFF	SHEET 1 OF 1 SHEETS
1. PROJECT P20/1310 P20			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA	
2. LOCATION (Coordinates or Station) STV. 6A			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY PSS			12. MANUFACTURER'S DESIGNATION OF DRILL CMG 75	
4. HOLE NO. (As shown on drawing title and file number) P20-5807			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4 UNDISTURBED 0
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES —	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —	
7. THICKNESS OF OVERBURDEN 10.0'			16. DATE HOLE STARTED 8/16/96 COMPLETED 8/16/96	
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 16.1'	
9. TOTAL DEPTH OF HOLE 10.0'			18. TOTAL CORE RECOVERY FOR BORING — %	
			19. SIGNATURE OF INSPECTOR D. Humphreys	

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		SAND: med-fine, yellow, 10YR 5/6 to v. dk. 6YR 3/2 well sorted, silty 10-25%, damp, firm. (SM)	75	1	Blows 1345 Lab 3" spoons 12-13-14-15 HS=0 BZ=0
	4		as above. 6Y 10YR 6/1, silty clayey 20%-30%, well sorted. wet at bottom loose-firm (SM/SC)	75	2	5-10-11-12 1400 Lab HS=18 BZ=0
	6		lt yell Br -6/4 + 6Y -6/1 mottling v. loose-loose (SM/SC)	50	3	2" spoons 5-5-3-4 initial wet sample
	8		CLAY: gray 5Y 5/1, plastic, sandy 20% (CL)	—	—	↑ Auger
	10		as above, sand/clay mix	—	—	↓ 3-5-5-7 BZ=0
			CLAY: 6Y 5Y 5/1, plastic, sandy 20% (fat)	90	4	
			SAND: Gray, clayey 10-30% wet (SC)			
			E.O.B. @ 10.0'			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-5808

DRILLING LOG		DIVISION SAV	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310		10. SIZE AND TYPE OF BIT 4 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAV 6A		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDO-5808		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 10.0'		16. DATE HOLE STARTED 8/16/96 COMPLETED 8/16/96		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 16.2'		
9. TOTAL DEPTH OF HOLE 10.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
19. SIGNATURE OF INSPECTOR D. Humphris				

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
	2		SAND: dk br 10YR 3/3; med-fine - silty 20% COAL: dry, sand mix No sample taken (SM)	83	1	BLOWS 150 3" spoons 8-15-17-20 OUA ppm HS - NA BZ = 0
	4		SAND: med-fine, gy B&M 5/2, silty 20% well sorted, loose-firm. wet at bottom (SM)	67	2	5-7-11-14 1525 HS = 4.5 BZ = 0
	6		as above. Lt B by 10YR 6/2. fr. glauconite, v. loose-firm. wet massive. (SM)	75	3	2" spoons 4-9-7-11 initiate wet sample BZ = 0
	8		Cuttings as above	—	—	
	10		Gray-silt, well sorted, as above (SM) CLAY: fat, plastic, sandy 10% (CL)	83	4	3-11-3 BZ = 0
	12		E.O.B. @ 10.0' by			
	14					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-5B09

DRILLING LOG		DIVISION SAV		INSTALLATION HAAF		SHEET 1 OF 1 SHEETS	
1. PROJECT PDD/130				10. SIZE AND TYPE OF BIT 4 1/4" ID HSA			
2. LOCATION (Coordinates or Station) SAV 6A				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL			
3. DRILLING AGENCY PSI				12. MANUFACTURER'S DESIGNATION OF DRILL CME 75			
4. HOLE NO. (As shown on drawing title and file number) PDD-5B09				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4 UNDISTURBED 0	
5. NAME OF DRILLER K. Durham				14. TOTAL NUMBER CORE BOXES			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER			
7. THICKNESS OF OVERBURDEN 10.0'				16. DATE HOLE		STARTED 8/16/96 COMPLETED 8/16/96	
8. DEPTH DRILLED INTO ROCK 0				17. ELEVATION TOP OF HOLE 16.5'			
9. TOTAL DEPTH OF HOLE 10.0'				18. TOTAL CORE RECOVERY FOR BORING			
				19. SIGNATURE OF INSPECTOR D. Thompson			
ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	0	0' 2'	SAND: med-fine, to gravel, black w/yr 2% to yellow - 7/6 to 5/16 mm. dry, loose - typical (SM) silty 20%	88	1	Blows 3" spoons 10-11-10-7	1600 DVA, 100 mm HS=14 BZ=0
	2		CLAY: sandy 40%, 6 mm, low plastic, (CL) : as above.	58	2	5-6-6-9	1615 HS=100 BZ=0
	4		SAND: Gray w/yr 5/1, wet, well sorted (SW) silty 10% : as above	25	3	2" spoons 5-6-7-5	BZ=0
	6		Cuttings as above	-	-	Auger	
	8		as above, clay 20%	75	4	3-6-6-8	BZ=0
	10		(SC) E.O.B. @ 10.0' bgs				
	12						

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-SB/D

DRILLING LOG		DIVISION SAV		INSTALLATION HAAT		SHEET 1 OF 1 SHEETS	
1. PROJECT PDO/1310				10. SIZE AND TYPE OF BIT 4 1/4" ID HSA			
2. LOCATION (Coordinates or Station) SAV 6A				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL			
3. DRILLING AGENCY PSI				12. MANUFACTURER'S DESIGNATION OF DRILL CME 75			
4. HOLE NO. (As shown on drawing title and file number) PDO-SB/D		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4		DISTURBED 4		UNDISTURBED —	
5. NAME OF DRILLER K. Durhan				14. TOTAL NUMBER CORE BOXES —			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. ELEVATION GROUND WATER —		16. DATE HOLE STARTED 8/17/96 COMPLETED 8/17/96	
7. THICKNESS OF OVERBURDEN 10.0'				17. ELEVATION TOP OF HOLE 16.2'			
8. DEPTH DRILLED INTO ROCK 0				18. TOTAL CORE RECOVERY FOR BORING —			
9. TOTAL DEPTH OF HOLE 10.0'				19. SIGNATURE OF INSPECTOR D. Humphreys			
ELEVATION e	DEPTH h, b, v	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOVERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g	
	2		SAND: med. fine, v. dk. gy 10YR 3/2, silty 20% well sorted, dry. (SM) bravel + coal SAND: Lt. gy - 7/2, well sorted, silty 5% dry (SW) : as above, wet, loose - firm. fr. glauconite, fr. mica. (SW)	92	1	BLOWS 0735 Lab 3" spoons 23-16-22-22 OVA, ppm HS- 3.5 BZ- 0	
	4		: Lt. dk. gy 5Y 6/2, clayey 25%, roots (SC)	67	2	0740 Lab 6-12-14-12 HS- 5.0 BZ- 0	
	6		v. thin beds clay, sandy 40% (CL)	90	3	2" spoons 3-4-5-3 BZ- 0	
	8		v. soft drilling, clayey sand mix	—	—	Auger initial wet sample	
	10		CLAY: interbedded sand thin beds top 1/2 plastic, firm-stiff, Lt. dk. Br 10YR 6/4 to Gy 5Y 5/1. CL	100	4	8-11-8-9 BZ=0	
			E.O.B. @ 10.0' bgs				

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-SB11

DRILLING LOG		DIVISION SAV	INSTALLATION HAAF	SHEET 1 OF 1 SHEETS
1. PROJECT PDD/1310			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA	
2. LOCATION (Coordinates or Station) SAV GA			11. DATUM FOR ELEVATION SHOWN (BSM or MSL) MSL	
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) PDD-SB11			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4 UNDISTURBED 0
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES —	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —	
7. THICKNESS OF OVERBURDEN 10.0'			16. DATE HOLE STARTED 8/17/96 COMPLETED 8/17/96	
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 16.5'	
9. TOTAL DEPTH OF HOLE 10.0'			18. TOTAL CORE RECOVERY FOR BORING —	
			19. SIGNATURE OF INSPECTOR D. Humphries	

ELEVATION a	DEPTH Y b ft	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2	0.0 to 2.0' BGS	SAND: dk. div Br 2.5' to Pale/Yel-7/8. med-fine, 10% gravel, 10% clay. sand is well sorted, dry, firm to firm, tr. glauconite. (SP)	90	1	8 CWS 3" spoons 810 Lab 17-21-18-20 OVA, ppm HS-9.0 B2-0
	4		med-fine; Lt. Yell Br 2.5' 6/8, well sorted, silty 5-10%, tr. glauconite + mica wet. (SW)	63	2	5-13-16-15 0820 LAB HS-31 B2-0 initial wet sample
	6		AS above, v. loose-loose (SW)	71	3	2" spoons 3-9-4-10 B2-0
	8		4" clay layer, sandy 40%, low plastic (SW)	—	—	↑ Auger ↓
	10		Cuttings sand w/clay mix	—	—	3-4-3-4 B2-0
			SAND: med-fine, Br-Yell 10YR 6/8, well sorted silt 10%, tr. glauconite + mica, wet, v. loose gray - bls. (SW)	75	4	
			E.O.B @ 10.0' bgs			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO - SB12

DRILLING LOG		DIVISION SAV	INSTALLATION HAAF	SHEET 1 OF 1 SHEETS
1. PROJECT PDO / 1310			10. SIZE AND TYPE OF BIT <u>4 1/4" ID HSA</u>	
2. LOCATION (Coordinates or Station) SAV 6A			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) PDO-SB12			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4	DISTURBED 0
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES —	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER —	
7. THICKNESS OF OVERBURDEN <u>10.0'</u>			16. DATE HOLE STARTED <u>8/17/96</u> COMPLETED <u>8/17/96</u>	
8. DEPTH DRILLED INTO ROCK <u>0</u>			17. ELEVATION TOP OF HOLE <u>17.1'</u>	
9. TOTAL DEPTH OF HOLE <u>10.0'</u>			18. TOTAL CORE RECOVERY FOR BORING _____ %	
			19. SIGNATURE OF INSPECTOR <u>D. Humphreys</u>	

ELEVATION c	DEPTH VI b W	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		SAND: med-fine, v. dk gy br 10YR 3/2, well sorted, dry, silty 10% (SW) Coaly Gravel	63	1	Blows 3 spoons 0913 Lab 3-26-9-9 H5-3.5 B2-0
	4		CLAY: 6Y 10YR 5/1 Sandy 40%, plastic, as above (CL)	63	2	3-9-11-11 0920 Lab H5-22 B2-0
	6		SAND: med-fine, v. flk Br 10YR 7/3, well sorted, rd. not at bottom, silty 20-10%, fr. glauconite firm. (SM)	71	3	4-5-4-5 B2-0
	8		as above, silty 5-10%, v. loose-100% (SW) - clayey 30-50% (SC)	—	—	↑ Auger ↓ 0-4-7-6 B2-0
	10		Cuttings mix of sand + clay	—	—	
			SAND: mostly Yell 10YR 7/6, med-fine, well sorted, wet, v. loose-loose, silty 5-10%, fr. glauconite + mica. (SW)	83	4	
			G. O. B. @ 10.0' by 5			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-5B13

DRILLING LOG		DIVISION SAV	INSTALLATION HAAT	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA	
2. LOCATION (Coordinates or Station) SAV 6A			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) PDO-5B13			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4
5. NAME OF DRILLER K. Durham			14. TOTAL NUMBER CORE BOXES	UNDISTURBED 0
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			15. ELEVATION GROUND WATER	
7. THICKNESS OF OVERBURDEN 10.0'			16. DATE HOLE STARTED 8/17/96 COMPLETED 8/17/96	
8. DEPTH DRILLED INTO ROCK 0			17. ELEVATION TOP OF HOLE 16.1'	
9. TOTAL DEPTH OF HOLE 10.0'			18. TOTAL CORE RECOVERY FOR BORING — %	
			19. SIGNATURE OF INSPECTOR D. Humphris	

ELEVATION e	DEPTH w by	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		Coal + Br. sand, grass SAND med-fine, yellow 10YR 5/6 to 6Y-6/1, clayey 25%, dry, loose-firm, well-sorted (SC)	88	1	Below 955 3" spoons 1ab 6-14-20-14 1005 6-11-11-8 1ab H5- 55 82-0
	4		6Y-6/1, clayey 20-40%, well-sorted loose-firm, wet, fr. glauconite + mica (SC)	75	2	initial 2" spoons wet 0-4-5-6 sample 82-0
	6		Yellow 10YR 7/6 (SW)	75	3	BE=0
	8		Cuttings as above	—	—	Auger
	10		as above 6Y 10YR 5/1. (SW)	71	4	4-4-4-5 BE=0
			E.O.B. @ 10.0' bgs			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-SB14

DRILLING LOG		DIVISION SAV	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310		10. SIZE AND TYPE OF BIT 4 1/4" ID HPA		
2. LOCATION (Coordinates or Station) SAV 6A		11. DATUM FOR ELEVATION SHOWN (TBM or BSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDO-SB14		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 10.0'		16. DATE HOLE STARTED 8/17/96 COMPLETED 8/17/96		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 16.5'		
9. TOTAL DEPTH OF HOLE 10.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION •	DEPTH ft	LEGEND •	CLASSIFICATION OF MATERIALS (Description) •	% CORE RECOV- ERY •	BOX OR SAMPLE NO. •	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) •
	0		SAND: med-fine: v. dk gy brn 3/2, silty 20% dry, firm-v. firm	75	1	Blows 3" spoons 13-17-17-25
	2		Coat + gravel SAND: med-fine; 1/4 Br 10R 3/8, well sorted, silty 25% (SM)	80	2	initial wet sample 7-15-20-12
	4		: as above, clay 20% at top, wet. - clay 5%, well sorted, loose-firm. (SW)	92	3	2 spoons 2-4-6-9
	6		CLAY: Gy 10R 6/1, sandy 30%, plastic. (CL)			
	8		SAND: Gy, med-fine, well sorted, loose, silty 10% (SW)			
	10		Cuttings mixed sand/clay			Auger
			SAND: med-fine, Br-101 10R 6/6, fr. banding w/ thin clay laminae, clay 5-20%, well sorted, wet, v. loose-loose. (SW/SC)	50	4	4-4-8-8
			E.O.B. @ 10.0' by 5			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-SB15

DRILLING LOG		DIVISION SAV	INSTALLATION HAAP	SHEET 1 OF 1 SHEETS
1. PROJECT PDO/1310			10. SIZE AND TYPE OF BIT 4 1/4" ID HSA	
2. LOCATION (Coordinates or Station) SAV 6A			11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL	
3. DRILLING AGENCY PSI			12. MANUFACTURER'S DESIGNATION OF DRILL CME 75	
4. HOLE NO. (As shown on drawing title and file number) PDO-SB15			13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4
5. NAME OF DRILLER K. Durham			UNDISTURBED 0	
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.			14. TOTAL NUMBER CORE BOXES	
7. THICKNESS OF OVERBURDEN 10.0'			15. ELEVATION GROUND WATER	
8. DEPTH DRILLED INTO ROCK 0			16. DATE HOLE STARTED 8/17/96 COMPLETED 8/17/96	
9. TOTAL DEPTH OF HOLE 10.0'			17. ELEVATION TOP OF HOLE 17.1'	
			18. TOTAL CORE RECOVERY FOR BORING	
			19. SIGNATURE OF INSPECTOR D. Humphreys	

ELEVATION e	DEPTH v, b/v	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	0		SAND: med-fine, v. dk. gyb. 10% 3/2, well sorted silty 20 (SM)	75	1	BLOWS 1320 3" spoons Lab 12-17-10-6
	2		Coal, Gravel, wood sand as above CLAY: Gray 10% silty, low plastic, sandy 30% (CL)			OVA, RRM HS = 1.5 B2 = 0
	4		as above, moist, fr. glauconite fr. mica. (CL)	58	2	Lab HS = 5 B2 = 0
	6		as above v. soft-firm. (CL)	92	3	2" spoons 2-6-4-3
	8		2" sand-wet SAND-Gray-silty, clayey 40%, wet. (SC)			initial wet sample B2 = 0
	10		Cuttings clay/sand mix			↑ Auger ↓ 4-4-6-5
			CLAY + SAND - gy 10% 25/11	100	4	
			SAND: med-fine, Pale Yell 25% 7/3, well sorted silty 10%, fr. glauconite + mica, wet, v. loose (SW)			132 - 0
			E.O.B. @ 10.0' bgs			

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDD-MW01

DRILLING LOG		DIVISION SAV	INSTALLATION HAMF	SHEET 1 OF 1 SHEETS
1. PROJECT 1310/PDO PDO		10. SIZE AND TYPE OF BIT 6 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAV. GA		11. DAYUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDD-MW01		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN		DISTURBED 4 UNDISTURBED Ø
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER		
7. THICKNESS OF OVERBURDEN 13.0'		16. DATE HOLE		STARTED 8/26/96 COMPLETED 8/26/96
8. DEPTH DRILLED INTO ROCK		17. ELEVATION TOP OF HOLE 17.7'		
9. TOTAL DEPTH OF HOLE 13.0'		18. TOTAL CORE RECOVERY FOR BORING		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY	BOX OR SAMPLE NO.	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)
		U. W. D.	SAND, med-fine, black 10YR 2/1 to yell Br 5/4 tr. gravel, silty 10-20%, well sorted dry, firm-v. firm. tr. glauconite + mica (SM)	71	1	BLOWS 3" spoons 1 lb 13-22-17-15 OVA. P.W. HS - 0.5 BZ - 0
	2		as above, clay 10-20%, v. loose - loose.	63	2	3-9-9-6 1 lb HS - 2.0 BZ - 0
	4		wet (SC) as above: clay 10-25-30%	75	3	2" spoons 4-9-11-10 fine wet sample HS - NA BZ - 0
	6		less clay 10-20% (SC) Cuttings as above	—	—	↑ Auger ↓
	8		4-6 by 10YR 7/1, thin clay laminae. clay matrix 5-10%, well sorted. loose, wet. (SW/SC)	71	4	6-9-8-5 Geotech BZ - 0
	10		Cuttings as above. runny sands	—	—	↑ Auger ↓
	12					
	14		E. v. B. @ 13.0' bgs			BZ = 0
	16					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. PDO-MW02

DRILLING LOG		DIVISION SAV		INSTALLATION HAAT		SHEET 1 OF 1 SHEETS	
1. PROJECT 1310/PDO PDO				10. SIZE AND TYPE OF BIT 6 1/8" ID HSA			
2. LOCATION (Coordinates or Station) SAV GA				11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL			
3. DRILLING AGENCY PSI				12. MANUFACTURER'S DESIGNATION OF DRILL CME 75			
4. HOLE NO. (As shown on drawing title and file number) PDO-MW02				13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 4		UNDISTURBED 0	
5. NAME OF DRILLER K. Durham				14. TOTAL NUMBER CORE BOXES —			
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.				15. DATE HOLE 8/26/96		COMPLETED 8/26/96	
7. THICKNESS OF OVERBURDEN 14.0'				17. ELEVATION TOP OF HOLE 17.8'			
8. DEPTH DRILLED INTO ROCK 0				18. TOTAL CORE RECOVERY FOR BORING — %			
9. TOTAL DEPTH OF HOLE 14.0'				19. SIGNATURE OF INSPECTOR D. Humphreys			
ELEVATION •	DEPTH VR BY	LEGEND 1/1 CY	CLASSIFICATION OF MATERIALS (Description)	% CORE RECOV- ERY •	BOX OR SAMPLE NO. 1	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant)	
	2	0 0 0	SAND: med-fine; v. dk by 10YR 3/1 to Bk 2/1, dry, loose-v. firm, tr. gravel, poor sorted, silty 20%, tr. coal (SP/SM)	75	1	Blows 34 spuds 7-30-26-19	OVA, ppm HS- 1.5 BZ- 0
	4		LT. Br. 6Y 6/2 to Bk 2/1, well sorted silty 10%, v. loose-loose (SW)	63	2	3-4-6-6 1/2	HS- 50 BZ- 0
	6		BK - silty - 20% damp (SM)	63	3	3-4-7-11 1/2	HS- 56 BZ- 0
	8		LT. Br. 6Y 6/2, well sorted, silty 5% (SW/SM)	—	—	↑ initial wet sample Auger in well at install	
	10		Cuttings as above	—	—	↓ 2' spoon 9-9-10-9	Geotech BZ- 0
	12		6Y 10YR 5/1, well sorted, silty 5-10% wet, tr. glauconite mica. (SW)	25	4		
	14		Cuttings as above, runny sands	—	—	Auger	
	16		E.O.B. @ 14.0' 6g 5				

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

Hole No. P20-MW03

DRILLING LOG		DIVISION SAV.	INSTALLATION HARR	SHEET 1 OF 1 SHEETS
1. PROJECT 1310/PDO		10. SIZE AND TYPE OF BIT 6 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAV 6A		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CME 75		
4. HOLE NO. (As shown on drawing title and file number) PDO-MW03		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN	DISTURBED 4	UNDISTURBED 0
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 13'		16. DATE HOLE STARTED 8/26/96 COMPLETED 8/26/96		
8. DEPTH DRILLED INTO ROCK 0		17. ELEVATION TOP OF HOLE 17.3'		
9. TOTAL DEPTH OF HOLE 13'		18. TOTAL CORE RECOVERY FOR BORING — %		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION •	DEPTH ft	LEGEND V C V	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY •	BOX OR SAMPLE NO. 1	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		SAND, med-fine, mostly w dk gy Br 10YR 3/2 tr. gravel core, silty 10-25%, dry, firm-dense, poor sorting (SM/SP)	71	1	BLOW 3" spoons 11-28-38-28 Lab OVA, ppm H5- 2.0 B2- 0
	4		med-fine; dk gy to v. dk gy 10YR 4/1-3/1 moist; well sorted; loose-v. loose, silty 5-15% (SM/SW)	63	2	5-5-5-3 Lab H5- 0.5 B2- 0
	6		dk gy - 4/1, wet, tr. roots, clay 5-15%, v. loose. (SW/SC)	67	3	2-2-2-5 Initial wet Sample H5- 0 B2- 0
	8		Cuttings as above	—	—	↑ Anger ↓
	10		Lt. Olive gy 5Y 6/2, clay 10-30% v. loose-loose. (SC) 10% clay 5% - well sorted tr. thin laminae, tr. glauconite (SW)	63	4	2 1/2" spm 2-5-5-4 Grated B2- 0
	12		Cuttings as above	—	—	↑ Anger ↓
	14		E.O.B @ 13.0'			B2=0
	16					
	18					

Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

DRILLING LOG		DIVISION SAV.	INSTALLATION HAAF	SHEET 1 OF 1 SHEETS
1. PROJECT 1310 / PDO		10. SIZE AND TYPE OF BIT 6 1/4" ID HSA		
2. LOCATION (Coordinates or Station) SAV 6A		11. DATUM FOR ELEVATION SHOWN (TBM or MSL) MSL		
3. DRILLING AGENCY PSI		12. MANUFACTURER'S DESIGNATION OF DRILL CMG 75		
4. HOLE NO. (As shown on drawing title and file number) PDO-MW04		13. TOTAL NO. OF OVER-BURDEN SAMPLES TAKEN 6		UNDISTURBED Ø
5. NAME OF DRILLER K. Durham		14. TOTAL NUMBER CORE BOXES —		
6. DIRECTION OF HOLE ☒ VERTICAL ☐ INCLINED _____ DEG. FROM VERT.		15. ELEVATION GROUND WATER —		
7. THICKNESS OF OVERBURDEN 19.0'		16. DATE HOLE STARTED 8/27/96 COMPLETED 8/27/96		
8. DEPTH DRILLED INTO ROCK Ø		17. ELEVATION TOP OF HOLE 26.0'		
9. TOTAL DEPTH OF HOLE 19.0'		18. TOTAL CORE RECOVERY FOR BORING — %		
		19. SIGNATURE OF INSPECTOR D. Humphreys		

ELEVATION a	DEPTH b	LEGEND c	CLASSIFICATION OF MATERIALS (Description) d	% CORE RECOV- ERY e	BOX OR SAMPLE NO. f	REMARKS (Drilling time, water loss, depth of weathering, etc., if significant) g
	2		SAND: med-fine. Br 10YR 4/3 to Lt Gy 7/2 well sorted, dry, v. loose-loose. silty 5% fr. glauconite. (SW)	75	1	BLOWS 3" SPUNNS Lab 3-6-9-9 H5- 0.1 B2- 0
	4		: as above, Lt Gy 7/2, v. loose- firm. wet. (SW)	75	2	3-6-9-17 Lab initial wet sample perched? H5- 7.5 B2- 0
	6		clayey 10%-20% (SC)	79	3	2" SPUNNS 10-9-7-10 H5- NA B2- 0
	8		Cuttings mix of clay & sand (CL)	—	—	↑ Auger 8 in auger @ TD 17' (7.2' bgs)
	10		CLAY as above, moist (CL)	42	4	4-5-6-7 B2- 0
	12		Cuttings mix of clay & sand (CL)	—	—	↑ Auger
	14		SAND: 40% Br 10YR 5/6, clayey 15%, wet well sorted, loose, fr. glauconite - clayey 35% (SC)	58	5	5-9-8-5 wet sample B2=0
	16		as above.	75	6	2-1-2-1
	18		Cuttings as above.	—	—	↑ Auger B2=0
	20		E.O.B. @ 19.0' bgs			

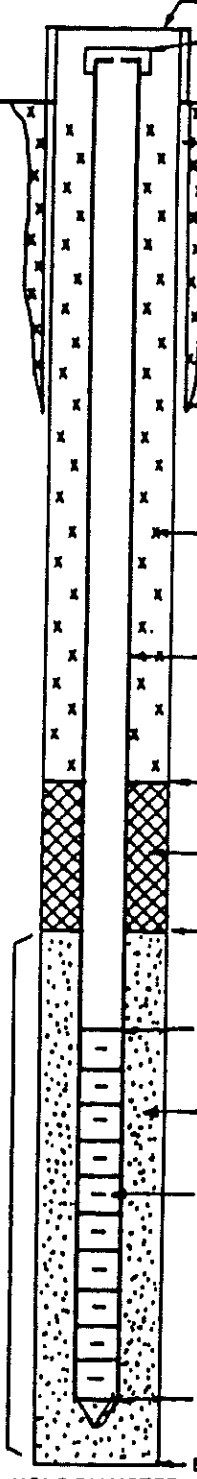
Split-spoon samples for lithologic definition and/or chemical analysis were collected from 3 to 5 feet below ground surface (BGS) and every 5 feet or lithologic change thereafter (unless otherwise noted).

APPENDIX D

MONITORING WELL CONSTRUCTION DIAGRAMS

GROUND WATER INSTALLATION		PROJECT:	JOB NO. 017830	WELL NO. PDO - MW01					
DRILLING CONTRACTOR: PSI		COORDINATES:							
BEGUN: 8/26/96	SUPERVISOR: D. Humphris	WELL SITE:	WATER LEVEL. DEPTH/ELEV 5.3' bgs						
FINISHED: 8/26/96	DRILLER: K. Durham								
REFERENCE POINT & ELEVATION:				DEPTH IN FT.	ELEV. IN				
				0	17.7				
				NA					
				1.0	16.7				
				1.5	15.2				
				2.0	15.7				
				NA					
				12.0	5.7				
				13.0	4.7				
				METHOD DRILLED: 6 1/4" ID HBA METHOD DEVELOPED: See Develop Sheet TIME DEVELOPED:				COMMENTS:	

GROUND WATER INSTALLATION		PROJECT: <i>PDO / 1310</i>	JOB NO. <i>017830</i>	WELL NO. <i>PDO-MW02</i>
DRILLING CONTRACTOR: <i>PSI</i>		COORDINATES:		
BEGUN: <i>8/26/96</i>	SUPERVISOR: <i>D. Humphris</i>	WELL SITE:	WATER LEVEL. DEPTH/ELEV <i>5.9' bgs</i>	
FINISHED: <i>8/26/96</i>	DRILLER: <i>K. Durham</i>			

REFERENCE POINT & ELEVATION:		DEPTH IN FT	ELEV. IN MSL
GENERALIZED GEOLOGIC LOG  TOP OF SURFACE CASING: TOP OF RISER CASING: GROUND SURFACE SURFACE CASING: DIA.: <i>4"</i> TYPE: <i>steel</i> BOTTOM OF SURFACE CASING BACKFILL: <i>Grout</i> TYPE: <i>Portland type I</i> RISER CASING: DIA.: <i>2"</i> TYPE: <i>PVC sch 40</i> TOP OF SEAL ANNULAR SEAL: TYPE: <i>ben-toni-te</i> BOTTOM OF SEAL (SE DEPTH) TOP OF SCREEN FILTER MATERIAL: <i>Silica</i> TYPE: <i>30/45</i> <i>Sand</i> SCREEN: DIA.: <i>2 in</i> OPENING WIDTH: <i>0.010 in</i> TYPE: <i>slotted</i> BOTTOM OF SCREEN (TOT DEPTH) BOTTOM OF HOLE HOLE DIAMETER <i>11"</i>		0	17.8
		1.0	16.8
		1.0	16.8
		2.0	15.8
		3.0	14.8
		NA	
		13.0	4.8
		14.0	3.8

METHOD DRILLED:
6 1/4" ID HSA

METHOD DEVELOPED:
See Develop sheet

TIME DEVELOPED:

COMMENTS:



GROUND WATER INSTALLATION		PROJECT: <i>PDO/1310</i>	JOB NO. <i>017830</i>	WELL NO. <i>PDO-MW03</i>
DRILLING CONTRACTOR: <i>PSI</i>		COORDINATES:		
BEGUN: <i>8/26/96</i>	SUPERVISOR: <i>D. Humphris</i>	WELL SITE:		WATER LEVEL. DEPTH/ELEV <i>5.7' bgs</i>
FINISHED: <i>8/26/96</i>	DRILLER: <i>K. Durham</i>			

REFERENCE POINT & ELEVATION:		DEPTH IN FT	ELEV. IN MSL
TOP OF SURFACE CASING:			
TOP OF RISER CASING:			
GROUND SURFACE		0	17.3'
GENERALIZED GEOLOGIC LOG	SURFACE CASING: DIA.: <i>4"</i> TYPE: <i>steel</i>		
	BOTTOM OF SURFACE CASING	1.0	16.3
	BACKFILL: <i>Grout</i> TYPE: <i>Portland Type I</i>		
	RISER CASING: DIA.: <i>2"</i> TYPE: <i>PVC sch 40</i>		
	TOP OF SEAL	1.0	16.3
	ANNULAR SEAL: TYPE: <i>bentonite</i>		
	BOTTOM OF SEAL (SE DEPTH)	1.5	15.8
	TOP OF SCREEN	2.0	15.3
	FILTER MATERIAL: <i>Silica Sand</i> TYPE: <i>30/45</i>		
	SCREEN: DIA.: <i>2"</i> OPENING WIDTH: <i>0.010 in</i> TYPE: <i>slotted</i>	NA	
BOTTOM OF SCREEN (TOT DEPTH)	12.0	5.3	
BOTTOM OF HOLE	13.0	4.3	

METHOD DRILLED :
6 1/4" ID HSA

METHOD DEVELOPED :
See Develop sheet

TIME DEVELOPED :

HOLE DIAMETER
11"

COMMENTS:

*5.7' bgs
at develop*

10'
SCREEN LENGTH

GROUND WATER INSTALLATION		PROJECT: <i>PDO/1310</i>	JOB NO. <i>017830</i>	WELL NO. <i>PDO-MW04</i>
DRILLING CONTRACTOR: <i>PSI</i>		COORDINATES:		
BEGUN: <i>8/21</i>	SUPERVISOR: <i>D. Humphris</i>	WELL SITE:	WATER LEVEL. DEPTH/ELEV	
FINISHED:	DRILLER: <i>K. Durham</i>		<i>6.6' bgs</i>	

REFERENCE POINT & ELEVATION:		DEPTH IN FT.	ELEV. IN MSL
GROUND SURFACE		0	26.0'
GENERALIZED GEOLOGIC LOG	TOP OF SURFACE CASING:		
	TOP OF RISER CASING:		
	SURFACE CASING: DIA.: <i>4"</i> TYPE: <i>steel</i>		
	BOTTOM OF SURFACE CASING	2.0	24.0'
	BACKFILL: <i>Grout</i> TYPE: <i>Portland type I</i>		
	RISER CASING: DIA.: <i>2"</i> TYPE: <i>PVC sch 40</i>		
	TOP OF SEAL	5.0	21.0'
	ANNULAR SEAL: TYPE: <i>bentonite</i>		
	BOTTOM OF SEAL (SE DEPTH)	6.6	19.4'
	TOP OF SCREEN	8.0	14.0'
FILTER MATERIAL: <i>Silica Sand</i> TYPE: <i>30/45</i>			
SCREEN: DIA.: <i>2"</i> OPENING WIDTH: <i>0.010 in</i> TYPE: <i>slotted</i>	10.4 SCREEN LENGTH		
BOTTOM OF SCREEN (TOT DEPTH)	18.0	4.0'	
BOTTOM OF HOLE	19.0	3.0'	

METHOD DRILLED :
6 1/4" ID HSA

METHOD DEVELOPED :
See Develop Sheet

TIME DEVELOPED :

HOLE DIAMETER
11"

COMMENTS:

6.6'
bgs
at develop

APPENDIX E

WELL DEVELOPMENT AND SAMPLING RECORDS

METHOD OF DEVELOPMENT: 12V DC Whale Pump

STATIC WATER LEVEL: 5.3' bgs

$TD = 12.0'$ $1 vol = 10.7 gal$
 $5 vol = 55, 0 + 35 = 90 gal$

TOTAL DEVELOPMENT TIME: 1:45

TOTAL VOLUME PURGED: 90 GAL

COMMENTS clear, sul/for odor

M&E
Metcalf & Eddy

METHOD OF DEVELOPMENT: 2" Graphos Red: L10

STATIC WATER LEVEL: 5.85 ~~40~~ B65

1 Vol = 11.4 GAL

$$5 \text{ vol} = 57.2 \text{ GAL} + 35 \text{ GAL} = 92.2$$

629.

TOTAL DEVELOPMENT TIME: 1hr: 25 min

TOTAL VOLUME PURGED: 95 GAL

COMMENTS _____

M&E
Metcalf & Eddy

METHOD OF DEVELOPMENT: 12V Dc Whale Pump

STATIC WATER LEVEL: 8.40' TOC / 5.7' bgs

1 vol = 10.1 gal
6.3' water in well

TOTAL DEVELOPMENT TIME: 1:12
TOTAL VOLUME PURGED: 51 GAL
COMMENTS: Clear, sl. sulfur odor

MONITORING WELL DEVELOPMENT

WELL I.D. NO.: P.D.O - mwoy

METHOD OF DEVELOPMENT: 2" Ground Glass Red. Flt.

DATE: 8-28-76

STATIC WATER LEVEL: 9.7' TOC

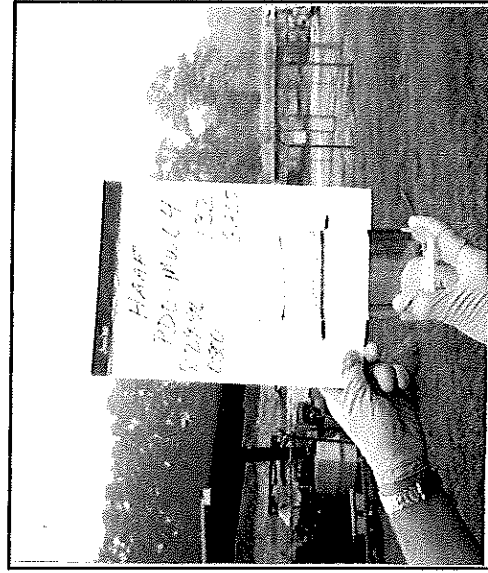
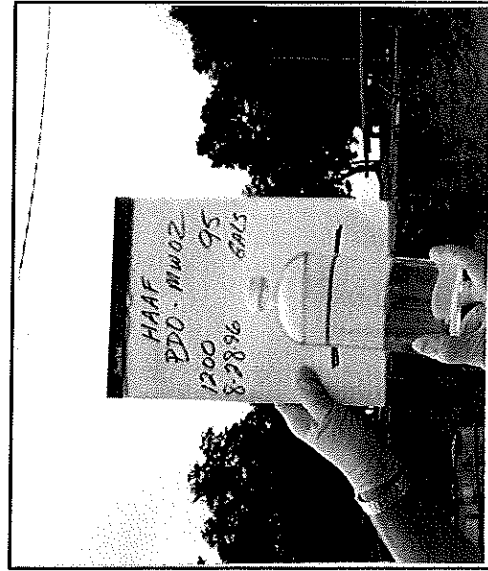
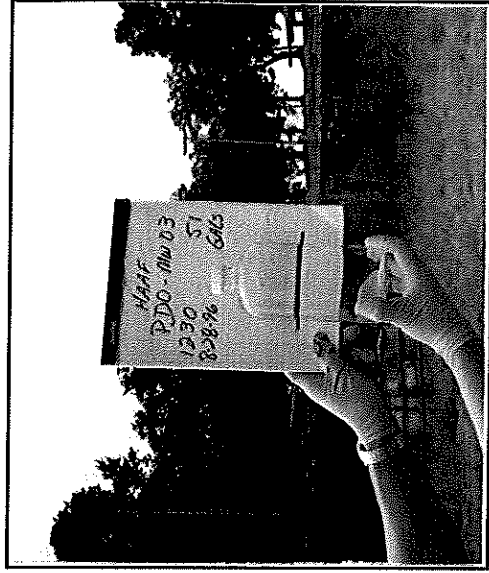
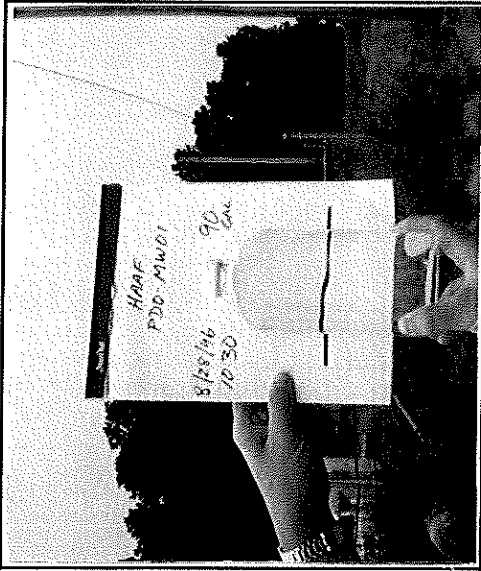
LOGGED BY: G. Kowell

$$5 \text{ vol} = 8 \text{ GAL} + 50 \text{ GAL} = 131$$
[illegible]

TOTAL DEVELOPMENT TIME: 3hr : 40min

TOTAL VOLUME PURGED: 132 GAL.

COMMENTS _____



MONITORING WELL DEVELOPMENT PHOTOGRAPHS

**FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET**



SAMPLED BY: G. Rowell / T. Neal

WELL ID: PDO-mw0101

PROJECT NAME: Hunter 3

LOCATION: PDO-yard

Date sampled: 9-18-96 Time start 1025 End 1035

Well secured upon arrival? (Y)N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 1.05

2. Depth of water from T.O.C. 7.84 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 14.25 ft

3. = 3.15 gallons to purge

4. Feet of standing water (h) 6.41 ft

4. Purging Method Waterva

CALCULATION:

Standing water volume = $\pi [(d)^2 + 4](h)$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (6.41 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 1.05 \text{ gal}$$

	pH	Conductivity	Temperature, (F)
1. Well volume = <u>1.05</u> gal.	<u>5.76</u>	<u>406</u>	<u>74.5</u>
2. Well volume = <u>2.10</u> gal.	<u>5.70</u>	<u>376</u>	<u>75.5</u>
3. Well volume = <u>3.15</u> gal.	<u>5.67</u>	<u>335</u>	<u>76.3</u>
4. Well volume = _____ gal.	_____	_____	_____
5. Well volume = _____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailor

Field preservation - HCL HNO₃

Sample Description Clear

Odor: None

Color: Clear

Appearance: _____

Weather Conditions: ≈ 85°F, Partly Cloudy

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 83 ppm

COMMENTS: _____

FIELD LOG BOOK SAMPLING DATA: GROUNDWATER MONITORING WELL WORK SHEET



SAMPLED BY: G. Rowell / T. Neal

WELL ID: PDO-mw02

PROJECT NAME: Hunter 3

LOCATION: PDO Yard

Date sampled: 9-18-96 Time start 1035 End 1045

Well secured upon arrival? ☒ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 0.96

2. Depth of water from T.O.C. 9.44 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 15.3 ft

3. = 2.88 gallons to purge

4. Feet of standing water (h) 5.86 ft

4. Purging Method Waterfall

CALCULATION:

Standing water volume = $\pi [(d)^2 + 4] (h)$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (5.86 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 0.96 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>0.96</u> gal.	<u>6.02</u>	<u>90</u>	<u>73.8</u>
2. Well volume =	<u>1.92</u> gal.	<u>5.93</u>	<u>87</u>	<u>73.1</u>
3. Well volume =	<u>2.88</u> gal.	<u>5.82</u>	<u>86</u>	<u>73.2</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailor

Field preservation - HCL, HNO₃

Sample Description Clear

Odor: None

Color: Clear

Appearance: _____

Weather Conditions: ~ 80°F, Partly Cloudy

Air Monitoring Equipment used: DVA

Reading: Breathing zone: 0 ppm

In Well: 70 ppm

COMMENTS: _____



FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET

SAMPLED BY: G. Rowell / T. Neal

WELL ID: PDO-mw03

PROJECT NAME: Hunter 3

LOCATION: PDO-yard

Date sampled: 9-18-96 Time start 1045 End 1055

Well secured upon arrival? ☒ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 1.00

2. Depth of water from T.O.C. 8.14 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 14.25 ft

3. = 3.00 gallons to purge

4. Feet of standing water (h) 6.11 ft

4. Purging Method Watertra

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4](h)$$

$$= 3.14 [(0.167 \text{ ft})^2 + 4] (6.11 \text{ ft}) \times 7.48 \text{ gal / ft}^3 = 1.00 \text{ gal}$$

	pH	Conductivity	Temperature, (F)
1. Well volume = <u>1.00</u> gal.	<u>5.67</u>	<u>106</u>	<u>74.2</u>
2. Well volume = <u>2.00</u> gal.	<u>5.60</u>	<u>104</u>	<u>74.3</u>
3. Well volume = <u>3.00</u> gal.	<u>5.58</u>	<u>118</u>	<u>74.0</u>
4. Well volume = _____ gal.	_____	_____	_____
5. Well volume = _____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailer

Field preservation - HCL - HNO₃

Sample Description clear

Odor: None

Color: Clear

Appearance: _____

Weather Conditions: ≈ 80°F, Partly Cloudy

Air Monitoring Equipment used: DVA

Reading: Breathing zone: 0 ppm

In Well: 88 ppm

COMMENTS: _____



FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET

SAMPLED BY: G. Rowell / T. Neal

WELL ID: PDO-14W04

PROJECT NAME: Hunter 3

LOCATION: PDO-yard

Date sampled: 9-18-96 Time start 1015 End 1025

Well secured upon arrival? (Y) N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 1.78

2. Depth of water from T.O.C. 9.43 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 20.35 ft

3. = 5.37 gallons to purge

4. Feet of standing water (h) 10.92 ft

4. Purging Method Waterra

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4] (h)$$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (10.92 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 1.78 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume = <u>1.78</u> gal.		<u>6.21</u>	<u>43</u>	<u>72.2</u>
2. Well volume = <u>3.58</u> gal.		<u>6.48</u>	<u>43</u>	<u>71.3</u>
3. Well volume = <u>5.37</u> gal.		<u>6.50</u>	<u>50</u>	<u>72.0</u>
4. Well volume = _____ gal.		_____	_____	_____
5. Well volume = _____ gal.		_____	_____	_____
Ground water sample _____		_____	_____	_____
Sampling method - <u>Teflon Bailor</u>			Field preservation - <u>Waterra</u>	

Sample Description Clear

Odor: None

Color: Clear

Appearance: _____

Weather Conditions: OVA $\approx 75^\circ\text{F}$, Partly Cloudy

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 20 ppm

COMMENTS: _____



FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET

SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-19

PROJECT NAME: Hunter 3

LOCATION: PDO-yard

Date sampled: 9-17-96 Time start 1715 End 1725

Well secured upon arrival? (Y)N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 1.41

2. Depth of water from T.O.C. 6.54 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 15.12 ft

3. = 4.23 gallons to purge

4. Feet of standing water (h) 8.58 ft

4. Purging Method Waterria

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4](h)$$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (8.58 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 1.41 \text{ gal}$$

1. Well volume = 1.41 gal.

pH

43.6 5.45

Conductivity

1.34 105

Temperature, (F)

85.2

2. Well volume = 2.82 gal.

5.15

106

82.3

3. Well volume = 4.23 gal.

5.28

110

81.2

4. Well volume = _____ gal.

5. Well volume = _____ gal.

Ground water sample _____

Sampling method - Teflon Bailor

Field preservation - HCL, HNO₃

Sample Description Turbid

Odor: None

Color: Brown

Appearance: _____

Weather Conditions: ≈ 90°F, Partly Cloudy

Air Monitoring Equipment used: DVA

Reading:

Breathing zone: 0 ppm

In Well: 30 ppm

COMMENTS: _____

FIELD LOG BOOK SAMPLING DATA: GROUNDWATER MONITORING WELL WORK SHEET



SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-20

PROJECT NAME: Hunter 3

LOCATION: PDO - yard

Date sampled: 9-18-96 Time start 0950 End 1000

Well secured upon arrival? (Y)N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 2.13

2. Depth of water from T.O.C. 8.65 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 21.68 ft

3. = 6.40 gallons to purge

4. Feet of standing water (h) 13.03 ft

4. Purging Method Waterfall

CALCULATION:

Standing water volume = $\pi [(d)^2 + 4] (h)$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (13.03 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 2.13 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>2.13</u> gal.	<u>5.70</u>	<u>75</u>	<u>73.0</u>
2. Well volume =	<u>4.27</u> gal.	<u>5.72</u>	<u>68</u>	<u>72.6</u>
3. Well volume =	<u>6.40</u> gal.	<u>5.73</u>	<u>66</u>	<u>72.8</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailer

Field preservation - HCL, HNO₃

Sample Description Cloudy

Odor: None

Color: lt. gray

Appearance: _____

Weather Conditions: ~75°F, Clear

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 25 ppm

COMMENTS: _____

**FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET**



SAMPLED BY: G. Rowell / Tom Neal

WELL ID: 1-21

PROJECT NAME: Hunter 3

LOCATION: PDO Yard

Date sampled: 9-18-96 Time start 0940 End 0950

Well secured upon arrival? ☒ Y ☐ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 2.47

2. Depth of water from T.O.C. 3.85 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 18.93 ft

3. = 7.41 gallons to purge

4. Feet of standing water (h) 15.08 ft

4. Purging Method Watera

CALCULATION:

Standing water volume = $\pi [(d)^2 + 4] (h)$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (15.08 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 2.47 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>2.47</u> gal.	<u>5.38</u>	<u>130</u>	<u>73.2</u>
2. Well volume =	<u>4.94</u> gal.	<u>5.42</u>	<u>126</u>	<u>74.0</u>
3. Well volume =	<u>7.41</u> gal.	<u>5.40</u>	<u>129</u>	<u>73.7</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailer

Field preservation - HCL, HNO₃

Sample Description Clear

Odor: None

Color: Clear

Appearance: _____

Weather Conditions: ~ 75°F, Clear

Air Monitoring Equipment used: OVA

Reading: Breathing zone: Ø ppm

In Well: 40 ppm

COMMENTS: _____



FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET

SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-22

PROJECT NAME: Hunter 3

LOCATION: PDO - Yard

Date sampled: 9-18-96 Time start 1005 End 1015

Well secured upon arrival? ☒ Y ☐ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 2.15

2. Depth of water from T.O.C. 8.40 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 21.50 ft

3. = 6.44 gallons to purge

4. Feet of standing water (h) 13.10 ft

4. Purging Method Watera

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4] (h)$$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (13.10 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 2.15 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>2.15</u> gal.	<u>5.72</u>	<u>86</u>	<u>73.3</u>
2. Well volume =	<u>4.29</u> gal.	<u>5.68</u>	<u>86</u>	<u>73.0</u>
3. Well volume =	<u>6.44</u> gal.	<u>5.66</u>	<u>89</u>	<u>72.8</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailor

Field preservation - HCL, HNO₃

Sample Description Cloudy

Odor: None

Color: lt. Gray

Appearance: _____

Weather Conditions: ≈ 75°F, Clear

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 36 ppm

COMMENTS: _____



FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET

SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-23

PROJECT NAME: Hunter 3

LOCATION: PDO-yard

Date sampled: 9-17-96 Time start 1730 End 1740

Well secured upon arrival? ☒ Y ☐ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 2.37

2. Depth of water from T.O.C. 6.15 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 20.60 ft

3. = 7.10 gallons to purge

4. Feet of standing water (h) 14.45 ft

4. Purging Method Watera

CALCULATION:

Standing water volume = $\pi [(d)^2 + 4] (h)$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (14.45 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = \underline{2.37} \text{ gal}$$

	pH	Conductivity	Temperature, (F)
1. Well volume = <u>2.37</u> gal.	<u>5.32</u>	<u>143</u>	<u>82.4</u>
2. Well volume = <u>4.74</u> gal.	<u>5.31</u>	<u>133</u>	<u>81.1</u>
3. Well volume = <u>7.10</u> gal.	<u>5.28</u>	<u>135</u>	<u>81.2</u>
4. Well volume = _____ gal.	_____	_____	_____
5. Well volume = _____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailor Field preservation - HCL, HNO₃

Sample Description Cloudy, slightly turbid

Odor: None

Color: brown

Appearance: _____

Weather Conditions: ≈ 90°F, Partly Cloudy

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 76 ppm

COMMENTS: _____

FIELD LOG BOOK SAMPLING DATA: GROUNDWATER MONITORING WELL WORK SHEET



SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-24

PROJECT NAME: Hunter 3

LOCATION: PDO-Yard

Date sampled: 9-17-96 Time start 1745 End 1755

Well secured upon arrival? ☒ Y ☐ N

1. Casing Diameter (d) 2 inches + 12 = 0.167 ft

1. Standing water (gal.) = 2.38

2. Depth of water from T.O.C. 6.91 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 21.45 ft

3. = 7.15 gallons to purge

4. Feet of standing water (h) 14.54 ft

4. Purging Method Waterwa

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4](h)$$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (14.54 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = 2.38 \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>2.38</u> gal.	<u>5.82</u>	<u>77</u>	<u>80.5</u>
2. Well volume =	<u>4.76</u> gal.	<u>5.80</u>	<u>73</u>	<u>80.7</u>
3. Well volume =	<u>7.15</u> gal.	<u>5.83</u>	<u>72</u>	<u>79.9</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Trailer

Field preservation - HCL, HNO3

Sample Description Cloudy

Odor: None

Color: Brown

Appearance: _____

Weather Conditions: ≈ 90°F, Partly Cloudy

Air Monitoring Equipment used: OVA

Reading: Breathing zone: 0 ppm

In Well: 55 ppm

COMMENTS: _____



**FIELD LOG BOOK SAMPLING DATA:
GROUNDWATER MONITORING WELL WORK SHEET**

SAMPLED BY: G. Rowell / T. Neal

WELL ID: 1-25

PROJECT NAME: Hunter 3

LOCATION: PDO-Yard

Date sampled: 9-17-96 Time start 1805 End 1815

Well secured upon arrival? (Y) N

1. Casing Diameter (d) 2 Inches + 12 = 0.167 ft

1. Standing water (gal.) = 1.94

2. Depth of water from T.O.C. 9.46 ft

2. X 3 well volumes

3. Depth of well from T.O.C. 21.29 ft

3. = 5.81 gallons to purge

4. Feet of standing water (h) 11.83 ft

4. Purging Method Waterera

CALCULATION:

Standing water volume

$$= \pi [(d)^2 + 4] (h)$$

$$= 3.14 [(0.167 \text{ ft.})^2 + 4] (11.83 \text{ ft.}) \times 7.48 \text{ gal / ft.}^3 = \underline{1.94} \text{ gal}$$

		pH	Conductivity	Temperature, (F)
1. Well volume =	<u>1.94</u> gal.	<u>6.05</u>	<u>118</u>	<u>80.4</u>
2. Well volume =	<u>3.88</u> gal.	<u>6.00</u>	<u>123</u>	<u>78.8</u>
3. Well volume =	<u>5.81</u> gal.	<u>5.98</u>	<u>128</u>	<u>78.9</u>
4. Well volume =	_____ gal.	_____	_____	_____
5. Well volume =	_____ gal.	_____	_____	_____

Ground water sample _____

Sampling method - Teflon Bailor

Field preservation - HCL, HNO₃

Sample Description Cloudy

Odor: None

Color: lt. gray

Appearance: _____

Weather Conditions: ~90°F, Partly Cloudy

Air Monitoring Equipment used: DVA

Reading: Breathing zone: 0 ppm

In Well: 100 ppm

COMMENTS: _____

APPENDIX F

CHEMICAL DATA AND VALIDATION REPORTS

HUNTER ARMY AIRFIELD - PDO YARD
SAMPLING CHRONOLOGY

Sample ID	Matrix	SDG ID	Date Sampled	Time Sampled	Date Lab Received	Date Lab Reported	Depth (ft.)	QC Samples	VOC's 8260	SVOC's 8270	DRO 8100M	GRO 8015M	P.P. Metals 6000/7000	Gross a&b 9310
PDO-HA0401	S	HAA39	9/16/96	14:15	9/17/96	10/10/96	1.0		X	X	X	X	X	X
PDO-HA0402	S	HAA39	9/16/96	14:25	9/17/96	10/10/96	2.0		X	X	X	X	X	X
PDO-HA0501	S	HAA39	9/16/96	14:55	9/17/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA0502	S	HAA39	9/16/96	15:05	9/17/96	9/27/96	2.0		X	X	X	X	X	X
PDO-HA11	S	HAA39	9/16/96	15:05	9/17/96	9/27/96	2.0	DUP	X	X	X	X	X	X
PDO-HA0601	S	HAA39	9/16/96	15:30	9/17/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA0602	S	HAA39	9/16/96	16:05	9/17/96	10/9/96	5.0	MS/MSD	X	X	X	X	X	X
PDO-HA0701	S	HAA39	9/16/96	16:35	9/17/96	10/10/96	1.0		X	X	X	X	X	X
PDO-HA0702	S	HAA39	9/16/96	17:00	9/17/96	10/10/96	5.0		X	X	X	X	X	X
PDO-HA0801	S	HAA39	9/16/96	17:30	9/17/96	10/10/96	1.0		X	X	X	X	X	X
PDO-HA0802	S	HAA39	9/16/96	17:50	9/17/96	10/10/96	5.0		X	X	X	X	X	X
PDO-HA0901	S	HAA39	9/16/96	18:15	9/17/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA0902	S	HAA39	9/16/96	18:25	9/17/96	9/27/96	3.0		X	X	X	X	X	X
PDO-HA1001	S	HAA39	9/16/96	19:00	9/17/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA1002	S	HAA39	9/16/96	19:10	9/17/96	9/27/96	3.0		X	X	X	X	X	X
PDO-HA12	S	HAA39	9/16/96	19:10	9/17/96	9/27/96	3.0	DUP	X	X	X	X	X	X
PDO-GW0101	W	HAA40	9/18/96	10:25	9/20/96	10/9/96	0.0		X	X	X	X	X	X
PDO-GW0201	W	HAA40	9/18/96	10:35	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW0301	W	HAA40	9/18/96	10:45	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW0401	W	HAA40	9/18/96	10:15	9/20/96	10/9/96	0.0		X	X	X	X	X	X
PDO-ER02	W	HAA41	9/17/96	15:50	9/20/96	10/9/96	0.0	EB	X	X	X	X	X	X
PDO-GW1901	W	HAA41	9/17/96	17:15	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW2001	W	HAA40	9/18/96	9:50	9/20/96	10/9/96	0.0		X	X	X	X	X	X
PDO-GW2101	W	HAA40	9/18/96	9:40	9/20/96	10/9/96	0.0		X	X	X	X	X	X
PDO-GW2201	W	HAA40	9/18/96	10:05	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW2301	W	HAA41	9/17/96	17:30	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW2401	W	HAA41	9/17/96	17:45	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-GW2501	W	HAA41	9/17/96	18:05	9/20/96	10/4/96	0.0		X	X	X	X	X	X
PDO-SW01	W	HAA42	9/18/96	14:40	9/20/96	10/2/96	0.0		X	X	X	X	X	X
PDO-SW02	W	HAA40	9/18/96	14:15	9/20/96	10/3/96	0.0		X	X	X	X	X	X
PDO-SW03	W	HAA40	9/18/96	13:40	9/20/96	10/3/96	0.0		X	X	X	X	X	X
PDO-SW04	W	HAA40	9/18/96	13:40	9/20/96	10/3/96	0.0	DUP	X	X	X	X	X	X
PDO-SE01	S	HAA42	9/18/96	14:46	9/20/96	10/3/96	0.0		X	X	X	X	X	X
PDO-SE03	S	HAA42	9/18/96	13:40	9/20/96	10/3/96	0.0		X	X	X	X	X	X
PDO-SE04	S	HAA42	9/18/96	13:40	9/20/96	10/3/96	0.0	DUP	X	X	X	X	X	X

HUNTER ARMY AIRFIELD - PDO YARD
SAMPLING CHRONOLOGY

Sample ID	Matrix	SDG ID	Date Sampled	Time Sampled	Date Lab Received	Date Lab Reported	Depth (ft.)	QC Samples	VOC's 801018020	SVOC's 8270	DRO 8100M	GRO 8015M	P.P. Metals 600017000	Gross s&b 9310
PDO-HA0101	S	HAA38	8/29/96	08:55	8/29/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA0102	S	HAA38	8/29/96	09:00	8/29/96	9/27/96	5.0		X	X	X	X	X	X
PDO-HA0201	S	HAA38	8/29/96	09:35	8/29/96	9/27/96	1.0		X	X	X	X	X	X
PDO-HA0202	S	HAA38	8/29/96	09:40	8/29/96	9/27/96	4.0		X	X	X	X	X	X
PDO-HA0301	S	HAA38	8/29/96	10:20	8/29/96	9/27/96	1.0	MS/MSD	X	X	X	X	X	X
PDO-HA0302	S	HAA38	8/29/96	10:30	8/29/96	9/27/96	5.0		X	X	X	X	X	X
PDO-MWB0101	S	HAA37	8/26/96	08:35	8/27/96	9/27/96	2.0		X	X	X	X	X	X
PDO-MWB0102	S	HAA37	8/26/96	08:45	8/27/96	9/27/96	4.0		X	X	X	X	X	X
PDO-MWB0201	S	HAA37	8/26/96	10:15	8/27/96	9/27/96	4.0		X	X	X	X	X	X
PDO-MWB0202	S	HAA37	8/26/96	10:25	8/27/96	9/27/96	6.0		X	X	X	X	X	X
PDO-MWB05	S	HAA37	8/26/96	10:25	8/27/96	9/27/96	6.0	DUP	X	X	X	X	X	X
PDO-MWB0301	S	HAA37	8/26/96	13:30	8/27/96	9/27/96	2.0		X	X	X	X	X	X
PDO-MWB0302	S	HAA37	8/26/96	13:40	8/27/96	9/27/96	4.0		X	X	X	X	X	X
PDO-MWB0401	S	HAA37	8/27/96	07:55	8/27/96	9/27/96	2.0		X	X	X	X	X	X
PDO-MWB0402	S	HAA37	8/27/96	08:05	8/27/96	9/27/96	4.0		X	X	X	X	X	X

HUNTER ARMY AIRFIELD - PDO YARD
SAMPLING CHRONOLOGY

Sample ID	Matrix	SDG ID	Date Sampled	Time Sampled	Date Lab Received	Date Lab Reported	Depth (ft.)	QC Samples	VOC's 801018020	SVOC's 8270	DRO 8100M	GRO 8015M	P.P. Metals 600017000	Gross a&b 9310
PDO-SB0101	W	HAA34	8/14/96	12:45	8/15/96	9/23/96	2.0	EB	X	X	X	X	X	X
PDO-SB0102	S	HAA34	8/14/96	15:30	8/15/96	9/23/96	2.0		X	X	X	X	X	X
PDO-SB0201	S	HAA34	8/14/96	15:40	8/15/96	9/23/96	4.0		X	X	X	X	X	X
PDO-SB0202	S	HAA34	8/15/96	08:15	8/15/96	9/23/96	2.0		X	X	X	X	X	X
PDO-SB0301	S	HAA34	8/15/96	08:30	8/15/96	9/23/96	4.0		X	X	X	X	X	X
PDO-SB0302	S	HAA34	8/15/96	10:00	8/15/96	9/23/96	2.0		X	X	X	X	X	X
PDO-SB0401	S	HAA34	8/15/96	10:15	8/15/96	9/23/96	4.0		X	X	X	X	X	X
PDO-SB0402	S	HAA34	8/15/96	11:25	8/15/96	9/23/96	2.0		X	X	X	X	X	X
PDO-SB16	S	HAA34	8/15/96	11:40	8/15/96	9/23/96	4.0	DUP	X	X	X	X	X	X
PDO-SB0501	S	HAA34	8/15/96	14:15	8/15/96	9/23/96	2.0		X	X	X	X	X	X
PDO-SB0502	S	HAA34	8/15/96	14:25	8/15/96	9/23/96	4.0		X	X	X	X	X	X
PDO-SB0601	S	HAA35	8/16/96	13:00	8/16/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB0602	S	HAA35	8/16/96	13:05	8/16/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB0701	S	HAA35	8/16/96	13:40	8/16/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB0702	S	HAA35	8/16/96	13:50	8/16/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB0801	S	HAA35	8/16/96	15:20	8/16/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB17	S	HAA35	8/16/96	15:20	8/16/96	9/25/96	4.0	DUP	X	X	X	X	X	X
PDO-SB0901	S	HAA35	8/16/96	16:00	8/16/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB0902	S	HAA35	8/16/96	16:10	8/16/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB1001	S	HAA36	8/17/96	07:25	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1002	S	HAA36	8/17/96	07:40	8/19/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB1101	S	HAA36	8/17/96	08:10	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1102	S	HAA36	8/17/96	08:15	8/19/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB1201	S	HAA36	8/17/96	09:05	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1202	S	HAA36	8/17/96	09:15	8/19/96	9/25/96	4.0	MS/MSD	X	X	X	X	X	X
PDO-SB1301	S	HAA36	8/17/96	09:50	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1302	S	HAA36	8/17/96	10:00	8/19/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB18	S	HAA36	8/17/96	10:00	8/19/96	9/25/96	4.0	DUP	X	X	X	X	X	X
PDO-SB1401	S	HAA36	8/17/96	12:35	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1402	S	HAA36	8/17/96	12:45	8/19/96	9/25/96	4.0		X	X	X	X	X	X
PDO-SB1501	S	HAA36	8/17/96	13:15	8/19/96	9/25/96	2.0		X	X	X	X	X	X
PDO-SB1502	S	HAA36	8/17/96	13:25	8/19/96	9/25/96	4.0		X	X	X	X	X	X

HUNTER ARMY AIRFIELD - PDO YARD
SAMPLING CHRONOLOGY

Sample ID	Matrix	SDG ID	Date Sampled	Time Sampled	Date Lab Received	Date Lab Reported	Depth (ft.)	QC Samples	VOC's 8010\8020	SVOC's 8270	DRO 8100M	GRO 8015M	P.P. Metals 6000\7000	Gross a&b 9310
PDO-HPW01	W	TO17	8/15/96	15:20	8/16/96		0.0		X					
PDO-HPW02	W	TO17	8/15/96	16:00	8/16/96		0.0		X					
PDO-HPW03	W	TO17	8/18/96	10:10	8/19/96		0.0		X					
PDO-HPW04	W	TO17	8/18/96	09:30	8/19/96		0.0		X					
PDO-HPW05	W	TO17	8/18/96	10:35	8/19/96		0.0		X					
PDO-HPW06	W	TO17	8/18/96	11:15	8/19/96		0.0		X					
PDO-HPW07	W	TO17	8/18/96	13:50	8/19/96		0.0		X					
PDO-HPW08	W	TO17	8/18/96	14:15	8/19/96		0.0		X					
PDO-HPW09	W	TO17	8/18/96	14:50	8/19/96		0.0		X					
PDO-HPW10	W	TO17	8/18/96	15:40	8/19/96		0.0		X					

DATA QUALITY SUMMARY REPORT

Hunter Army Airfield - PDO Yard
November 19, 1996

1.0 INTRODUCTION

Metcalf & Eddy, Inc. was contracted by the United States Army Corps of Engineers, Savannah District, to perform a site investigation at the former Hunter Army Airfield. The purpose of this investigation is to determine the extent of contamination present in the soil and groundwater at this site.

Metcalf & Eddy, Inc. contracted with Savannah Laboratories to perform the required analyses of soil samples. The analytical data was validated according to USEPA National Functional Guidelines for Organics Data Review and Inorganics Analysis. This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The following sections of this Data Quality Summary Report discuss the laboratory reporting, data validation, problems encountered and corrective actions as applied to the samples and data collected during this determination.

1.1 Field Samples and Analysis

The following report summarizes the validation findings of the samples included in the Sample Data Groups listed below.

<u>SDG</u>	<u>Date</u>	<u>Matrix</u>	<u>Samples</u>	<u>Field Duplicates</u>	<u>Trip Blanks</u>	<u>Equipment Blanks</u>
HAA34	08/14/96	SOIL	11	1	0	1
HAA35	08/16/96	SOIL	7	1	0	0
HAA36	08/17/96	SOIL	12	1	0	0
HAA37	08/26/96	SOIL	8	1	0	0
HAA38	08/13/96	SOIL	6	0	0	0

Samples were analyzed by Savannah Laboratories - Tallahassee, Florida using the following USEPA SW-846 Methods:

6000/7000 Priority Pollutant Metals
8015M Gasoline Range Organics
8100M Diesel Range Organics
8100 Polynuclear Aromatic Hydrocarbons
8260 Volatile Organic Compounds (GC/MS)
8270 Semivolatile Organic Compounds (GC/MS)
9310 Gross alpha & beta

Forty-four soil samples, four field duplicates and one equipment blank were analyzed. All samples were not analyzed by all methods. All soil sample results were reported on a dry weight basis.

2.0 LABORATORY REPORTING

2.1 Laboratory Blanks

Laboratory blanks or method blanks are artificial samples prepared from the same matrix type as the samples to be analyzed. These blanks are taken through sample preparation and analyzed before the field samples to determine if the glassware, sample preparation or laboratory environment has contaminated the field samples.

All laboratory blanks for all methods of analysis of soils were free of contaminants at and above the method reporting limits.

2.2 Laboratory Control Samples (% Recovery)

Laboratory control samples are artificial samples prepared from the same matrix type as the samples to be analyzed. These samples are processed through sample preparation and analyzed to assess the performance of each analytical system that the laboratory using to analyze the field samples.

All laboratory control samples for all methods of analysis of soils were within required control limits with the exception of four samples with slightly high RPDs. No qualifiers were applied.

2.3 Precision (% RPD)

Laboratory precision is evaluated by calculating the relative percent difference (RPD) between the values reported for a matrix spiked sample (MS) and its duplicate, the matrix spiked duplicate (MSD), or any other set of duplicate parameters. The following equation is utilized for this calculation:

$$RPD = \frac{|V_s - V_d|}{[V_s + V_d] / 2} \times 100$$

Where V_s is the value reported for the matrix spiked sample (MS) and V_d is the value reported for its duplicate (MSD). Sample RPDs are compared to the analyzing laboratory's precision control limits which are primarily derived from their in-house quality control data.

RPDs for all methods of analysis of spiked samples were within required control limits with the exception of one sample analyzed for each of the following; antimony, chromium, lead, selenium, polynuclear aromatic hydrocarbons and gross alpha/beta. Two samples exhibited slightly high RPD's for GRO. No qualifiers were applied.

RPDs of field duplicates for all methods of analysis of soils were within the required control limits with the exception of one sample analyzed for each of the following; arsenic, copper, lead and gross alpha/beta. Two samples exhibited slightly high RPD's for mercury and volatile organics. No qualifiers were applied.

2.4 Surrogate Recovery

Surrogates are compounds similar to analytes of interest but are not normally found in environmental samples. Prior to sample preparation and analysis, surrogates are spiked into laboratory control samples, calibration and check standards, matrix spiked samples and field samples. Accuracy is measured by calculating percent recoveries for each surrogate as follows:

$$\%R = \frac{\text{Concentration of spike found}}{\text{Concentration of spike added}} \times 100$$

Slightly low surrogate recovery was exhibited for twelve soil samples analyzed for GRO and one soil sample analyzed for semivolatile organics. Slightly high surrogate recovery was exhibited for three samples analyzed for volatile organics. All other surrogate recoveries were within the required control limits.

2.5 Holding Time

Holding time is the storage time allowed between sample collection and sample analysis when the designated preservation and storage techniques are employed.

All samples were within required holding times for all methods of analysis.

2.6 Temperature

Cooler receipts indicate that the laboratory received all samples at the correct temperature.

3.0 DATA VALIDATION

The objective when evaluating the quality of chemical data is to determine its usability. The evaluation is based upon the interpretation of the laboratory QC data, the field QC data, and the project Data Quality Objectives (DQOs). The evaluation process is often termed "data validation".

3.1 Laboratory Data Validation

Laboratory data were evaluated to assess , holding times, laboratory blanks, laboratory control samples, surrogate recoveries, and matrix spike/matrix spike duplicate (MS/MSD) relative percent differences (RPDs). These criteria were used to evaluate the bias and precision of the data generated by the laboratory. The bias of the laboratory data was assessed through consideration of the following:

- Adherence to the prescribed method
- Recovery of MS/MSD from field samples
- Method blank contamination
- Adherence to sample preparation and holding times
- Recovery of surrogate spikes

Field duplicate precision

3.2 Definition of Data Qualifiers

During the data validation process, all laboratory data had to be evaluated and assigned a data qualifier, as applicable. These qualifiers are defined in the February 1994 EPA document titled, "National Functional Guidelines for Organic and Inorganic Data Review." This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The guidance also describes procedures to be followed when qualifying data. The data qualifiers are defined as follows:

When the compound was analyzed for, but was not detected above the level of the associated value, a "U" was used to flag the compounds. A flag of "J" is usually used when the associated value is an estimated quantity. Data flagged with "R" are unusable. In some cases the flag "UJ" may be used to mean that the compound was analyzed for, but was not detected, and the associated value is an estimate and may be inaccurate or imprecise. Data qualifier flags were not assigned to data that were totally in compliance with Quality Control requirements.

For organic data, specifically VOCs, the positive and undetected (U) results were qualified as estimated (J/UJ) if one surrogate compound was detected outside acceptable recovery limits and/or the recovery was greater than 10 percent. If the recoveries of one surrogate compound were less than 10 percent, then the positive results were qualified as estimated (J) and the undetected results were rejected (R).

Results of SVOC are validated in the same manner as VOC except that qualifiers are applied to results with two or more surrogate compounds detected outside the acceptable recovery limits for each fraction (acid and base neutral extractable compounds).

Results for individual metals were qualified if percent recoveries for MS/MSD samples are low or outside acceptable recovery limits. If MS/MSD recoveries were greater than 125 percent, the positive results are acceptable (no qualifiers applied) and the undetected results were qualified as estimated (UJ). If percent recoveries of MS/MSD samples were between 30-74 percent, both the positive and undetected results were qualified as estimated (J/UJ). If recoveries were less than 30 percent, positive results were qualified as estimated (J) and undetected results are rejected (R).

3.3 Qualified Results

Volatile Organics - One soil sample exhibited a slightly high surrogate recovery for dibromofluoromethane and two soil samples exhibited a slightly high surrogate recovery for 4-bromofluorobenzene. Detects for all associated samples were qualified as estimated (J), non-detects were not qualified.

Semivolatile Organics - One soil sample exhibited slightly low surrogate recoveries for 2-fluorophenol and 2-fluorobiphenyl. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ).

Gasoline Range Organics - Two matrix spiked soil samples exhibited slightly low recoveries for GRO. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ). Twelve soil samples exhibited slightly low surrogate recoveries for trifluorotoluene. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ).

Diesel Range Organics - Two matrix spiked soil samples exhibited zero recovery for DRO. Detects for all associated samples were qualified as estimated (J), non-detects as rejected (R).

Priority Pollutant Metals - Four antimony, one arsenic, one lead and one selenium matrix spiked soil samples exhibited very low matrix spike recoveries. Detects for all associated samples were qualified as estimated (J), non-detects were rejected (R). One copper, two lead and three selenium matrix spiked soil samples exhibited slightly low matrix spike recoveries. Detects for all associated samples were qualified as estimated (J), non-detects were qualified as (UJ). One chromium matrix spiked soil sample exhibited a high recovery. Detects for the chromium sample were qualified as estimated (J), non-detects were not qualified.

Radionuclides - Five gross alpha and three gross beta matrix spiked soil samples exhibited high matrix spike recoveries. Detects for associated samples were qualified as estimated (J), non-detects were not qualified.

4.0 PROBLEMS ENCOUNTERED

The problems encountered during sample analysis for this investigation are described in detail below. Analytical data that did not meet the QC requirements were qualified as stated in Section 3.3.

4.1 Holding Times

No problems were present regarding hold times.

4.2 Surrogate Recovery

No problems outside of occasional sample result qualification were encountered.

4.3 Precision (% RPD)

No problems outside of occasional sample result qualification were encountered.

4.4 Field Duplicates

In addition to the matrix spike sample, field duplicates were collected to assess sampling precision. Six duplicate samples were collected at a frequency of approximately 10%, one for every ten field samples (rounded up), per matrix, per site, per sampling event. Field duplicates were within quality control RPD limits for 99% of the parameters analyzed. Sample duplicate precision is indicative that these data are comparable and representative of field conditions.

4.5 Equipment Rinsates

One equipment rinsate was sampled during this investigation and acetone was detected at a concentration of 9.2 ug/L. Applying the 10X rule, all associated samples that were detected with acetone < 92 ug/L were qualified as estimated (J), all associated samples that were detected with acetone ≥ 92 ug/L were not qualified.

4.6 Laboratory Blanks

All laboratory blanks were analyzed and found to be free of contaminants at and above the reporting limits. Acetone was detected well below the reporting limit for seven method blanks. Bromomethane and toluene were also detected well below the reporting limit for one other blank. No qualifiers were required.

4.7 Laboratory Control Standards

All laboratory control standards were within required control limits, with the exception of four slightly high RPD's. No qualifiers were required.

5.0 SUMMARY OF DATA QUALITY

The data qualifier "R" was added to data that were rejected as follows: 9 soil samples for DRO non-detects, 5 soil samples for Arsenic non-detects, and 23 soil samples for Antimony non-detects. For the entire project a total of 62 soil samples were analyzed for 119 parameters, equivalent to 7378 individual results. A total of 37 soil results were rejected. The amount of data obtained compared to the amount of data that was expected to be obtained is enough to achieve the goal of > 99% completeness. The results of the data validation indicate the overall quality of the data is within QC limits and is acceptable to verify or deny any contamination present in the soil at this site.

DATA QUALITY SUMMARY REPORT

Hunter Army Airfield - PDO Yard

November 20, 1996

1.0 INTRODUCTION

Metcalf & Eddy, Inc. was contracted by the United States Army Corps of Engineers, Savannah District, to perform a site investigation at the former Hunter Army Airfield. The purpose of this investigation is to determine the extent of contamination present in the soil and groundwater at this site.

Metcalf & Eddy, Inc. contracted with Savannah Laboratories to perform the required analyses of soil samples. The analytical data received was validated according to USEPA National Functional Guidelines for Organics Data Review and Inorganics Analysis. This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The following sections of this Data Quality Summary Report discuss the laboratory reporting, data validation, problems encountered and corrective actions as applied to the samples and data collected during this determination.

1.1 Field Samples and Analysis

The following report summarizes the validation findings of the samples included in the Sample Data Groups listed below.

<u>SDG</u>	<u>Date</u>	<u>Matrix</u>	<u>Samples</u>	<u>Field Duplicates</u>	<u>Trip Blanks</u>	<u>Equipment Blanks</u>
HAA39	09/16/96	SOIL	14	2	0	0
HAA40	09/18/96	WATER	14	2	0	1
HAA42	09/18/96	SOIL	3	1	0	0

Samples were analyzed by Savannah Laboratories - Tallahassee, Florida using the following USEPA SW-846 Methods:

6000/7000	Priority Pollutant Metals
8015M	Gasoline Range Organics
8100M	Diesel Range Organics
8260	Volatile Organic Compounds (GC/MS)
8270	Semivolatile Organic Compounds (GC/MS)
9310	Gross alpha & beta

Forteen water and seventeen soil samples, five field duplicates and one equipment blank were analyzed. All samples were not analyzed by all methods. All soil sample results were reported on a dry weight basis.

2.0 LABORATORY REPORTING

2.1 Laboratory Blanks

Laboratory blanks or method blanks are artificial samples prepared from the same matrix type as the samples to be analyzed. These blanks are taken through sample preparation and analyzed before the field samples to determine if the glassware, sample preparation or laboratory environment has contaminated the field samples.

All laboratory blanks for all methods of analysis of soils were free of contaminants at and above the method reporting limits.

2.2 Laboratory Control Samples (% Recovery)

Laboratory control samples are artificial samples prepared from the same matrix type as the samples to be analyzed. These samples are processed through sample preparation and analyzed to assess the performance of each analytical system that the laboratory using to analyze the field samples.

All laboratory control samples for all methods of analysis of soils were within required control limits.

2.3 Precision (% RPD)

Laboratory precision is evaluated by calculating the relative percent difference (RPD) between the values reported for a matrix spiked sample (MS) and its duplicate, the matrix spiked duplicate (MSD), or any other set of duplicate parameters. The following equation is utilized for this calculation:

$$RPD = \frac{|V_s - V_d|}{[V_s + V_d] / 2} \times 100$$

Where V_s is the value reported for the matrix spiked sample (MS) and V_d is the value reported for its duplicate (MSD). Sample RPDs are compared to the analyzing laboratory's precision control limits which are primarily derived from their in-house quality control data.

RPDs for all methods of analysis of spiked soil samples were within required control limits with the exception of one sample analyzed for antimony. No qualifiers were applied.

RPDs of field duplicates for all methods of analysis of soils were within the required control limits with the exception of one sample analyzed for each of the following; arsenic, copper, mercury, zinc, volatile organics, DRO and gross beta. Two samples exhibited slightly high RPD's for chromium, lead and semivolatile organics. No qualifiers were applied.

2.4 Surrogate Recovery

Surrogates are compounds similar to analytes of interest but are not normally found in environmental samples. Prior to sample preparation and analysis, surrogates are spiked into laboratory control samples, calibration and check standards, matrix spiked samples and field samples. Accuracy is measured by calculating percent recoveries for each surrogate as follows:

$$\%R = \frac{\text{Concentration of spike found}}{\text{Concentration of spike added}} \times 100$$

Slightly low surrogate recovery was exhibited for three soil samples analyzed for GRO. Slightly high surrogate recovery was exhibited for one sample analyzed for volatile organics. Zero surrogate recovery was exhibited for one semivolatile and two DRO samples due to required dilutions. All other surrogate recoveries were within the required control limits.

2.5 Holding Time

Holding time is the storage time allowed between sample collection and sample analysis when the designated preservation and storage techniques are employed.

All samples were within required holding times for all methods of analysis except for two sediment samples that were less than eight hours out of hold time. No qualifiers were applied.

2.6 Temperature

Cooler receipts indicate that the laboratory received all samples at the correct temperature.

3.0 DATA VALIDATION

The objective when evaluating the quality of chemical data is to determine its usability. The evaluation is based upon the interpretation of the laboratory QC data, the field QC data, and the project Data Quality Objectives (DQOs). The evaluation process is often termed "data validation".

3.1 Laboratory Data Validation

Laboratory data were evaluated to assess, holding times, laboratory blanks, laboratory control samples, surrogate recoveries, and matrix spike/matrix spike duplicate (MS/MSD) relative percent differences (RPDs). These criteria were used to evaluate the bias and precision of the data generated by the laboratory. The bias of the laboratory data was assessed through consideration of the following:

- Adherence to the prescribed method
- Recovery of MS/MSD from field samples
- Method blank contamination

- Adherence to sample preparation and holding times
- Recovery of surrogate spikes

Field duplicate precision

3.2 Definition of Data Qualifiers

During the data validation process, all laboratory data had to be evaluated and assigned a data qualifier, as applicable. These qualifiers are defined in the 1991 EPA document titled, "National Functional Guidelines for Organic Data Review." This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The guidance also describes procedures to be followed when qualifying data. The data qualifiers are defined as follows:

When the compound was analyzed for, but was not detected above the level of the associated value, a "U" was used to flag the compounds. A flag of "J" is usually used when the associated value is an estimated quantity. Data flagged with "R" are unusable. In some cases the flag "UJ" may be used to mean that the compound was analyzed for, but was not detected, and the associated value is an estimate and may be inaccurate or imprecise. Data qualifier flags were not assigned to data that were totally in compliance with Quality Control requirements.

For organic data, specifically VOCs, the positive and undetected (U) results were qualified as estimated (J/UJ) if one surrogate compound was detected outside acceptable recovery limits and/or the recovery was greater than 10 percent. If the recoveries of one surrogate compound were less than 10 percent, then the positive results were qualified as estimated (J) and the undetected results were rejected (R).

Results of SVOC are validated in the same manner as VOC except that qualifiers are applied to results with two or more surrogate compounds detected outside the acceptable recovery limits for each fraction (acid and base neutral extractable compounds).

Results for individual metals were qualified if percent recoveries for MS/MSD samples are low or outside acceptable recovery limits. If MS/MSD recoveries were greater than 125 percent, the positive results are acceptable (no qualifiers applied) and the undetected results were qualified as estimated (UJ). If percent recoveries of MS/MSD samples were between 30-74 percent, both the positive and undetected results were qualified as estimated (J/UJ). If recoveries were less than 30 percent, positive results were qualified as estimated (J) and undetected results are rejected (R).

3.3 Qualified Results

Volatile Organics - Three soil samples exhibited slightly high surrogate recoveries for

4-bromofluorobenzene and one soil sample exhibited a slightly high surrogate recovery for all four surrogates. Detects for all associated samples were qualified as estimated (J), non-detects were not qualified.

Semivolatile Organics - One soil sample exhibited zero surrogate recoveries for all six surrogates due to required dilutions. Detects for all associated samples were qualified as estimated (J), non-detects were not qualified.

Gasoline Range Organics - One matrix spiked soil sample exhibited a slightly low recovery for GRO. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ).

Three soil samples exhibited slightly low surrogate recoveries for trifluorotoluene. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ).

Diesel Range Organics - Two matrix spiked soil samples exhibited zero recovery for DRO due to required dilutions. Detects for all associated samples were qualified as estimated (J), non-detects were not qualified.

Priority Pollutant Metals - One antimony matrix spiked soil sample exhibited very low matrix spike recovery. Detects for all associated samples were qualified as estimated (J), non-detects were rejected (R). One selenium matrix spiked soil sample exhibited slightly low matrix spike recovery. Detects for all associated samples were qualified as estimated (J), non-detects were qualified as (UJ).

Radionuclides - One gross alpha matrix spiked soil sample exhibited high matrix spike recoveries. Detects for associated samples were qualified as estimated (J), non-detects were not qualified.

4.0 PROBLEMS ENCOUNTERED

The problems encountered during sample analysis for this investigation are described in detail below. Analytical data that did not meet the QC requirements were qualified as stated in Section 3.3.

4.1 Holding Times

No problems were present regarding hold times. Two sediment samples were less than eight hours out of hold time. No qualifiers were applied.

4.2 Surrogate Recovery

No problems outside of occasional sample result qualification were encountered.

4.3 Precision (% RPD)

No problems outside of occasional sample result qualification were encountered.

4.4 Field Duplicates

In addition to the matrix spike sample, field duplicates were collected to assess sampling precision. Six duplicate samples were collected at a frequency of approximately 10%, one for every ten field samples (rounded up), per matrix, per site, per sampling event. Field duplicates were within quality control RPD limits for 99% of the parameters analyzed. Sample duplicate precision is indicative that these data are comparable and representative of field conditions.

4.5 Equipment Rinsates

One equipment rinsate was sampled during this investigation and methylene chloride was detected at a concentration of 250 ug/L. A 50X dilution was analyzed and methylene chloride was again detected at a concentration of 210 ug/L. Although methylene chloride was detected in a few of the samples, the concentrations were less than the concentration detected in the equipment blank. No qualifiers were applied.

4.6 Laboratory Blanks

All laboratory blanks were analyzed and found to be free of contaminants at and above the reporting limits. A few volatiles were detected well below the reporting limit for three method blanks. No qualifiers were required.

4.7 Laboratory Control Standards

All laboratory control standards were within required control limits.

5.0 SUMMARY OF DATA QUALITY

The data qualifier "R" was added to data that were rejected as follows: 9 soil samples for DRO non-detects, 5 soil samples for Arsenic non-detects, and 23 soil samples for Antimony non-detects. For the entire project a total of 62 soil samples were analyzed for 119 parameters, equivalent to 7378 individual results. A total of 37 soil results were rejected. The amount of data obtained compared to the amount of data that was expected to be obtained is enough to achieve the goal of >99% completeness. The results of the data validation indicate the quality of the data is within QC limits and is acceptable to verify or deny any contamination present in the soil at this site.

DATA QUALITY SUMMARY REPORT

Hunter Army Airfield - PDO Yard
November 21, 1996

1.0 INTRODUCTION

Metcalf & Eddy, Inc. was contracted by the United States Army Corps of Engineers, Savannah District, to perform a site investigation at the former Hunter Army Airfield. The purpose of this investigation is to determine the extent of contamination present in the soil and groundwater at this site.

Metcalf & Eddy, Inc. contracted with Savannah Laboratories to perform the required analyses of soil samples. The analytical data received was validated according to USEPA National Functional Guidelines for Organics Data Review and Inorganics Analysis. This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The following sections of this Data Quality Summary Report discuss the laboratory reporting, data validation, problems encountered and corrective actions as applied to the samples and data collected during this determination.

1.1 Field Samples and Analysis

The following report summarizes the validation findings of the samples included in the Sample Data Groups listed below.

<u>SDG</u>	<u>Date</u>	<u>Matrix</u>	<u>Samples</u>	<u>Field Duplicates</u>	<u>Trip Blanks</u>	<u>Equipment Blanks</u>
HAA40	09/18/96	WATER	10	1	0	0
HAA41	09/17/96	WATER	4	0	0	1

Samples were analyzed by Savannah Laboratories - Tallahassee, Florida using the following USEPA SW-846 Methods:

6000/7000 Priority Pollutant Metals
8015M Gasoline Range Organics
8100M Diesel Range Organics
8260 Volatile Organic Compounds (GC/MS)
8270 Semivolatile Organic Compounds (GC/MS)

Fourteen water samples, one field duplicate and one equipment blank were analyzed. All samples were not analyzed by all methods.

2.0 LABORATORY REPORTING

2.1 Laboratory Blanks

Laboratory blanks or method blanks are artificial samples prepared from the same matrix type as the samples to be analyzed. These blanks are taken through sample preparation and analyzed before the field samples to determine if the glassware, sample preparation or laboratory environment has contaminated the field samples.

All laboratory blanks for all methods of analysis of groundwater and surface water were free of contaminants at and above the method reporting limits.

2.2 Laboratory Control Samples (% Recovery)

Laboratory control samples are artificial samples prepared from the same matrix type as the samples to be analyzed. These samples are processed through sample preparation and analyzed to assess the performance of each analytical system that the laboratory using to analyze the field samples.

All laboratory control samples for all methods of analysis of groundwater and surface water were within required control limits.

2.3 Precision (% RPD)

Laboratory precision is evaluated by calculating the relative percent difference (RPD) between the values reported for a matrix spiked sample (MS) and its duplicate, the matrix spiked duplicate (MSD), or any other set of duplicate parameters. The following equation is utilized for this calculation:

$$RPD = \frac{|V_s - V_d|}{[V_s + V_d] / 2} \times 100$$

Where V_s is the value reported for the matrix spiked sample (MS) and V_d is the value reported for its duplicate (MSD). Sample RPDs are compared to the analyzing laboratory's precision control limits which are primarily derived from their in-house quality control data.

RPDs for all methods of analysis of spiked soil samples were within required control limits with the exception of one sample analyzed for semivolatiles. No qualifiers were applied.

RPDs of field duplicates for all methods of analysis of surface water were within the required control limits. RPDs of field duplicates for all methods of analysis of groundwater were within the required control limits with the exception of one sample analyzed for semivolatiles.

2.4 Surrogate Recovery

Surrogates are compounds similar to analytes of interest but are not normally found in environmental samples. Prior to sample preparation and analysis, surrogates are spiked into laboratory control samples, calibration and check standards, matrix spiked samples and field samples. Accuracy is measured by calculating percent recoveries for each surrogate as follows:

$$\%R = \frac{\text{Concentration of spike found}}{\text{Concentration of spike added}} \times 100$$

Slightly low surrogate recovery was exhibited for one semivolatile surrogate in two groundwater samples. The three other surrogates in each sample were in control and no qualifiers were required. All other surrogate recoveries in all other methods were within the required control limits.

2.5 Holding Time

Holding time is the storage time allowed between sample collection and sample analysis when the designated preservation and storage techniques are employed.

All samples were within the required holding time for all methods of analysis except for volatile organics. All volatile organic samples were less than eight hours out of hold time. No qualifiers were applied.

2.6 Temperature

Cooler receipts indicate that the laboratory received all samples at the correct temperature.

3.0 DATA VALIDATION

The objective when evaluating the quality of chemical data is to determine its usability. The evaluation is based upon the interpretation of the laboratory QC data, the field QC data, and the project Data Quality Objectives (DQOs). The evaluation process is often termed "data validation".

3.1 Laboratory Data Validation

Laboratory data were evaluated to assess , holding times, laboratory blanks, laboratory control samples, surrogate recoveries, and matrix spike/matrix spike duplicate (MS/MSD) relative percent differences (RPDs). These criteria were used to evaluate the bias and precision of the data generated by the laboratory. The bias of the laboratory data was assessed through consideration of the following:

- Adherence to the prescribed method
- Recovery of MS/MSD from field samples
- Method blank contamination
- Adherence to sample preparation and holding times
- Recovery of surrogate spikes
- Field duplicate precision

3.2 Definition of Data Qualifiers

During the data validation process, all laboratory data had to be evaluated and assigned a data qualifier, as applicable. These qualifiers are defined in the 1991 EPA document titled, "National Functional Guidelines for Organic Data Review." This guidance follows the Quality Assurance (QA)/Quality Control (QC) requirements outlined in the USEPA's Test Methods for Evaluating Solid Waste (EPA SW-846). Overall these guidelines mimic the most current editions of the EPA's Functional Guidelines for Reviewing Organic and Inorganic Analyses conducted outside the EPA's Contract Laboratory Program (CLP).

The guidance also describes procedures to be followed when qualifying data. The data qualifiers are defined as follows:

When the compound was analyzed for, but was not detected above the level of the associated value, a "U" was used to flag the compounds. A flag of "J" is usually used when the associated value is an estimated quantity. Data flagged with "R" are unusable. In some cases the flag "UJ" may be used to mean that the compound was analyzed for, but was not detected, and the associated value is an estimate and may be inaccurate or imprecise. Data qualifier flags were not assigned to data that were totally in compliance with Quality Control requirements.

For organic data, specifically VOCs, the positive and undetected (U) results were qualified as estimated (J/UJ) if one surrogate compound was detected outside acceptable recovery limits and/or the recovery was greater than 10 percent. If the recoveries of one surrogate compound were less than 10 percent, then the positive results were qualified as estimated (J) and the undetected results were rejected (R).

Results of SVOC are validated in the same manner as VOC except that qualifiers are applied to results with two or more surrogate compounds detected outside the acceptable recovery limits for each fraction (acid and base neutral extractable compounds).

Results for individual metals were qualified if percent recoveries for MS/MSD samples are low or outside acceptable recovery limits. If MS/MSD recoveries were greater than 125 percent, the positive results are acceptable (no qualifiers applied) and the undetected results were qualified as estimated (UJ). If percent recoveries of MS/MSD samples were between 30-74 percent, both the positive and undetected results were qualified as estimated (J/UJ). If recoveries were less than 30 percent, positive results were qualified as estimated (J) and undetected results are rejected (R).

3.3 Qualified Results

Semivolatile Organics - One matrix spiked groundwater sample exhibited a high recovery for phenol. Detects for all associated samples were qualified as estimated (J), non-detects were not qualified.

Diesel Range Organics - One matrix spiked groundwater sample exhibited slightly low recovery for DRO. Detects for all associated samples were qualified as estimated (J), non-detects as (UJ).

4.0 PROBLEMS ENCOUNTERED

The problems encountered during sample analysis for this investigation are described in detail below. Analytical data that did not meet the QC requirements were qualified as stated in Section 3.3.

4.1 Holding Times

All samples analyzed for volatile organics were less than eight hours out of hold time. No qualifiers were applied.

4.2 Surrogate Recovery

No problems outside of occasional sample result qualification were encountered.

4.3 Precision (% RPD)

No problems outside of occasional sample result qualification were encountered.

4.4 Field Duplicates

In addition to the matrix spike sample, field duplicates were collected to assess sampling precision. Six duplicate samples were collected at a frequency of approximately 10%, one for every ten field samples (rounded up), per matrix, per site, per sampling event. Field duplicates were within quality control RPD limits for 99% of the parameters analyzed. Sample duplicate precision is indicative that these data are comparable and representative of field conditions.

4.5 Equipment Rinsates

One equipment rinsate was sampled during this investigation and methylene chloride was detected at a concentration of 250 ug/L. A 50X dilution was analyzed and methylene chloride was again detected at a concentration of 210 ug/L. Although methylene chloride was detected in a few of the samples, the concentrations were less than the concentration detected in the equipment blank. No qualifiers were applied.

4.6 Laboratory Blanks

All laboratory blanks were analyzed and found to be free of contaminants at and above the reporting limits. A few semivolatiles and volatiles were detected well below the reporting limit for three method blanks. No qualifiers were required.

4.7 Laboratory Control Standards

All laboratory control standards were within required control limits.

5.0 SUMMARY OF DATA QUALITY

The data qualifier "R" was added to data that were rejected as follows: 9 soil samples for DRO non-detects, 5 soil samples for Arsenic non-detects, and 23 soil samples for Antimony non-detects. For the entire project a total of 62 soil samples were analyzed for 119 parameters, equivalent to 7378 individual results. A total of 37 soil results were rejected. The amount of data obtained compared to the amount of data that was expected to be obtained is enough to achieve the goal of >99% completeness. The results of the data validation indicate the quality of the data is within QC limits and is acceptable to verify or deny any contamination present in the soil at this site.

CONSTITUENT	SITE (Units in ug/l)	PDO-HPW01		PDO-HPW02		PDO-HPW03		PDO-HPW05		PDO-HPW06		PDO-HPW07	
		SAMPLE ID		PDO-HPW02		PDO-HPW03		PDO-HPW05		PDO-HPW06		PDO-HPW07	
		DATE		08/15/96		08/15/96		08/18/96		08/18/96		08/18/96	
		RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Bromodichloromethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Benzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Bromoform		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Bromomethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Carbon tetrachloride		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chlorobenzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Chloroform		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
2-Chloroethylvinyl ether		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Chloromethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Dibromochloromethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,2-Dichlorobenzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,3-Dichlorobenzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,4-Dichlorobenzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Dichlorodifluoromethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1-Dichloroethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,2-Dichloroethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1-Dichloroethene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
cis/trans-1,2-Dichloroethene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,2-Dichloropropane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,3-Dichloropropene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Methylene chloride		<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
Ethylbenzene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
1,1,2,2-Tetrachloroethane		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Toluene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Tetrachloroethene		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed													
METHODS: 8010/8020 J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.													

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR HYDROPUNCH GROUNDWATER

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CONSTITUENT (Units in ug/l)	SITE		PDO-HPW01		PDO-HPW02		PDO-HPW03		PDO-HPW05		PDO-HPW06		PDO-HPW07	
	SAMPLE ID	DATE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
1,1,1-Trichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Xylenes			<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

METHODS: 8010/8020

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR HYDROPUNCH GROUNDWATER

Page: 1B of 2B

CONSTITUENT	(Units in ug/l)	SITE	PDO-HPW08	PDO-HPW09	PDO-HPW10
		SAMPLE ID	PDO-HPW08	PDO-HPW09	PDO-HPW10
		DATE	08/18/96	08/18/96	08/18/96
		RESULT TYPE	Primary	Duplicate	Primary
Bromodichloromethane			<1.0	<1.0	<1.0
Benzene			<1.0	<1.0	<1.0
Bromoform			<5.0	<5.0	<5.0
Bromomethane			<1.0	<1.0	<1.0
Carbon tetrachloride			<1.0	<1.0	<1.0
Chlorobenzene			<1.0	<1.0	<1.0
Chloroethane			<1.0	<1.0	<1.0
Chloroform			<1.0	<1.0	<1.0
2-Chloroethylvinyl ether			<1.0	<1.0	<1.0
Chloromethane			<1.0	<1.0	<1.0
Dibromochloromethane			<1.0	<1.0	<1.0
1,2-Dichlorobenzene			<1.0	<1.0	<1.0
1,3-Dichlorobenzene			<1.0	<1.0	<1.0
1,4-Dichlorobenzene			<1.0	<1.0	<1.0
Dichlorodifluoromethane			<1.0	<1.0	<1.0
1,1-Dichloroethane			<1.0	<1.0	<1.0
1,2-Dichloroethane			<1.0	<1.0	<1.0
1,1,1-Dichloroethene			<1.0	<1.0	<1.0
cis/trans-1,2-Dichloroethene			<1.0	<1.0	<1.0
1,2-Dichloropropane			<1.0	<1.0	<1.0
1,3-Dichloropropane			<1.0	<1.0	<1.0
Methylene chloride			<5.0	<5.0	<5.0
Ethylbenzene			<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane			<1.0	<1.0	<1.0
Toluene			<1.0	<1.0	<1.0
Tetrachloroethene			<1.0	<1.0	<1.0
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed					
METHODS: 8010/8020					
J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.					

CONSTITUENT (Units in ug/l)	SITE	PDO-HPW08	PDO-HPW09	PDO-HPW09	PDO-HPW10
	SAMPLE ID	PDO-HPW08	PDO-HPW09	PDO-HPW11	PDO-HPW10
	DATE	08/18/96	08/18/96	08/18/96	08/18/96
	RESULT TYPE	Primary	Primary	Duplicate	Primary
1,1,1-Trichloroethane		<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane		<1.0	<1.0	<1.0	<1.0
Trichloroethene		<1.0	<1.0	<1.0	<1.0
Trichlorofluoromethane		<1.0	<1.0	<1.0	<1.0
1,2,3-Trichloropropane		<1.0	<1.0	<1.0	<1.0
Vinyl chloride		<1.0	<1.0	<1.0	<1.0
Xylenes		<1.0	<1.0	<1.0	<1.0
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed					
METHODS: 8010/8020					
J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.					

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

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CONSTITUENT (Units in ug/l)	SITE	PDO-GW01	PDO-GW02	PDO-GW03	PDO-GW04	PDO-GW19	PDO-GW19
SAMPLE ID	DATE	Primary	Primary	Primary	Primary	Primary	Primary
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Acetone	110	120	<25	<25	<25	<25	<25
Benzene	24	15	<1	<1	<1	<1	<1
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1
Bromoform	<1	<1	<1	<1	<1	<1	<1
Bromomethane	<1	<1	<1	<1	<1	<1	<1
2-Butanone (MEK)	170	160	<10	<10	<10	<10	<10
Carbon disulfide	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1
Chloroethane	<1	<1	<1	<1	<1	<1	<1
2-Chloroethylvinyl ether	<10	<10	<10	<10	<10	<10	<10
Chloroform	<1	<1	<1	<1	<1	<1	<1
Chloromethane	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	(0.19)	(0.29)	<1	<1	<1	<1	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	(0.33)	(0.37)	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene	<1	<1	<1	<1	<1	<1	<1
Ethyl benzene	4.2	<1	<1	<1	<1	<1	<1
2-Hexanone	<10	<10	<10	<10	<10	<10	<10
Methyl isobutyl ketone (MIBK)	39	<10	<10	<10	<10	<10	<10
Methylene chloride	<5	4.1 J	<5	<5	<5	210 J	<5

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT	SITE (Units in ug/l)	PDO-GW01								PDO-GW02								PDO-GW03								PDO-GW04								PDO-GW19								PDO-GW1901																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		SAMPLE ID								PDO-GW0101								PDO-GW0201								PDO-GW0301								PDO-GW0401								PDO-ER02								PDO-GW1901																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

Page: 3A of 3C

CONSTITUENT	(Units in ug/l)	SITE	PDO-GW01	PDO-GW02	PDO-GW03	PDO-GW04	PDO-GW19	PDO-GW19
SAMPLE ID	DATE	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary
GRO	77	---	<50	<50	<50	<50	<50	<50
DRO	1000	---	320	---	<100	<100	<100	<100
Antimony	<50.0	---	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Arsenic	<10.0	---	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
Beryllium	<4.0	---	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cadmium	<5.0	---	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chromium	16.0	---	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
Copper	<26.0	---	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0
Lead	6.4	---	<5.0	<5.0	<5.0	<5.0	<5.0	99
Mercury	<0.20	---	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel	55.0	---	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0
Selenium	<10.0	---	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Silver	<10.0	---	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium	<10.0	---	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc	340	---	<20	89	<20	<20	<20	74

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

CONSTITUENT	Units in ug/l	SITE	PDO-GW20	PDO-GW21	PDO-GW22	PDO-GW23	PDO-GW23	PDO-GW23	PDO-GW24
DATE	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary
Acetone		<25	<25	<25	<25	<25	<25	<25	50
Benzene		<1	<1	<1	<1	19	17	4.8	<1
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Bromoform		<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane		<1	<1	<1	<1	<1	<1	<1	<1
2-Butanone (MEK)		<10	<10	<10	<10	<10	<10	<10	60
Carbon disulfide		<1	<1	<1	(0.43)	<1	<1	<1	1.8
Carbon tetrachloride		<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane		<1	<1	<1	<1	<1	<1	<1	<1
2-Chloroethylvinyl ether		<10	<10	<10	<10	<10	<10	<10	<10
Chloroform		<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane		<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene		<1	<1	<1	<1	(0.73)	(0.77)	(0.24)	<1
trans-1,2-Dichloroethene		<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane		<1	<1	<1	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene		<1	<1	<1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene		<1	<1	<1	<1	<1	<1	<1	<1
Ethyl benzene		<1	<1	<1	<1	10	8.8	<1	<1
2-Hexanone		<10	<10	<10	<10	<10	<10	<10	<10
Methyl isobutyl ketone (MIBK)		<10	<10	<10	<10	<10	<10	<10	<10
Methylene chloride		<5	<5	<5	<5	<5	<5	<5	1.0 J

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT	SITE (Units in ug/l)	PDO-GW20	PDO-GW21	PDO-GW22	PDO-GW23	PDO-GW23	PDO-GW24
SAMPLE ID		PDO-GW2001	PDO-GW2101	PDO-GW2201	PDO-GW2301	PDO-GW05	PDO-GW2401
DATE		09/18/96	09/18/96	09/18/96	09/17/96	09/17/96	09/17/96
RESULT TYPE		Primary	Primary	Primary	Primary	Duplicate	Primary
Styrene		<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane		<1	<1	<1	<1	<1	<1
Tetrachloroethene		<1	<1	(0.62)	(0.71)	(0.70)	15
Toluene		<1	<1	<1	<1	<1	1.4
1,1,1-Trichloroethane		<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane		<1	<1	<1	<1	<1	<1
Trichloroethene		<1	<1	<1	<1	<1	<1
Vinyl Acetate		<2	<2	<2	<2	<2	<2
Vinyl Chloride		<1	<1	<1	<1	<1	<1
m&p-Xylene		<1	<1	<1	15	13	1.5
o-Xylene		<1	<1	<1	9.5	8.0	(0.82)
Acenaphthene		<10	<10	<10	(0.74)	(1.6)	<10
Acenaphthylene		<10	<10	<10	<10	<10	<10
Benzo(a)pyrene		<10	<10	<10	<10	<10	<10
Benzo(b,k)fluoranthene		<10	<10	<10	<10	<10	<10
Benzo(ghi)perylene		<10	<10	<10	<10	<10	<10
Chrysene + Benzo(a)anthracene		<10	<10	<10	<10	<10	<10
Fluoranthene		<10	<10	<10	<10	<10	<10
Fluorene		<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene + Dibenzo(a,h)anthr		<10	<10	<10	(2.1)	(3.4)	<10
Naphthalene		<10	<10	<10	<10	<10	<10
Phenanthrene + Anthracene		<10	<10	<10	13	18	<10
Pyrene		<10	<10	<10	<10	<10	<10
1-Methylnaphthalene		<10	<10	<10	<10	<10	<10
2-Methylnaphthalene		<10	<10	<10	30	37	<10

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
() = Less than Reporting Limit

METHODS: 8260, 8270, 8100M, 8015M, PPMT-T. J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

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CONSTITUENT (Units in ug/l)	SITE		PDO-GW20		PDO-GW21		PDO-GW22		PDO-GW23		PDO-GW23		PDO-GW24	
	SAMPLE ID	DATE	RESULT TYPE	Primary	09/18/96	Primary	09/18/96	Primary	09/17/96	Primary	09/17/96	Duplicate	09/17/96	Primary
GRO				---	<50	<50	<50	<50	---	120	150	---	---	---
DRO				---	<100	<100	<100	<100	---	1500	1600	---	200	---
				---	---	---	---	---	---	---	---	---	---	---
Antimony				<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Arsenic				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	34.0	<10.0
Beryllium				<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	11.0	<4.0
Cadmium				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chromium				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	100	<10.0
Copper				<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	<26.0	35.0	<26.0
Lead				<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	16	19	<5.0	46	<5.0
Mercury				<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel				<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0	<40.0
Selenium				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Silver				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc				66	88	28	<20	<20	<20	<20	<20	<20	150	<20

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT (Units in ug/l)	SITE SAMPLE ID DATE RESULT TYPE	PDO-GW25		PDO-SW01		PDO-SW02		PDO-SW03		PDO-SW04	
		PDO-GW2501		PDO-SW01		PDO-SW02		PDO-SW03		PDO-SW04	
		09/17/96		09/18/96		09/18/96		09/18/96		09/18/96	
		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	
Acetone		91		<25		<25		<25		<25	
Benzene		48		(0.36)		(0.21)		(0.21)		<1	
Bromodichloromethane		<2		<1		<1		<1		<1	
Bromoform		<2		<1		<1		<1		<1	
Bromomethane		<2		<1		<1		<1		<1	
2-Butanone (MEK)		49		<10		<10		<10		<10	
Carbon disulfide		<2		<1		<1		<1		<1	
Carbon tetrachloride		<2		<1		<1		<1		<1	
Chlorobenzene		<2		<1		<1		<1		<1	
Chloroethane		<2		<1		<1		<1		<1	
2-Chloroethylvinyl ether		<20		<10		<10		<10		<10	
Chloroform		<2		<1		<1		<1		<1	
Chloromethane		<2		<1		<1		<1		<1	
Dibromochloromethane		<2		<1		<1		<1		<1	
1,1-Dichloroethane		(0.47)		<1		<1		<1		<1	
1,2-Dichloroethane		<2		<1		<1		<1		<1	
1,1-Dichloroethene		<2		<1		<1		<1		<1	
cis-1,2-Dichloroethene		<2		(0.68)		(0.45)		(0.40)		(0.44)	
trans-1,2-Dichloroethene		<2		<1		<1		<1		<1	
1,2-Dichloropropane		<2		<1		<1		<1		<1	
cis-1,3-Dichloropropene		<2		<1		<1		<1		<1	
trans-1,3-Dichloropropene		<2		<1		<1		<1		<1	
Ethyl benzene		3.2		<1		<1		<1		<1	
2-Hexanone		<20		<10		<10		<10		<10	
Methyl isobutyl ketone (MIBK)		<20		<10		<10		<10		<10	
Methylene chloride		12 J		<5		<5		<5		<5	
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed () = Less than Reporting Limit											
METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.											
J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.											

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

CONSTITUENT (Units in ug/l)	SITE		PDO-SW01		PDO-SW02		PDO-SW03		PDO-SW03	
	SAMPLE ID		PDO-SW01		PDO-SW02		PDO-SW03		PDO-SW03	
	DATE		09/18/96		09/18/96		09/18/96		09/18/96	
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	
Styrene	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	36	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	<2	1.3	1.3	1.1	1.1	(0.82)	(0.82)	(0.82)	(0.82)	(0.91)
Vinyl Acetate	<4	<2	<2	<2	<2	<2	<2	<2	<2	<2
Vinyl Chloride	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1
m&p-Xylene	9.1	<1	<1	<1	<1	<1	<1	<1	<1	<1
o-Xylene	7.3	<1	<1	<1	<1	<1	<1	<1	<1	<1
	---	---	---	---	---	---	---	---	---	---
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzo(b,k)fluoranthene	---	---	---	---	---	---	---	---	---	---
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chrysene + Benzo(a)anthracene	---	---	---	---	---	---	---	---	---	---
Fluoranthene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Fluorene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Indeno(1,2,3-cd)pyrene + Dibenzo(a,h)anthr	---	---	---	---	---	---	---	---	---	---
Naphthalene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phenanthrene + Anthracene	---	---	---	---	---	---	---	---	---	---
Pyrene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1-Methylnaphthalene	---	---	---	---	---	---	---	---	---	---
2-Methylnaphthalene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD - PDO YARD
PRIMARY ANALYTICAL RESULTS FOR GROUNDWATER & SURFACE WATER

CONSTITUENT	(Units in ug/l)	SITE	PDO-GW25	PDO-SW01	PDO-SW02	PDO-SW03	PDO-SW03	PDO-SW04
		SAMPLE ID	PDO-GW2501	PDO-SW01	PDO-SW02	PDO-SW03	PDO-SW03	PDO-SW04
		DATE	09/17/96	09/18/96	09/18/96	09/18/96	09/18/96	09/18/96
		RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate
GRO			---	---	---	---	---	---
DRO			110	<50	<50	<50	<50	<50
			820	<100	<100	<100	<100	<100
			---	---	---	---	---	---
Antimony			<50.0	<50.0	<50.0	<50.0	<50.0	<50.0
Arsenic			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Beryllium			<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Cadmium			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Chromium			24.0	<10.0	<10.0	<10.0	<10.0	<10.0
Copper			<26.0	<26.0	<26.0	<26.0	<26.0	<26.0
Lead			16	<5.0	<5.0	<5.0	<5.0	<5.0
Mercury			<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel			<40.0	<40.0	<40.0	<40.0	<40.0	<40.0
Selenium			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Silver			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Zinc			41	<20	130	<20	<20	<20

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

METHODS: 8260, 8270, 8100M, 8015M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA01		PDO-HA02		PDO-HA03		PDO-HA03	
	SAMPLE ID		PDO-HA0101		PDO-HA0201		PDO-HA0301		PDO-HA0302	
	DATE		08/29/96		08/29/96		08/29/96		08/29/96	
	DEPTH (ft)		1.00		1.00		1.00		5.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary	
Starting Depth Range	(feet)	0.000	4.000	0.000	3.000	0.000	0.000	4.000	4.000	4.000
Ending Depth Range	(feet)	1.000	5.000	1.000	4.000	1.000	1.000	5.000	5.000	5.000
Acetone	(mg/kg)	<0.058	<0.060	<0.052	<0.060	<0.056	<0.056	<0.058	<0.058	<0.058
Benzene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Bromodichloromethane	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Bromoform	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Bromomethane	(mg/kg)	<0.012	<0.012	<0.010	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012
2-Butanone (MEK)	(mg/kg)	<0.029	<0.030	<0.026	<0.030	<0.028	<0.028	<0.029	<0.029	<0.029
Carbon disulfide	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Carbon tetrachloride	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Chlorobenzene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Chloroethane	(mg/kg)	<0.012	<0.012	<0.010	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012
2-Chloroethylvinyl ether	(mg/kg)	<0.058	<0.060	<0.052	<0.060	<0.056	<0.056	<0.058	<0.058	<0.058
Chloroform	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Chloromethane	(mg/kg)	<0.012	<0.012	<0.010	<0.012	<0.011	<0.011	<0.012	<0.012	<0.012
Dibromochloromethane	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
1,1-Dichloroethane	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
1,2-Dichloroethane	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
1,1-Dichloroethene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
cis-1,2-Dichloroethene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
trans-1,2-Dichloroethene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
1,2-Dichloropropane	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
cis-1,3-Dichloropropene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
trans-1,3-Dichloropropene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
Ethyl benzene	(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0056	<0.0058	<0.0058	<0.0058
2-Hexanone	(mg/kg)	<0.029	<0.030	<0.026	<0.030	<0.028	<0.028	<0.029	<0.029	<0.029

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA01		PDO-HA02		PDO-HA02		PDO-HA03		PDO-HA03	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)				(mg/kg)	<0.029	<0.030	<0.026	<0.030	<0.028	<0.029		
Methylene chloride				(mg/kg)	<0.0058	<0.0060	(0.00094)	(0.0013)	(0.0011)	(0.0014)		
Styrene				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
1,1,2,2-Tetrachloroethane				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
Tetrachloroethene				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
Toluene				(mg/kg)	<0.0058	<0.0060	(0.0018)	<0.0060	<0.0056	<0.0058		
1,1,1-Trichloroethane				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
1,1,2-Trichloroethane				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
Trichloroethene				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
Vinyl Acetate				(mg/kg)	<0.012	<0.012	<0.010	<0.012	<0.011	<0.012		
Vinyl Chloride				(mg/kg)	<0.012	<0.012	<0.010	<0.012	<0.011	<0.012		
m&p-Xylene				(mg/kg)	<0.0058	<0.0060	<0.0052	<0.0060	<0.0056	<0.0058		
Acenaphthylene				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Anthracene				(mg/kg)	<0.38	<0.40	(0.014)	<0.39	(0.0091)	<0.38		
Benzidine				(mg/kg)	<3.2	<3.2	<2.8	<3.2	<3.0	<3.1		
Benzo(a)anthracene				(mg/kg)	(0.053)	<0.40	(0.093)	<0.39	<0.36	<0.38		
Benzo(a)pyrene				(mg/kg)	<0.38	<0.40	(0.11)	<0.39	<0.36	<0.38		
Benzo(g,h,i)perylene				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Benzo(k)fluoranthene				(mg/kg)	<0.38	<0.40	(0.13)	<0.39	<0.36	<0.38		
Bis(2-chloroethoxy) methane				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Bis(2-chloroethyl)ether				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Bis(2-chloroisopropyl) ether				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Bis(2-ethylhexyl)phthalate				(mg/kg)	<0.38	<0.40	(0.098)	<0.39	<0.36	(0.26)		
4-Bromophenyl phenylether				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		
Benzo(b)fluoranthene				(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38		

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
 () = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT	SITE		PDO-HA01		PDO-HA02		PDO-HA03	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Secondary	Primary	Secondary
	PDO-HA0101	PDO-HA0102	PDO-HA0201	PDO-HA0202	PDO-HA0301	PDO-HA0302	PDO-HA0303	PDO-HA0304
	08/29/96	08/29/96	08/29/96	08/29/96	08/29/96	08/29/96	08/29/96	08/29/96
Benzoic acid	(mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Benzyl alcohol	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
Butylbenzylphthalate	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
4-Chloroaniline	(mg/kg)	<0.78	<0.80	<0.69	<0.78	<0.73	<0.76	<0.76
4-Chloro-3-methylphenol	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2-Chlorophenol	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2-Chloronaphthalene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
4-Chlorophenyl phenyl ether	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
Chrysene	(mg/kg)	(0.078)	<0.40	(0.12)	<0.39	(0.054)	<0.38	<0.38
Dibenzo(a,h)anthracene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
Dibenzofuran	(mg/kg)	<0.38	<0.40	<0.34	<0.39	(0.062)	<0.38	<0.38
Di-n-butyl phthalate	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
1,2-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2,4-Dichlorophenol	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
1,3-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
1,4-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
3,3'-Dichlorobenzidine	(mg/kg)	<0.78	<0.80	<0.69	<0.78	<0.73	<0.76	<0.76
Diethyl phthalate	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
Dimethylphthalate	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0	<2.0	<1.8	<2.0	<1.8	<2.0	<2.0
2,4-Dinitrotoluene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2,6-Dinitrotoluene	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2,4-Dinitrophenol	(mg/kg)	<2.0	<2.0	<1.8	<2.0	<1.8	<2.0	<2.0
Di-n-octylphthalate	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
2,4-Dimethylphenol	(mg/kg)	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.38
Fluoranthene	(mg/kg)	(0.097)	<0.40	(0.14)	<0.39	(0.038)	<0.38	<0.38

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T. J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA01		PDO-HA02		PDO-HA03		PDO-HA03	
	SAMPLE ID		PDO-HA0101		PDO-HA0102		PDO-HA0201		PDO-HA0202	
	DATE		08/29/96		08/29/96		08/29/96		08/29/96	
	DEPTH (ft)		1.00		5.00		1.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary	
	Primary		Primary		Primary		Primary		Primary	
Fluorene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Hexachlorobenzene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Hexachlorobutadiene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Hexachlorocyclopentadiene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Hexachloroethane	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Isophorone	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
2-Methylnaphthalene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
2-Methylphenol	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Naphthalene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
2-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<1.8	<2.0	<1.8	<2.0	<2.0
3-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<1.8	<2.0	<1.8	<2.0	<2.0
4-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<1.8	<2.0	<1.8	<2.0	<2.0
Nitrobenzene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
2-Nitrophenol	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
4-Nitrophenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<1.8	<2.0	<1.8	<2.0	<2.0
N-Nitrosodimethylamine	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
N-Nitrosodi-n-propylamine	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Phenanthrene	(mg/kg)	(0.060)	<0.40	<0.39	(0.080)	<0.36	<0.38	<0.36	<0.38	<0.38
Pentachlorophenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<1.8	<2.0	<1.8	<2.0	<2.0
Phenol	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
Pyrene	(mg/kg)	(0.12)	<0.40	<0.39	(0.18)	<0.36	<0.38	<0.36	<0.38	<0.38
1,2,4-Trichlorobenzene	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38
2,4,5-Trichlorophenol	(mg/kg)	<0.38	<0.40	<0.39	<0.34	<0.36	<0.38	<0.36	<0.38	<0.38

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA01		PDO-HA01		PDO-HA02		PDO-HA02		PDO-HA03		PDO-HA03	
	SAMPLE ID		PDO-HA0101		PDO-HA0102		PDO-HA0201		PDO-HA0202		PDO-HA0301		PDO-HA0302	
	DATE		08/29/96		08/29/96		08/29/96		08/29/96		08/29/96		08/29/96	
	DEPTH (ft)		1.00		5.00		1.00		4.00		1.00		5.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary	
2,4,6-Trichlorophenol	(mg/kg)	<0.38	<0.38	<0.40	<0.34	<0.39	<0.36	<0.38	<0.36	<0.38	<0.36	<0.38	<0.36	<0.38
GRO	(mg/kg)	<0.21 J	<0.21 J	<0.21 J	<0.18 J	<0.21 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J
DRO	(mg/kg)	16 J	16 J	<12 R	16 J	16 J	28 J	16 J	28 J	16 J	28 J	16 J	28 J	<12 R
Gross Alpha	(pCi/g)	<14	<14	13 +/-8.0 J	<12	<12	<13	<14	<13	<14	<13	<14	<13	<14
Gross Beta	(pCi/g)	<12	<12	22 +/-8.2	14 +/-7.1	(12 +/-8.1)	<12	<12	<12	<12	<12	<12	<12	<12
Antimony	(mg/kg)	<5.8 J	<5.8 J	<6 J	<5.2 J	<6 J	<5.6 J	<5.8 J	<5.6 J	<5.8 J	<5.6 J	<5.8 J	<5.6 J	<5.8 J
Arsenic	(mg/kg)	1.3	1.3	<1.2	1.1	<1.1	8.1	<1.1	8.1	<1.1	8.1	<1.1	<1.1	<1.1
Beryllium	(mg/kg)	<0.58	<0.58	<0.6	<0.52	<0.6	<0.56	<0.58	<0.56	<0.58	<0.56	<0.58	<0.56	<0.58
Cadmium	(mg/kg)	<0.58	<0.58	<0.6	<0.52	<0.6	<0.56	<0.58	<0.56	<0.58	<0.56	<0.58	<0.56	<0.58
Chromium	(mg/kg)	3.8 J	3.8 J	7.8 J	6.9 J	6.9 J	3.1 J	3.1 J	3.1 J	3.1 J	3.1 J	3.1 J	3.1 J	3.2 J
Copper	(mg/kg)	4.3	4.3	<3	9.1	9.1	8.5	<3	8.5	<3	8.5	<3	8.5	<3
Lead	(mg/kg)	27 J	27 J	8.6 J	110 J	110 J	24 J	4.1 J	24 J	4.1 J	24 J	4.1 J	24 J	4.5 J
Mercury	(mg/kg)	0.033	0.033	0.075	0.044	0.044	0.024	0.035	0.024	0.035	0.024	0.035	0.024	0.018
Nickel	(mg/kg)	<4.8	<4.8	<4.8	<4.2	<4.2	<4.4	<4.8	<4.4	<4.8	<4.4	<4.8	<4.4	<4.6
Selenium	(mg/kg)	<1.1 J	<1.1 J	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J
Silver	(mg/kg)	<1.1	<1.1	<1.2	<1	<1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Thallium	(mg/kg)	<1.1	<1.1	<1.2	<1	<1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Zinc	(mg/kg)	12	12	<2.4	24	24	16	<2.3	16	<2.3	16	<2.3	16	<2.3

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EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA04		PDO-HA05		PDO-HA05		PDO-HA05		PDO-HA06	
	SAMPLE ID		PDO-HA0401		PDO-HA0402		PDO-HA0501		PDO-HA0502		PDO-HA0601	
	DATE	DEPTH (ft)	09/16/96	1.00	09/16/96	2.00	09/16/96	1.00	09/16/96	2.00	09/16/96	1.00
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary
Starting Depth Range	(feet)	0.000	1.000	0.000	1.000	1.000	0.000	1.000	1.000	---	0.000	0.000
Ending Depth Range	(feet)	1.000	2.000	1.000	2.000	2.000	1.000	2.000	2.000	---	1.000	1.000
Acetone	(mg/kg)	<0.056	0.0053 J	(0.016)	<0.058	<0.060	<0.064	<0.060	<0.060	<3.0	<0.056	<0.056
Benzene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	(0.0013)	(0.0013)
Bromodichloromethane	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Bromoform	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Bromomethane	(mg/kg)	<0.011	<0.011	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<6.0	<0.011	<0.011
2-Butanone (MEK)	(mg/kg)	<0.028	<0.028	<0.032	<0.028	<0.030	<0.032	<0.030	<0.030	<14	<0.028	<0.028
Carbon disulfide	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Carbon tetrachloride	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Chlorobenzene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Chloroethane	(mg/kg)	<0.011	<0.011	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<6.0	<0.011	<0.011
2-Chloroethylvinyl ether	(mg/kg)	<0.056	<0.057	<0.064	<0.057	<0.060	<0.064	<0.060	<0.060	<30	<0.056	<0.056
Chloroform	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Chloromethane	(mg/kg)	<0.011	<0.011	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<6.0	<0.011	<0.011
Dibromochloromethane	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
1,1-Dichloroethane	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
1,2-Dichloroethane	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
1,1-Dichloroethene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
cis-1,2-Dichloroethene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
trans-1,2-Dichloroethene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
1,2-Dichloropropane	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
cis-1,3-Dichloropropene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
trans-1,3-Dichloropropene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
Ethyl benzene	(mg/kg)	<0.0056	<0.0058	<0.0064	<0.0058	<0.0060	<0.0064	<0.0060	<0.0060	<3.0	<0.0056	<0.0056
2-Hexanone	(mg/kg)	<0.028	<0.028	<0.032	<0.028	<0.030	0.018	1.3 J	<0.030	3.5 J	<0.028	<0.028

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
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EPA METHODS: 8260.8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-HA04	PDO-HA0401	PDO-HA0402	PDO-HA05	PDO-HA0501	PDO-HA0502	PDO-HA05	PDO-HA11	PDO-HA06
	SAMPLE ID									
	DATE									
DEPTH (ft)										
RESULT TYPE										
		Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.028	<0.028	<0.028	<0.032	<0.032	<0.030	<14	<0.028	<0.028
Methylene chloride	(mg/kg)	(0.0014)	(0.0014)	0.0012 J	(0.0017)	(0.0017)	0.0020 J	<3.0	<0.0056	<0.0056
Styrene	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	<0.0060	<3.0	<0.0056	<0.0056
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	<0.0060	<3.0	<0.0056	<0.0056
Tetrachloroethene	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	0.043 J	<3.0	<0.0056	<0.0056
Toluene	(mg/kg)	(0.0012)	(0.0012)	0.00044 J	0.043	0.043	3.4 J	0.53 J	<0.0056	<0.0056
1,1,1-Trichloroethane	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	<0.0060	<3.0	<0.0056	<0.0056
1,1,2-Trichloroethane	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	<0.0060	<3.0	<0.0056	<0.0056
Trichloroethene	(mg/kg)	<0.0056	<0.0056	<0.0058	<0.0064	<0.0064	<0.0060	<3.0	<0.0056	<0.0056
Vinyl Acetate	(mg/kg)	<0.011	<0.011	<0.011	<0.012	<0.012	<0.012	<6.0	<0.011	<0.011
Vinyl Chloride	(mg/kg)	<0.011	<0.011	<0.011	<0.012	<0.012	<0.012	<6.0	<0.011	<0.011
m&p-Xylene	(mg/kg)	<0.0056	<0.0056	<0.0058	0.077	0.077	5.4 J	20 J	(0.0010)	(0.0010)
Acenaphthylene	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	(0.060)	(0.060)
Anthracene	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	0.26 J	(0.14)	(0.14)
Benidine	(mg/kg)	<3.0	<3.0	<3.1	<6.9	<6.9	<32	<64	<3.0	<3.0
Benzo(a)anthracene	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	0.53	0.53
Benzo(a)pyrene	(mg/kg)	(0.024)	(0.024)	<0.38	<0.84	<0.84	<3.9	<7.8	0.59	0.59
Benzo(g,h,i)perylene	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	(0.36)	(0.36)
Benzo(k)fluoranthene	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	0.38	0.38
Bis(2-chloroethoxy) methane	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	<0.38	<0.38
Bis(2-chloroethyl)ether	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	<0.38	<0.38
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	<0.38	<0.38
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.36	<0.36	<0.38	<0.84	<0.84	<3.9	<7.8	<0.38	<0.38
4-Bromophenyl phenylether	(mg/kg)	<0.36	<0.36	<0.38	0.93	0.93	1.2 J	<7.8	<0.38	<0.38
Benzo(b)fluoranthene	(mg/kg)	(0.042)	<0.38	<0.38	<0.84	<0.84	<3.9	<7.8	<0.38	<0.38
Values represent total concentrations unless noted	< = Not detected at indicated reporting limit	---	---	---	---	---	---	---	---	---
() = Less than Reporting Limit										

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA04		PDO-HA05		PDO-HA05		PDO-HA05		PDO-HA05		PDO-HA06	
	SAMPLE ID		PDO-HA0401		PDO-HA0402		PDO-HA0501		PDO-HA0502		PDO-HA11		PDO-HA0601	
	DATE		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96	
	DEPTH (ft)		1.00		2.00		1.00		2.00		2.00		1.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Duplicate		Primary	
Benzoic acid	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<4.4	(mg/kg)	<20	(mg/kg)	<40	(mg/kg)	<1.9	(mg/kg)	<0.38
Benzyl alcohol	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	0.047 J	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
Butylbenzylphthalate	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
4-Chloroaniline	(mg/kg)	<0.73	(mg/kg)	<0.76	(mg/kg)	<1.6	(mg/kg)	<7.8	(mg/kg)	<16	(mg/kg)	<0.75	(mg/kg)	<0.38
4-Chloro-3-methylphenol	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2-Chlorophenol	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2-Chloronaphthalene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
4-Chlorophenyl phenyl ether	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
Chrysene	(mg/kg)	(0.035)	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	0.61	(mg/kg)	<0.38
Dibenzofuran	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
Di-n-butyl phthalate	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	(0.054)	(mg/kg)	<0.38
1,2-Dichlorobenzene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2,4-Dichlorophenol	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
1,3-Dichlorobenzene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
1,4-Dichlorobenzene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
3,3'-Dichlorobenzidine	(mg/kg)	<0.73	(mg/kg)	<0.76	(mg/kg)	<1.6	(mg/kg)	<7.8	(mg/kg)	<16	(mg/kg)	<0.75	(mg/kg)	<0.38
Diethyl phthalate	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
Dimethylphthalate	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
4,6-Dinitro,2-methylphenol	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<4.4	(mg/kg)	<20	(mg/kg)	<40	(mg/kg)	<1.9	(mg/kg)	<0.38
2,4-Dinitrotoluene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2,6-Dinitrotoluene	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2,4-Dinitrophenol	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<4.4	(mg/kg)	<20	(mg/kg)	<40	(mg/kg)	<1.9	(mg/kg)	<0.38
Di-n-octylphthalate	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
2,4-Dimethylphenol	(mg/kg)	<0.36	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	<3.9	(mg/kg)	<7.8	(mg/kg)	<0.38	(mg/kg)	<0.38
Fluoranthene	(mg/kg)	(0.042)	(mg/kg)	<0.38	(mg/kg)	<0.84	(mg/kg)	0.32 J	(mg/kg)	0.24 J	(mg/kg)	1.0	(mg/kg)	<0.38

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-HA04	PDO-HA04	PDO-HA05	PDO-HA05	PDO-HA05	PDO-HA06
SAMPLE ID	PDO-HA0401	PDO-HA0402	PDO-HA0501	PDO-HA0502	PDO-HA11	PDO-HA0601	
DATE	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	
DEPTH (ft)	1.00	2.00	1.00	2.00	2.00	1.00	
RESULT TYPE	Primary	Primary	Primary	Primary	Duplicate	Primary	
Fluorene	(mg/kg)	<0.36	<0.38	(0.31)	<3.9	<7.8	(0.047)
Hexachlorobenzene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
Hexachlorobutadiene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
Hexachlorocyclopentadiene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
Hexachloroethane	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	0.38
Isophorone	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
2-Methylnaphthalene	(mg/kg)	<0.36	<0.38	3.2	22 J	23 J	(0.098)
2-Methylphenol	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	(0.013)
Naphthalene	(mg/kg)	<0.36	<0.38	1.1	10 J	11 J	(0.050)
2-Nitroaniline	(mg/kg)	<1.8	<2.0	<4.4	<20	<40	<1.9
3-Nitroaniline	(mg/kg)	<1.8	<2.0	<4.4	<20	<40	<1.9
4-Nitroaniline	(mg/kg)	<1.8	<2.0	(0.029)	<20	<40	<1.9
Nitrobenzene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
2-Nitrophenol	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
4-Nitrophenol	(mg/kg)	<1.8	<2.0	<4.4	<20	<40	<1.9
N-Nitrosodimethylamine	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
N-Nitrosodi-n-propylamine	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.36	<0.38	(0.34)	1.7 J	<7.8	<0.38
Phenanthrene	(mg/kg)	(0.036)	<0.38	(0.41)	1.9 J	1.6 J	0.59
Pentachlorophenol	(mg/kg)	<1.8	<2.0	<4.4	<20	<40	<1.9
Phenol	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
Pyrene	(mg/kg)	(0.042)	<0.38	(0.40)	0.70 J	0.55 J	0.93
1,2,4-Trichlorobenzene	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38
2,4,5-Trichlorophenol	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38

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 () = Less than Reporting Limit

EPA METHODS: 8260.8100.8015M.8100M.PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA04		PDO-HA04		PDO-HA05		PDO-HA05		PDO-HA05		PDO-HA06	
	SAMPLE ID		PDO-HA0401	PDO-HA0402	PDO-HA0501	PDO-HA0502	PDO-HA11	PDO-HA0601						
	DATE		09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96						
	DEPTH (ft)		1.00	2.00	1.00	2.00	2.00	2.00						
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary		Primary		
2,4,6-Trichlorophenol	(mg/kg)	<0.36	<0.38	<0.84	<3.9	<7.8	<0.38							
GRO	(mg/kg)	<0.2 J	<0.2	70	6900	4800	<0.2							
DRO	(mg/kg)	26	<11	1200 J	4600 J	4700 J	92							
Gross Alpha	(pCi/g)	<13	<14	<15	<14		<14							
Gross Beta	(pCi/g)	<12	<12	<14	<13		<12							
Antimony	(mg/kg)	<5.6 J	<5.8 J	<6.4 J	<6 J	<6 J	<5.6 J							
Arsenic	(mg/kg)	1.3	<1.1	1.3	<1.1	<2.3	3.1							
Beryllium	(mg/kg)	<0.56	<0.58	<0.64	<0.6	<0.6	<0.56							
Cadmium	(mg/kg)	<0.56	<0.58	<0.64	<0.6	<0.6	<0.56							
Chromium	(mg/kg)	4.4	1.6	11	8.8	4.7	5.8							
Copper	(mg/kg)	8.4	<2.8	4.9	<3	<3	6.3							
Lead	(mg/kg)	120	17	51	84	200	45							
Mercury	(mg/kg)	0.062	0.027	<0.012	0.015	0.013	0.027							
Nickel	(mg/kg)	<4.4	<4.6	<5.1	<4.8	<4.8	<4.6							
Selenium	(mg/kg)	<1.1 J	<1.1 J	<1.2 J	<1.1 J	<1.1 J	<1.1 J							
Silver	(mg/kg)	<1.1	<1.1	<1.2	<1.1	<1.1	<1.1							
Thallium	(mg/kg)	<1.1	<1.1	<1.2	<1.1	<1.1	<1.1							
Zinc	(mg/kg)	20	<2.2	36	30	28	23							

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT	SITE		PDO-HA06		PDO-HA07		PDO-HA07		PDO-HA08		PDO-HA09	
	SAMPLE ID		PDO-HA0602		PDO-HA0701		PDO-HA0702		PDO-HA0801		PDO-HA0802	
	DATE		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96	
	DEPTH (ft)		5.00		1.00		5.00		1.00		5.00	
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Starting Depth Range	(feet)		4.000		0.000		4.000		0.000		4.000	
Ending Depth Range	(feet)		5.000		1.000		5.000		1.000		5.000	
Acetone	(mg/kg)		<0.060		<0.056		(0.0097)		<0.058		(0.0086)	
Benzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Bromodichloromethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Bromoform	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Bromomethane	(mg/kg)		<0.012		<0.011		<0.012		<0.012		<0.012	
2-Butanone (MEK)	(mg/kg)		<0.030		<0.028		<0.030		<0.029		<0.029	
Carbon disulfide	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Carbon tetrachloride	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Chlorobenzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Chloroethane	(mg/kg)		<0.012		<0.011		<0.012		<0.012		<0.012	
2-Chloroethylvinyl ether	(mg/kg)		<0.060		<0.056		<0.060		<0.058		<0.058	
Chloroform	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Chloromethane	(mg/kg)		<0.012		<0.011		<0.012		<0.012		<0.012	
Dibromochloromethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
1,1-Dichloroethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
1,2-Dichloroethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
1,1-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
cis-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
trans-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
1,2-Dichloropropane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
cis-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
trans-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
Ethyl benzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0058		<0.0058	
2-Hexanone	(mg/kg)		<0.030		<0.028		<0.030		<0.029		<0.029	

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() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T. J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

SITE		PDO-HA06	PDO-HA07	PDO-HA07	PDO-HA08	PDO-HA08	PDO-HA09
SAMPLE ID		PDO-HA0602	PDO-HA0701	PDO-HA0702	PDO-HA0801	PDO-HA0802	PDO-HA0901
DATE		09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96
DEPTH (ft)		5.00	1.00	5.00	1.00	5.00	1.00
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.030	<0.028	<0.030	(0.0015)	<0.029	<0.028
Methylene chloride	(mg/kg)	<0.0060	(0.0047)	<0.0060	(0.0046)	(0.0055)	(0.0051)
Styrene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
Tetrachloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
Toluene	(mg/kg)	(0.0034)	<0.0056	<0.0060	(0.00089)	(0.0012)	(0.0012)
1,1,1-Trichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
1,1,2-Trichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
Trichloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0058	<0.0058	<0.0056
Vinyl Acetate	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.012	<0.011
Vinyl Chloride	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.012	<0.011
m&p-Xylene	(mg/kg)	<0.0060	<0.0056	<0.0060	(0.00081)	<0.0058	(0.0011)
Acenaphthylene	(mg/kg)	<0.40	(0.040)	<0.39	<0.38	<0.38	<0.38
Anthracene	(mg/kg)	<0.40	(0.036)	<0.39	<0.38	<0.38	<0.38
Benizidine	(mg/kg)	<3.2	<3.0	<3.2	<3.1	<3.2	<3.0
Benzo(a)anthracene	(mg/kg)	<0.40	(0.19)	<0.39	<0.38	<0.38	(0.14)
Benzo(a)pyrene	(mg/kg)	<0.40	(0.26)	<0.39	<0.38	<0.38	(0.15)
Benzo(g,h,i)perylene	(mg/kg)	<0.40	(0.18)	<0.39	<0.38	<0.38	<0.38
Benzo(k)fluoranthene	(mg/kg)	<0.40	(0.14)	<0.39	<0.38	<0.38	(0.14)
Bis(2-chloroethoxy) methane	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Bis(2-chloroethyl)ether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
4-Bromophenyl phenylether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Benzo(b)fluoranthene	(mg/kg)	<0.40	0.38	<0.39	<0.38	<0.38	(0.15)

Values represent total concentrations unless noted < = Not detected at indicated reporting limit -- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

SITE	PDO-HA06	PDO-HA07	PDO-HA07	PDO-HA08	PDO-HA08	PDO-HA08	PDO-HA09
SAMPLE ID	PDO-HA0602	PDO-HA0701	PDO-HA0702	PDO-HA0801	PDO-HA0802	PDO-HA0901	
DATE	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	
DEPTH (ft)	5.00	1.00	5.00	1.00	5.00	1.00	
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Benzoic acid	(mg/kg)	<2.0	<1.9	<2.0	<2.0	<1.9	<1.9
Benzyl alcohol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Butylbenzylphthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
4-Chloroaniline	(mg/kg)	<0.80	<0.75	<0.78	<0.76	<0.78	<0.75
4-Chloro-3-methylphenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2-Chlorophenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2-Chloronaphthalene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
4-Chlorophenyl phenyl ether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Chrysene	(mg/kg)	<0.40	(0.21)	<0.39	<0.38	<0.38	(0.17)
Dibenzo(a,h)anthracene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Dibenzofuran	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Di-n-butyl phthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
1,2-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2,4-Dichlorophenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
1,3-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
1,4-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
3,3'-Dichlorobenzidine	(mg/kg)	<0.80	<0.75	<0.78	<0.76	<0.78	<0.75
Diethyl phthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Dimethylphthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
4,6-Dinitro-2-methylphenol	(mg/kg)	<2.0	<1.9	<2.0	<2.0	<2.0	<1.9
2,4-Dinitrotoluene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2,6-Dinitrotoluene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2,4-Dinitrophenol	(mg/kg)	<2.0	<1.9	<2.0	<2.0	<2.0	<1.9
Di-n-octylphthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
2,4-Dimethylphenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.38
Fluoranthene	(mg/kg)	<0.40	(0.16)	<0.39	(0.014)	<0.38	(0.28)

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA06		PDO-HA07		PDO-HA07		PDO-HA08		PDO-HA08		PDO-HA09	
	SAMPLE ID		PDO-HA0602		PDO-HA0701		PDO-HA0702		PDO-HA0801		PDO-HA0802		PDO-HA0901	
	DATE		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96	
	DEPTH (ft)		5.00		1.00		5.00		1.00		5.00		1.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary	
Fluorene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Hexachlorobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Hexachlorobutadiene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Hexachlorocyclopentadiene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Hexachloroethane	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.40	(0.18)	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	(0.074)	<0.38
Isophorone	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2-Methylnaphthalene	(mg/kg)	<0.40	(0.094)	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2-Methylphenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
3-Methylphenol/4-Methylphenol (m & p-Creso	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Naphthalene	(mg/kg)	<0.40	(0.046)	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2-Nitroaniline	(mg/kg)	<2.0	<1.9	<2.0	<1.9	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
3-Nitroaniline	(mg/kg)	<2.0	<1.9	<2.0	<1.9	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
4-Nitroaniline	(mg/kg)	<2.0	<1.9	<2.0	<1.9	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
Nitrobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2-Nitrophenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
4-Nitrophenol	(mg/kg)	<2.0	<1.9	<2.0	<1.9	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
N-Nitrosodimethylamine	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
N-Nitrosodi-n-propylamine	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Phenanthrene	(mg/kg)	<0.40	(0.10)	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	(0.0090)	<0.38	<0.38	(0.17)	<0.38
Pentachlorophenol	(mg/kg)	<2.0	<1.9	<2.0	<1.9	<2.0	<1.9	<2.0	<2.0	<2.0	<2.0	<2.0	<1.9	<1.9
Phenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
Pyrene	(mg/kg)	<0.40	(0.21)	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	(0.016)	<0.38	<0.38	(0.27)	<0.38
1,2,4-Trichlorobenzene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2,4,5-Trichlorophenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
2,4,5-Trichlorophenol	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38

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 () = Less than Reporting Limit

EPA METHODS: 8260.8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA06		PDO-HA07		PDO-HA07		PDO-HA08		PDO-HA08		PDO-HA09	
	SAMPLE ID		PDO-HA0602		PDO-HA0701		PDO-HA0702		PDO-HA0801		PDO-HA0802		PDO-HA0901	
	DATE		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96	
	DEPTH (ft)		5.00		1.00		5.00		1.00		5.00		1.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary	
2,4,6-Trichlorophenol	(mg/kg)	<0.40	<0.38	---	<0.39	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38
GRO	(mg/kg)	<0.21	<0.2 J	---	<0.21	<0.2 J	<0.21	<0.2	<0.21	<0.21	<0.21	<0.2 J	<0.2 J	<0.2 J
DRO	(mg/kg)	<12	23	<12	<12	<12	<12	<12	<12	<12	<12	<12	20	<12
Gross Alpha	(pCi/g)	<14	<14	---	<14	<14	<14	<14	<14	<14	<14	<14	<14	<14
Gross Beta	(pCi/g)	19 +/- 7.5	<12	<12	16 +/- 7.9	<12	<12	<12	<12	<12	21 +/- 8.0	<12	<12	<12
Antimony	(mg/kg)	<6 J	<5.6 J	<6 J	<6 J	<5.8 J	<5.8 J	<5.8 J	<5.8 J	<5.8 J	<5.8 J	<5.6 J	<5.6 J	<5.6 J
Arsenic	(mg/kg)	<1.2	1.8	<1.1	<1.1	2.3	<1.1	<1.1	<1.1	<1.1	<1.1	1.8	<1.1	<1.1
Beryllium	(mg/kg)	<0.6	<0.56	<0.6	<0.6	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.56	<0.56	<0.56
Cadmium	(mg/kg)	<0.6	<0.56	<0.6	<0.6	<0.58	<0.58	<0.58	<0.58	<0.58	<0.58	<0.56	<0.56	<0.56
Chromium	(mg/kg)	6.4	4.6	5.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	1.9	<1.9	<1.9
Copper	(mg/kg)	<3	5.6	<3	<3	4.8	<3	<3	<3	<3	<3	<2.8	<2.8	<2.8
Lead	(mg/kg)	6.3	29	6.4	6.4	230	230	230	230	230	230	310	310	310
Mercury	(mg/kg)	0.018	0.026	0.023	0.023	0.039	0.039	0.039	0.039	0.039	0.039	0.042	0.042	0.042
Nickel	(mg/kg)	<4.8	<4.6	<4.8	<4.8	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6	<4.6
Selenium	(mg/kg)	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J
Silver	(mg/kg)	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Thallium	(mg/kg)	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Zinc	(mg/kg)	<2.4	20	<2.3	<2.3	6.8	6.8	6.8	6.8	6.8	<2.3	12	12	12

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
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EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-HA09		PDO-HA10		PDO-HA1002		PDO-HA10		PDO-HA12		PDO-MW01		PDO-MW01	
	SAMPLE ID		PDO-HA0902		PDO-HA1001		PDO-HA1002		PDO-HA1001		PDO-HA12		PDO-MWB0101		PDO-MWB0102	
	DATE		09/16/96		09/16/96		09/16/96		09/16/96		09/16/96		08/26/96		08/26/96	
	DEPTH (ft)		3.00		1.00		3.00		3.00		3.00		2.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Duplicate		Primary		Primary	
	(feet)		(feet)		(feet)		(feet)		(feet)		(feet)		(feet)		(feet)	
Starting Depth Range	2.000		0.000		0.000		2.000		2.000		---		0.000		2.000	
Ending Depth Range	3.000		3.000		1.000		3.000		3.000		---		2.000		4.000	
Acetone	(mg/kg)		(0.022)		(0.0082)		(0.0084)		(0.0084)		<0.060		<0.054		<0.057	
Benzene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		(0.0017)		<0.0058	
Bromodichloromethane	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Bromoform	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Bromomethane	(mg/kg)		<0.012		<0.012		<0.012		<0.012		<0.012		<0.010		<0.011	
2-Butanone (MEK)	(mg/kg)		<0.029		<0.030		<0.030		<0.030		<0.030		<0.027		<0.028	
Carbon disulfide	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Carbon tetrachloride	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Chlorobenzene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		(0.0016)		<0.0058	
Chloroethane	(mg/kg)		<0.012		<0.012		<0.012		<0.012		<0.012		<0.010		<0.011	
2-Chloroethylvinyl ether	(mg/kg)		<0.058		<0.060		<0.062		<0.062		<0.060		<0.054		<0.057	
Chloroform	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Chloromethane	(mg/kg)		<0.012		<0.012		<0.012		<0.012		<0.012		<0.010		<0.011	
Dibromochloromethane	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
1,1-Dichloroethane	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
1,2-Dichloroethane	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
1,1-Dichloroethene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		(0.0014)	
cis-1,2-Dichloroethene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
trans-1,2-Dichloroethene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
1,2-Dichloropropane	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
cis-1,3-Dichloropropene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
trans-1,3-Dichloropropene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
Ethyl benzene	(mg/kg)		<0.0058		<0.0060		<0.0061		<0.0061		<0.0060		<0.0054		<0.0058	
2-Hexanone	(mg/kg)		<0.029		<0.030		<0.030		<0.030		<0.030		<0.027		<0.028	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
 () = Less than Reporting Limit

EPA METHODS: 8260.8100.8015M.8100M.PPMT-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-HA09	PDO-HA10	PDO-HA1001	PDO-HA1002	PDO-HA10	PDO-HA12	PDO-MW01	PDO-MW0101	PDO-MW0102
	SAMPLE ID	PDO-HA0902	PDO-HA1001	PDO-HA1001	PDO-HA1002	PDO-HA10	PDO-HA12	PDO-MW01	PDO-MW0101	PDO-MW0102
	DATE	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	09/16/96	08/26/96	08/26/96	08/26/96
	DEPTH (ft)	3.00	1.00	3.00	3.00	3.00	3.00	2.00	4.00	4.00
	RESULT TYPE	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.029	<0.030	<0.030	<0.030	<0.030	<0.030	<0.027	<0.027	<0.028
Methylene chloride	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	(0.0013)	<0.0054	<0.0054	<0.0058
Styrene	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.0054	<0.0054	<0.0058
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.0054	<0.0054	<0.0058
Tetrachloroethene	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.0054	<0.0054	<0.0058
Toluene	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	(0.0011)	<0.0054	<0.0054	<0.0058
1,1,1-Trichloroethane	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	(0.0020)	<0.0054	(0.00068)
1,1,2-Trichloroethane	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.0054	<0.0054	<0.0058
Trichloroethene	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.0054	<0.0054	<0.0058
Vinyl Acetate	(mg/kg)	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	(0.0012)	<0.010	<0.0058
Vinyl Chloride	(mg/kg)	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.010	<0.010	<0.011
m&p-Xylene	(mg/kg)	<0.0058	<0.0060	<0.0060	<0.0061	<0.0061	<0.0060	<0.010	<0.010	<0.011
								(0.00046)		<0.0058
Acenaphthylene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Anthracene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Benzidine	(mg/kg)	<3.1	<3.2	<3.3	<3.3	<3.2	<3.2	<3.0	<3.0	<3.1
Benzo(a)anthracene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Benzo(a)pyrene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Benzo(g,h,i)perylene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Benzo(k)fluoranthene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Bis(2-chloroethoxy) methane	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Bis(2-chloroethoxy) ether	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
4-Bromophenyl phenylether	(mg/kg)	<0.38	1.1	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Benzo(b)fluoranthene	(mg/kg)	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38
Values represent total concentrations unless noted	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit	< = Not detected at indicated reporting limit
() = Less than Reporting Limit										

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

1	PDO-MW01	<0.38
	PDO-MWB0102	<0.38
	08/26/96	<0.38
	4.00	<0.38
	Primary	<0.38
		<0.38
		<0.38
		<0.38
		<0.38
		<0.38
		<2.0
		<2.0
		<2.0
		<0.38
		<0.38
		<2.0
		<0.38
		<0.38
		<0.38
		<0.38
		<2.0
		<0.38
		<0.38
		<0.38
		<0.38

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

CONSTITUENT

CONSTITUENT	SITE		PDO-HA09		PDO-HA10		PDO-HA10		PDO-HA10		PDO-MW01		PDO-MW01								
	SAMPLE ID	DATE	PDO-HA0902	09/16/96	PDO-HA1001	09/16/96	PDO-HA1002	09/16/96	PDO-HA1012	09/16/96	PDO-MW0101	08/26/96	PDO-MW0102	08/26/96							
															DEPTH (ft)	3.00	1.00	3.00	3.00	2.00	4.00
2,4,6-Trichlorophenol	(mg/kg)	<0.38	<0.38	<0.39	<0.39	<0.40	<0.40	<0.40	<0.40	<0.36	<0.36	<0.38	<0.38	<0.38							
GRO	(mg/kg)	<0.2	<0.2	<0.21	<0.21	<0.22	<0.22	<0.21	<0.21	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J							
DRO	(mg/kg)	<12	<12	25	25	<12	<12	<12	<12	18 J	18 J	12 J	12 J	12 J							
Gross Alpha	(pCi/g)	<14	<14	<14	<14	12 +/- 8.5 J	12 +/- 8.5 J	<14	<14	<13	<13	<14	<14	<14							
Gross Beta	(pCi/g)	<12	<12	<13	<13	<14	<14	<14	<14	<12	<12	(11 +/- 7.8)	(11 +/- 7.8)	(11 +/- 7.8)							
Antimony	(mg/kg)	<5.8 J	<5.8 J	<6 J	<6 J	<6.1 J	<6.1 J	<6 J	<6 J	<5.4 J	<5.4 J	<5.8 J	<5.8 J	<5.8 J							
Arsenic	(mg/kg)	1.5	1.5	7.0	7.0	<1.2	<1.2	<1.2	<1.2	28	28	1.6	1.6	1.6							
Beryllium	(mg/kg)	<0.58	<0.58	<0.6	<0.6	<0.61	<0.61	<0.6	<0.6	<0.54	<0.54	<0.58	<0.58	<0.58							
Cadmium	(mg/kg)	<0.58	<0.58	8.5	8.5	<0.61	<0.61	<0.6	<0.6	<0.54	<0.54	<0.58	<0.58	<0.58							
Chromium	(mg/kg)	4.1	4.1	39	39	1.9	1.9	2.9	2.9	2.5	2.5	4.6	4.6	4.6							
Copper	(mg/kg)	<3	<3	120	120	<3	<3	7.8	7.8	3.6	3.6	<2.8	<2.8	<2.8							
Lead	(mg/kg)	140	140	710	710	9.4	9.4	6.7	6.7	13	13	5.8	5.8	5.8							
Mercury	(mg/kg)	0.030	0.030	1.4	1.4	0.068	0.068	0.073	0.073	0.041	0.041	0.018	0.018	0.018							
Nickel	(mg/kg)	<4.6	<4.6	19	19	<5	<5	<4.8	<4.8	<4.3	<4.3	<4.6	<4.6	<4.6							
Selenium	(mg/kg)	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.2 J	<1.2 J	<1.2 J	<1.2 J	<1 J	<1 J	<1.1 J	<1.1 J	<1.1 J							
Silver	(mg/kg)	<1.1	<1.1	<1.1	<1.1	<1.2	<1.2	<1.2	<1.2	<1	<1	<1.1	<1.1	<1.1							
Thallium	(mg/kg)	<1.1	<1.1	<1.1	<1.1	<1.2	<1.2	<1.2	<1.2	<1	<1	<1.1	<1.1	<1.1							
Zinc	(mg/kg)	<2.3	<2.3	830	830	11	11	51	51	3.8	3.8	<2.2	<2.2	<2.2							

Values represent total concentrations unless noted < = Not detected at indicated reporting limit
() = Less than Reporting Limit
--- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW02		PDO-MW02		PDO-MW02		PDO-MW03		PDO-MW03		PDO-MW04	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	Duplicate	Primary	
Starting Depth Range			(feet)	2.000	4.000	---	0.000	2.000	0.000	2.000	0.000	2.000	0.000	
Ending Depth Range			(feet)	4.000	6.000	---	2.000	4.000	2.000	4.000	2.000	4.000	2.000	
Acetone			(mg/kg)	0.084	(0.032)	0.11	<0.054	0.074	<0.054	0.074	<0.054	0.074	<0.052	
Benzene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	(0.0013)	<0.0053	(0.0013)	<0.0053	(0.0013)	<0.0052	
Bromodichloromethane			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Bromoform			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Bromomethane			(mg/kg)	<0.012	<0.012	<0.012	<0.010	<0.011	<0.010	<0.011	<0.010	<0.011	<0.010	
2-Butanone (MEK)			(mg/kg)	<0.030	<0.029	<0.029	<0.026	<0.028	<0.026	<0.028	<0.026	<0.028	<0.026	
Carbon disulfide			(mg/kg)	(0.0019)	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Carbon tetrachloride			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Chlorobenzene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Chloroethane			(mg/kg)	<0.012	<0.012	<0.012	<0.010	<0.011	<0.010	<0.011	<0.010	<0.011	<0.010	
2-Chloroethylvinyl ether			(mg/kg)	<0.060	<0.058	<0.058	<0.054	<0.057	<0.054	<0.057	<0.054	<0.057	<0.052	
Chloroform			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Chloromethane			(mg/kg)	<0.012	<0.012	<0.012	<0.010	<0.011	<0.010	<0.011	<0.010	<0.011	<0.010	
Dibromochloromethane			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
1,1-Dichloroethane			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
1,2-Dichloroethane			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
1,1-Dichloroethene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
cis-1,2-Dichloroethene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
trans-1,2-Dichloroethene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
1,2-Dichloropropane			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
cis-1,3-Dichloropropene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
trans-1,3-Dichloropropene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
Ethyl benzene			(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	
2-Hexanone			(mg/kg)	<0.030	<0.029	<0.029	<0.026	<0.028	<0.026	<0.028	<0.026	<0.028	<0.026	
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed () = Less than Reporting Limit														
EPA METHODS: 8260,8100,8015M,8100M,PPMET-T. J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.														

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW02		PDO-MW02		PDO-MW02		PDO-MW03		PDO-MW03		PDO-MW04	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)				(mg/kg)	<0.030	<0.029	<0.029	<0.026	<0.028	<0.026	<0.028	<0.026	<0.026	<0.026
Methylene chloride				(mg/kg)	<0.0060	<0.0058	0.036	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
Styrene				(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
1,1,2,2-Tetrachloroethane				(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
Tetrachloroethene				(mg/kg)	<0.0060	(0.0020)	<0.0058	(0.0040)	<0.0058	(0.0040)	<0.0058	<0.0052	<0.0052	<0.0052
Toluene				(mg/kg)	(0.0015)	(0.0016)	(0.00045)	(0.00074)	(0.0010)	(0.00074)	(0.0010)	(0.0011)	(0.0011)	(0.0011)
1,1,1-Trichloroethane				(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
1,1,2-Trichloroethane				(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
Trichloroethene				(mg/kg)	<0.0060	(0.0016)	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
Vinyl Acetate				(mg/kg)	<0.012	<0.012	<0.012	<0.010	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010
Vinyl Chloride				(mg/kg)	<0.012	<0.012	<0.012	<0.010	<0.011	<0.010	<0.011	<0.010	<0.010	<0.010
m&p-Xylene				(mg/kg)	<0.0060	<0.0058	<0.0058	<0.0053	<0.0058	<0.0053	<0.0058	<0.0052	<0.0052	<0.0052
Acenaphthylene				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Anthracene				(mg/kg)	<0.40	(0.020)	(0.022)	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Benidine				(mg/kg)	<3.2	<3.1	<3.1	<2.9	<3.1	<2.9	<3.1	<2.8	<2.8	<2.8
Benzo(a)anthracene				(mg/kg)	<0.40	(0.039)	(0.055)	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Benzo(a)pyrene				(mg/kg)	<0.40	<0.38	(0.036)	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Benzo(g,h,i)perylene				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Benzo(k)fluoranthene				(mg/kg)	<0.40	<0.38	(0.060)	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Bis(2-chloroethoxy) methane				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Bis(2-chloroethyl)ether				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Bis(2-chloroisopropyl) ether				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Bis(2-ethylhexyl)phthalate				(mg/kg)	<0.40	(0.080)	(0.14)	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
4-Bromophenyl phenylether				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34
Benzo(b)fluoranthene				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.35	<0.38	<0.34	<0.34	<0.34

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW02		PDO-MW02		PDO-MW03		PDO-MW04	
	SAMPLE ID	PDO-MWB0201	PDO-MWB0202	PDO-MWB05	PDO-MWB0301	PDO-MWB0302	PDO-MWB0401			
	DATE	08/26/96	08/26/96	08/26/96	08/26/96	08/26/96	08/27/96			
	DEPTH (ft)	4.00	6.00	6.00	2.00	4.00	2.00			
RESULT TYPE	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	
Benzoic acid	(mg/kg)	<2.0	(0.13)	<2.0	<1.8	(0.070)	<1.8	<1.8		
Benzyl alcohol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Butylbenzylphthalate	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
4-Chloroaniline	(mg/kg)	<0.80	<0.76	<0.76	<0.70	<0.76	<0.68	<0.68		
4-Chloro-3-methylphenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2-Chlorophenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2-Chloronaphthalene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
4-Chlorophenyl phenyl ether	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Chrysene	(mg/kg)	<0.40	(0.051)	(0.054)	(0.10)	<0.38	<0.34	<0.34		
Dibenzo(a,h)anthracene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Dibenzofuran	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Di-n-butyl phthalate	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
1,2-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2,4-Dichlorophenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
1,3-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
1,4-Dichlorobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
3,3'-Dichlorobenzidine	(mg/kg)	<0.80	<0.76	<0.76	<0.70	<0.76	<0.68	<0.68		
Diethyl phthalate	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Dimethyl phthalate	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8	<1.8		
2,4-Dinitrotoluene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2,6-Dinitrotoluene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2,4-Dinitrophenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8	<1.8		
Di-n-octylphthalate	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
2,4-Dimethylphenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34	<0.34		
Fluoranthene	(mg/kg)	(0.013)	(0.066)	(0.091)	(0.065)	<0.38	<0.34	(0.047)		
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed										
() = Less than Reporting Limit										
EPA METHODS: 8260,8100,8015M,8100M,PPMET-T. J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.										

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

SITE	PDO-MW02	PDO-MW02	PDO-MW02	PDO-MW02	PDO-MW03	PDO-MW03	PDO-MW04
SAMPLE ID	PDO-MWB0201	PDO-MWB0202	PDO-MWB05	PDO-MWB0301	PDO-MWB0302	PDO-MWB0401	
DATE	08/26/96	08/26/96	08/26/96	08/26/96	08/26/96	08/27/96	
DEPTH (ft)	4.00	6.00	6.00	2.00	4.00	2.00	
RESULT TYPE	Primary	Primary	Duplicate	Primary	Primary	Primary	
Fluorene	(mg/kg)	<0.40	<0.38	(0.0083)	<0.35	<0.38	<0.34
Hexachlorobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Hexachlorobutadiene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Hexachlorocyclopentadiene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Hexachloroethane	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Isophorone	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
2-Methylnaphthalene	(mg/kg)	<0.40	<0.38	<0.38	0.54	<0.38	<0.34
2-Methylphenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Naphthalene	(mg/kg)	<0.40	(0.013)	(0.011)	(0.27)	<0.38	<0.34
2-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8
3-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8
4-Nitroaniline	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8
Nitrobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
2-Nitrophenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
4-Nitrophenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8
N-Nitrosodimethylamine	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
N-Nitrosodi-n-propylamine	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Phenanthrene	(mg/kg)	(0.012)	(0.081)	(0.094)	0.37	<0.38	<0.34
Pentachlorophenol	(mg/kg)	<2.0	<2.0	<2.0	<1.8	<2.0	<1.8
Phenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
Pyrene	(mg/kg)	(0.022)	(0.11)	(0.16)	(0.12)	<0.38	(0.0095)
1,2,4-Trichlorobenzene	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34
2,4,5-Trichlorophenol	(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.34

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260.8100, 8015M, 8100M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW02		PDO-MW02		PDO-MW02		PDO-MW03		PDO-MW03		PDO-MW04	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary
2,4,6-Trichlorophenol				(mg/kg)	<0.40	<0.38	<0.38	<0.35	<0.38	<0.38	<0.38	<0.38	<0.34	<0.34
GRO				(mg/kg)	<0.21 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.18 J	<0.18 J
DRO				(mg/kg)	20 J	29 J	23 J	44 J	44 J	20 J	20 J	20 J	<10 R	<10 R
Gross Alpha				(pCi/g)	<14	<14								
Gross Beta				(pCi/g)	<13	<12		13 +/-6.6	<12	<12	<12	<12	<11	<11
Antimony				(mg/kg)	<6 J	<5.8 J	<5.8 J	<5.3 J	<5.8 J	<5.8 J	<5.8 J	<5.8 J	<5.2 J	<5.2 J
Arsenic				(mg/kg)	<1.2	<1.1	<1.1	3.3	<1.1	<1.1	<1.1	<1.1	<1	<1
Beryllium				(mg/kg)	<0.6	<0.58	<0.58	<0.53	<0.58	<0.58	<0.58	<0.58	<0.52	<0.52
Cadmium				(mg/kg)	<0.6	<0.58	<0.58	<0.53	<0.58	<0.58	<0.58	<0.58	<0.52	<0.52
Chromium				(mg/kg)	2.0	2.0	1.6	3.4	3.4	1.8	1.8	1.8	2.0	2.0
Copper				(mg/kg)	<3	<3	<3	7.8	7.8	<2.8	<2.8	<2.8	<2.6	<2.6
Lead				(mg/kg)	6.1	4.4	5.0	12	12	2.7	2.7	2.7	4.8	4.8
Mercury				(mg/kg)	0.026	0.021	0.015	0.031	0.031	0.023	0.023	0.023	0.012	0.012
Nickel				(mg/kg)	<4.8	<4.6	<4.6	<4.3	<4.6	<4.6	<4.6	<4.6	<4.1	<4.1
Selenium				(mg/kg)	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1 J	<1 J
Silver				(mg/kg)	<1.2	<1.1	<1.1	<1	<1	<1.1	<1.1	<1.1	<1	<1
Thallium				(mg/kg)	<1.2	<1.1	<1.1	<1	<1	<1.1	<1.1	<1.1	<1	<1
Zinc				(mg/kg)	3.8	2.5	<2.3	6.2	6.2	<2.2	<2.2	<2.2	3.8	3.8

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW04		PDO-SB01		PDO-SB01		PDO-SB01		PDO-SB02		PDO-SB02		PDO-SB03	
	SAMPLE ID		PDO-MWB0402		PDO-SB0101		PDO-SB0102		PDO-SB0201		PDO-SB0202		PDO-SB0301			
	DATE		08/27/96		08/14/96		08/14/96		08/15/96		08/15/96		08/15/96			
	DEPTH (ft)		4.00		2.00		4.00		2.00		4.00		2.00			
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary		Primary	
Starting Depth Range	(feet)		2.000		0.000		2.000		0.000		0.000		2.000		0.000	
Ending Depth Range	(feet)		4.000		2.000		4.000		2.000		4.000		2.000		2.000	
Acetone	(mg/kg)		<0.060		<0.058 J		0.21		<0.057		<0.060		<0.057		<0.057	
Benzene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Bromodichloromethane	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Bromoform	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Bromomethane	(mg/kg)		<0.012		<0.012 J		<0.012		<0.011		<0.012		<0.011		<0.011	
2-Butanone (MEK)	(mg/kg)		<0.030		<0.029 J		<0.030		<0.028		<0.030		<0.028		<0.028	
Carbon disulfide	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Carbon tetrachloride	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Chlorobenzene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Chloroethane	(mg/kg)		<0.012		<0.012 J		<0.012		<0.011		<0.012		<0.011		<0.011	
2-Chloroethylvinyl ether	(mg/kg)		<0.060		<0.058 J		<0.060		<0.057		<0.060		<0.057		<0.057	
Chloroform	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Chloromethane	(mg/kg)		<0.012		<0.012 J		<0.012		<0.011		<0.012		<0.011		<0.011	
Dibromochloromethane	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
1,1-Dichloroethane	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
1,2-Dichloroethane	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
1,1-Dichloroethene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
cis-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
trans-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
1,2-Dichloropropane	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
cis-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
trans-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
Ethyl benzene	(mg/kg)		<0.0060		<0.0058 J		<0.0060		<0.0058		<0.0060		<0.0058		<0.0058	
2-Hexanone	(mg/kg)		<0.030		<0.029 J		<0.030		<0.028		<0.030		<0.028		<0.028	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit -- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-MW04	PDO-SB01	PDO-SB01	PDO-SB01	PDO-SB02	PDO-SB02	PDO-SB03
SAMPLE ID	PDO-MW04	PDO-SB01	PDO-SB01	PDO-SB01	PDO-SB02	PDO-SB02	PDO-SB02	PDO-SB03
DATE	08/27/96	08/14/96	08/14/96	08/14/96	08/15/96	08/15/96	08/15/96	08/15/96
DEPTH (ft)	4.00	2.00	2.00	4.00	2.00	4.00	2.00	2.00
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.030	<0.029 J	<0.030	<0.028	<0.030	<0.028	<0.028
Methylene chloride	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Styrene	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Tetrachloroethene	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Toluene	(mg/kg)	(0.00037)	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
1,1,1-Trichloroethane	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
1,1,2-Trichloroethane	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Trichloroethene	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Vinyl Acetate	(mg/kg)	<0.012	<0.012 J	<0.012	<0.011	<0.012	<0.011	<0.011
Vinyl Chloride	(mg/kg)	<0.012	<0.012 J	<0.012	<0.011	<0.012	<0.011	<0.011
m&p-Xylene	(mg/kg)	<0.0060	<0.0058 J	<0.0060	<0.0058	<0.0060	<0.0058	<0.0058
Acenaphthylene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Anthracene	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Benzidine	(mg/kg)	<3.2	<3.1	<3.2	<3.1	<3.2	<3.1	<3.1
Benzo(a)anthracene	(mg/kg)	<0.40	1.3	<0.39	<0.38	<0.39	<0.38	<0.38
Benzo(a)pyrene	(mg/kg)	<0.40	1.6	<0.39	<0.38	<0.39	<0.38	<0.38
Benzo(g,h,i)perylene	(mg/kg)	<0.40	1.3	<0.39	<0.38	<0.39	<0.38	<0.38
Benzo(k)fluoranthene	(mg/kg)	<0.40	1.4	<0.39	<0.38	<0.39	<0.38	<0.38
Bis(2-chloroethoxy) methane	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Bis(2-chloroethyl)ether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
4-Bromophenyl phenylether	(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.39	<0.38	<0.38
Benzo(b)fluoranthene	(mg/kg)	<0.40	1.8	<0.39	<0.38	<0.39	<0.38	<0.38
Values represent total concentrations unless noted	< = Not detected at indicated reporting limit	---	---	---	---	---	---	---
() = Less than Reporting Limit								

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW04		PDO-SB01		PDO-SB01		PDO-SB02		PDO-SB02		PDO-SB03	
	SAMPLE ID		PDO-MWB0402		PDO-SB0101		PDO-SB0102		PDO-SB0201		PDO-SB0202		PDO-SB0301	
	DATE		08/27/96		08/14/96		08/14/96		08/15/96		08/15/96		08/15/96	
	DEPTH (ft)		4.00		2.00		4.00		2.00		4.00		2.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary	
Benzoic acid	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0
Benzyl alcohol	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Butylbenzylphthalate	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
4-Chloroaniline	(mg/kg)	<0.80	(mg/kg)	<0.76	(mg/kg)	<0.76	(mg/kg)	<0.78	(mg/kg)	<0.76	(mg/kg)	<0.78	(mg/kg)	<0.76
4-Chloro-3-methylphenol	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2-Chlorophenol	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2-Chloronaphthalene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
4-Chlorophenyl phenyl ether	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Chrysene	(mg/kg)	<0.40	(mg/kg)	1.4	(mg/kg)	<0.39	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Dibenzo(a,h)anthracene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Dibenzofuran	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Di-n-butyl phthalate	(mg/kg)	(0.048)	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
1,2-Dichlorobenzene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2,4-Dichlorophenol	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
1,3-Dichlorobenzene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
1,4-Dichlorobenzene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
3,3'-Dichlorobenzidine	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Diethyl phthalate	(mg/kg)	<0.80	(mg/kg)	<0.76	(mg/kg)	<0.76	(mg/kg)	<0.78	(mg/kg)	<0.76	(mg/kg)	<0.78	(mg/kg)	<0.76
Dimethylphthalate	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0
2,4-Dinitrotoluene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2,6-Dinitrotoluene	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2,4-Dinitrophenol	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0
Di-n-octylphthalate	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
2,4-Dimethylphenol	(mg/kg)	<0.40	(mg/kg)	<0.38	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38
Fluoranthene	(mg/kg)	<0.40	(mg/kg)	0.88	(mg/kg)	<0.39	(mg/kg)	<0.39	(mg/kg)	<0.38	(mg/kg)	<0.39	(mg/kg)	<0.38

Values represent total concentrations unless noted < = Not detected at indicated reporting limit -- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW04		PDO-SB01		PDO-SB01		PDO-SB02		PDO-SB02		PDO-SB03	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Fluorene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Hexachlorobenzene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Hexachlorobutadiene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Hexachlorocyclopentadiene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Hexachloroethane				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Indeno(1,2,3-cd)pyrene				(mg/kg)	<0.40		1.2		<0.39		<0.38		<0.38	
Isophorone				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
2-Methylnaphthalene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
2-Methylphenol				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
3-Methylphenol/4-Methylphenol (m&p-Creso				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Naphthalene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
2-Nitroaniline				(mg/kg)	<2.0		<2.0		<2.0		<2.0		<2.0	
3-Nitroaniline				(mg/kg)	<2.0		<2.0		<2.0		<2.0		<2.0	
4-Nitroaniline				(mg/kg)	<2.0		<2.0		<2.0		<2.0		<2.0	
Nitrobenzene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
2-Nitrophenol				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
4-Nitrophenol				(mg/kg)	<2.0		<2.0		<2.0		<2.0		<2.0	
N-Nitrosodimethylamine				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
N-Nitrosodi-n-propylamine				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
N-Nitrosodiphenylamine/Diphenylamine				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Phenanthrene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Pentachlorophenol				(mg/kg)	<2.0		<2.0		<2.0		<2.0		<2.0	
Phenol				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Pyrene				(mg/kg)	<0.40		1.9		<0.39		<0.38		<0.38	
1,2,4-Trichlorobenzene				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
2,4,5-Trichlorophenol				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Values represent total concentrations unless noted				(mg/kg)	<0.40		<0.38		<0.39		<0.38		<0.38	
Values not detected at indicated reporting limit --- = Not analyzed														

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-MW04		PDO-SB01		PDO-SB01		PDO-SB02		PDO-SB02		PDO-SB03	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
2,4,6-Trichlorophenol				(mg/kg)	<0.40	<0.38	<0.39	<0.38	<0.38	<0.39	<0.38	<0.38	<0.38	<0.38
GRO				(mg/kg)	<0.21 J	<0.2	<0.21	<0.2 J	<0.21	<0.21	<0.21	<0.2 J	<0.2 J	<0.2 J
DRO				(mg/kg)	14 J	26	<12	<11	<11	<12	<11	<11	<11	<11
Gross Alpha				(pCi/g)	<14	<14	<14	<14	<14	15 +/-10 J	<14	<14	<14	<14
Gross Beta				(pCi/g)	<13	<12	<13	<13	14 +/-7.2 J	20 +/-7.6 J	<12	<12	<12	<12
Antimony				(mg/kg)	<6 J	<5.8 R	<6 R	<5.8 R	<5.8 R	<6 R	<5.8 R	<5.8 R	<5.8 R	<5.8 R
Arsenic				(mg/kg)	<1.2	1.4 J	<1.1 R	1.3 J	<1.1 R	<1.1 R	<1.1 R	<1.1 R	<1.1 R	<1.1 R
Beryllium				(mg/kg)	<0.6	<0.58	<0.6	<0.58	<0.58	<0.6	<0.58	<0.58	<0.58	<0.58
Cadmium				(mg/kg)	<0.6	0.59	<0.6	<0.58	<0.58	<0.6	<0.58	<0.58	<0.58	<0.58
Chromium				(mg/kg)	4.7	12	6.1	6.3	6.3	6.6	6.6	6.6	2.8	2.8
Copper				(mg/kg)	<3	10	<3	<2.8	<2.8	<3	<3	<2.8	<2.8	<2.8
Lead				(mg/kg)	3.5	67 J	2.1 J	7.6 J	7.6 J	2.7 J	2.7 J	5.5 J	5.5 J	5.5 J
Mercury				(mg/kg)	0.043	0.022	0.022	0.026	0.026	0.024	0.024	0.012	0.012	0.012
Nickel				(mg/kg)	<4.8	4.9	<4.8	<4.6	<4.6	<4.8	<4.6	<4.6	<4.6	<4.6
Selenium				(mg/kg)	<1.2 J	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Silver				(mg/kg)	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Thallium				(mg/kg)	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Zinc				(mg/kg)	3.4	46	<2.3	<2.2	<2.2	<2.3	<2.3	<2.3	<2.3	<2.3

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260.8100.8015M.8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
	SAMPLE ID		PDO-SB0302		PDO-SB0401		PDO-SB0402		PDO-SB16		PDO-SB0502		PDO-SB0501	
	DATE		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96	
	DEPTH (ft)		4.00		2.00		4.00		4.00		2.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Duplicate		Primary		Primary	
Starting Depth Range	(feet)	2.000	0.000	2.000	0.000	2.000	2.000	4.000	---	---	0.000	2.000	2.000	2.000
Ending Depth Range	(feet)	4.000	2.000	4.000	---	---	---	---	---	---	2.000	4.000	---	4.000
Acetone	(mg/kg)	<0.060	0.11	0.13	0.18	0.11	0.13	0.18	0.18	0.11	0.11	0.11	0.11	<0.056
Benzene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Bromodichloromethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Bromoform	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Bromomethane	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.011
2-Butanone (MEK)	(mg/kg)	<0.030	<0.028	<0.030	<0.030	<0.028	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.028	<0.028
Carbon disulfide	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Carbon tetrachloride	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Chlorobenzene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Chloroethane	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.011
2-Chloroethylvinyl ether	(mg/kg)	<0.060	<0.056	<0.060	<0.060	<0.056	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.056	<0.056
Chloroform	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Chloromethane	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.011
Dibromochloromethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
1,1-Dichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
1,2-Dichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
cis-1,2-Dichloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
trans-1,2-Dichloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
1,2-Dichloropropane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
cis-1,3-Dichloropropene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
trans-1,3-Dichloropropene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
Ethyl benzene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0056
2-Hexanone	(mg/kg)	<0.030	<0.028	<0.030	<0.030	<0.028	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.028	<0.028
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed														

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
					Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary		
Methyl isobutyl ketone (MIBK)				(mg/kg)	<0.030	<0.028	<0.030	<0.030	<0.030	<0.030	<0.030	<0.028	<0.030	
Methylene chloride				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Styrene				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
1,1,2,2-Tetrachloroethane				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Tetrachloroethene				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Toluene				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
1,1,1-Trichloroethane				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
1,1,2-Trichloroethane				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Trichloroethene				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Vinyl Acetate				(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	
Vinyl Chloride				(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.012	
m&p-Xylene				(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0056	<0.0060	
Acenaphthylene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Anthracene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Benzidine				(mg/kg)	<3.2	<3.0	<3.2	<3.2	<3.2	<3.2 J	<3.2 J	<3.0	<3.0	
Benzo(a)anthracene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Benzo(a)pyrene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Benzo(g,h,i)perylene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Benzo(k)fluoranthene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Bis(2-chloroethoxy) methane				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Bis(2-chloroethyl)ether				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Bis(2-chloroisopropyl) ether				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Bis(2-ethylhexyl)phthalate				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
4-Bromophenyl phenylether				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	
Benzo(b)fluoranthene				(mg/kg)	<0.40	<0.36	<0.40	<0.40	<0.40	<0.39 J	<0.39 J	<0.38	<0.38	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
	SAMPLE ID		PDO-SB0302		PDO-SB0401		PDO-SB0402		PDO-SB16		PDO-SB0502		PDO-SB0501	
	DATE		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96	
	DEPTH (ft)		4.00		2.00		4.00		4.00		2.00		4.00	
RESULT TYPE		Primary		Primary		Primary		Primary		Duplicate		Primary		Primary
Benzoic acid	(mg/kg)	<2.0		<2.0		<1.8		<2.0		<2.0		<2.0 J		<1.9
BenzyI alcohol	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Butylbenzylphthalate	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
4-Chloroaniline	(mg/kg)	<0.80		<0.80		<0.73		<0.80		<0.80		<0.78 J		<0.75
4-Chloro-3-methylphenol	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2-Chlorophenol	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2-Chloronaphthalene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
4-Chlorophenyl phenyl ether	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Chrysene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Dibenzo(a,h)anthracene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Dibenzofuran	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Di-n-butyl phthalate	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
1,2-Dichlorobenzene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2,4-Dichlorophenol	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
1,3-Dichlorobenzene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
1,4-Dichlorobenzene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
3,3'-Dichlorobenzidine	(mg/kg)	<0.80		<0.80		<0.73		<0.80		<0.80		<0.78 J		<0.75
Diethyl phthalate	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Dimethylphthalate	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0		<2.0		<1.8		<2.0		<2.0		<2.0 J		<1.9
2,4-Dinitrotoluene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2,6-Dinitrotoluene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2,4-Dinitrophenol	(mg/kg)	<2.0		<2.0		<1.8		<2.0		<2.0		<2.0 J		<1.9
Di-n-octylphthalate	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
2,4-Dimethylphenol	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Fluoranthene	(mg/kg)	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38
Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed														

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EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
	SAMPLE ID		PDO-SB0302		PDO-SB0401		PDO-SB0402		PDO-SB16		PDO-SB0502		PDO-SB0501	
	DATE		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96	
	DEPTH (ft)		4.00		2.00		4.00		4.00		2.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Duplicate		Primary		Primary	
Fluorene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Hexachlorobenzene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Hexachlorobutadiene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Hexachlorocyclopentadiene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Hexachloroethane	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Isophorone	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
2-Methylnaphthalene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
2-Methylphenol	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Naphthalene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
2-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0 J	(mg/kg)	<1.9
3-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0 J	(mg/kg)	<1.9
4-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0 J	(mg/kg)	<1.9
Nitrobenzene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
2-Nitrophenol	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
4-Nitrophenol	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0 J	(mg/kg)	<1.9
N-Nitrosodimethylamine	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
N-Nitrosodi-n-propylamine	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Phenanthrene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Pentachlorophenol	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0	(mg/kg)	<2.0 J	(mg/kg)	<1.9
Phenol	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Pyrene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
1,2,4-Trichlorobenzene	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
2,4,5-Trichlorophenol	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38
Values represent total concentrations unless noted	(mg/kg)	<0.40	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.40	(mg/kg)	<0.39 J	(mg/kg)	<0.38

< = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB03		PDO-SB04		PDO-SB04		PDO-SB04		PDO-SB05		PDO-SB05	
	SAMPLE ID		PDO-SB0302		PDO-SB0401		PDO-SB0402		PDO-SB16		PDO-SB0502		PDO-SB0501	
	DATE		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96		08/15/96	
	DEPTH (ft)		4.00		2.00		4.00		4.00		2.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Duplicate		Primary		Primary	
	(mg/kg)		(mg/kg)		(mg/kg)		(pCi/g)		(pCi/g)		(mg/kg)		(mg/kg)	
2,4,6-Trichlorophenol	<0.40		<0.40		<0.36		<0.40		<0.40		<0.39 J		<0.38	
GRO	---		<0.21		<0.2		<0.21		<0.21		<0.21		<0.2 J	
DRO	<12		<12		31		<12		12		<12		22	
Gross Alpha	---		<14		<13		<12		19 +/-10 J		---		---	
Gross Beta	<13		<13		13 +/-7.1 J		<13		<12		<13		<12	
Antimony	<6 R		<6 R		<5.6 R		<6 R		<6 R		<6 R		<5.6 R	
Arsenic	9.9 J		9.9 J		3.8 J		<1.2 R		<1.2 R		1.3 J		2.3 J	
Beryllium	<0.6		<0.6		<0.56		<0.6		<0.6		<0.6		<0.56	
Cadmium	<0.6		<0.6		<0.56		<0.6		<0.6		<0.6		<0.56	
Chromium	11		11		2.7		4.2		4.8		5.7		2.0	
Copper	<3		<3		3.5		<3		<3		<3		<2.8	
Lead	2.5 J		2.5 J		20 J		2.4 J		2.6 J		3.3 J		33 J	
Mercury	0.014		0.014		0.030		0.031		0.062		0.015		0.026	
Nickel	<4.8		<4.8		<4.4		<4.8		<4.8		<4.8		<4.6	
Selenium	<1.2		<1.2		<1.1		<1.2		<1.2		<1.1		<1.1	
Silver	<1.2		<1.2		<1.1		<1.2		<1.2		<1.1		<1.1	
Thallium	<1.2		<1.2		<1.1		<1.2		<1.2		<1.1		<1.1	
Zinc	<2.4		<2.4		3.2		<2.4		2.5		<2.3		4.8	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB06		PDO-SB07		PDO-SB07		PDO-SB08		PDO-SB08	
	SAMPLE ID		PDO-SB0601		PDO-SB0602		PDO-SB0701		PDO-SB0702		PDO-SB0801	
	DATE		08/16/96		08/16/96		08/16/96		08/16/96		08/16/96	
	DEPTH (ft)		2.00		4.00		2.00		4.00		4.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary	
Starting Depth Range	(feet)		0.000		2.000		0.000		2.000		2.000	
Ending Depth Range	(feet)		2.000		4.000		2.000		4.000		4.000	
Acetone	(mg/kg)		<0.056		(0.037)		(0.0072)		<0.060		(0.014)	
Benzene	(mg/kg)		<0.0056		<0.0060		(0.00095)		<0.0060		<0.0060	
Bromodichloromethane	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Bromoform	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Bromomethane	(mg/kg)		<0.011		<0.012		<0.011		<0.012		<0.012	
2-Butanone (MEK)	(mg/kg)		<0.028		<0.030		<0.028		<0.030		<0.030	
Carbon disulfide	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Carbon tetrachloride	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Chlorobenzene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Chloroethane	(mg/kg)		<0.011		<0.012		<0.011		<0.012		<0.012	
2-Chloroethylvinyl ether	(mg/kg)		<0.056		<0.060		<0.056		<0.060		<0.060	
Chloroform	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Chloromethane	(mg/kg)		<0.011		<0.012		<0.011		<0.012		<0.012	
Dibromochloromethane	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
1,1-Dichloroethane	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
1,2-Dichloroethane	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
1,1-Dichloroethene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
cis-1,2-Dichloroethene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
trans-1,2-Dichloroethene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
1,2-Dichloropropane	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
cis-1,3-Dichloropropene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
trans-1,3-Dichloropropene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
Ethyl benzene	(mg/kg)		<0.0056		<0.0060		<0.0056		<0.0060		<0.0060	
2-Hexanone	(mg/kg)		<0.028		<0.030		<0.028		<0.030		<0.030	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
 () = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB06		PDO-SB07		PDO-SB08		PDO-SB08	
	SAMPLE ID		PDO-SB0601	PDO-SB0602	PDO-SB0701	PDO-SB0702	PDO-SB0801	PDO-SB0801	PDO-SB0801	PDO-SB0801
	DATE		08/16/96	08/16/96	08/16/96	08/16/96	08/16/96	08/16/96	08/16/96	08/16/96
	DEPTH (ft)		2.00	4.00	2.00	4.00	4.00	4.00	4.00	4.00
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.028	<0.030	<0.028	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Methylene chloride	(mg/kg)	(0.0024)	(0.0022)	(0.0021)	(0.0023)	(0.0024)	(0.0024)	(0.0024)	(0.0021)	(0.0021)
Styrene	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Tetrachloroethene	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Toluene	(mg/kg)	(0.0022)	(0.00041)	(0.0025)	<0.0060	<0.0060	<0.0060	<0.0060	(0.00082)	(0.00082)
1,1,1-Trichloroethane	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
1,1,2-Trichloroethane	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Trichloroethene	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Vinyl Acetate	(mg/kg)	<0.011	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
Vinyl Chloride	(mg/kg)	<0.011	<0.012	<0.011	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
m&p-Xylene	(mg/kg)	<0.0056	<0.0060	<0.0056	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060
Acenaphthylene	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Anthracene	(mg/kg)	(0.024)	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Benidine	(mg/kg)	<3.0	<3.2	<3.0	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
Benzo(a)anthracene	(mg/kg)	(0.14)	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Benzo(a)pyrene	(mg/kg)	(0.15)	<0.39	<0.39	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Benzo(g,h,i)perylene	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Benzo(k)fluoranthene	(mg/kg)	(0.26)	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Bis(2-chloroethoxy) methane	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Bis(2-chloroethyl)ether	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
4-Bromophenyl phenylether	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39
Benzo(b)fluoranthene	(mg/kg)	<0.38	<0.39	<0.38	<0.39	<0.40	<0.40	<0.40	<0.39	<0.39

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB06		PDO-SB07		PDO-SB08		PDO-SB08
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Primary	
Benzoic acid				(mg/kg)	<1.9	<1.9	<2.0	<2.0	PDO-SB08
Benzyl alcohol				(mg/kg)	<0.38	<0.38	<0.39	<0.40	PDO-SB08
Butylbenzylphthalate				(mg/kg)	<0.38	<0.38	<0.39	<0.40	PDO-SB0801
4-Chloroaniline				(mg/kg)	<0.75	<0.75	<0.78	<0.80	08/16/96
4-Chloro-3-methylphenol				(mg/kg)	<0.38	<0.38	<0.39	<0.40	08/16/96
2-Chlorophenol				(mg/kg)	<0.38	<0.38	<0.39	<0.40	4.00
2-Chloronaphthalene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	Primary
4-Chlorophenyl phenyl ether				(mg/kg)	<0.38	<0.38	<0.39	<0.40	Duplicate
Chrysene				(mg/kg)	(0.24)	<0.38	<0.39	<0.40	
Dibenzo(a,h)anthracene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
Dibenzofuran				(mg/kg)	(0.064)	<0.38	<0.39	<0.40	
Di-n-butyl phthalate				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
1,2-Dichlorobenzene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
2,4-Dichlorophenol				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
1,3-Dichlorobenzene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
1,4-Dichlorobenzene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
3,3'-Dichlorobenzidine				(mg/kg)	<0.75	<0.75	<0.78	<0.80	
Diethyl phthalate				(mg/kg)	<0.38	<0.39	<0.39	<0.40	
Dimethylphthalate				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
4,6-Dinitro,2-methylphenol				(mg/kg)	<1.9	<1.9	<2.0	<2.0	
2,4-Dinitrotoluene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
2,6-Dinitrotoluene				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
2,4-Dinitrophenol				(mg/kg)	<1.9	<1.9	<2.0	<2.0	
Di-n-octylphthalate				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
2,4-Dimethylphenol				(mg/kg)	<0.38	<0.38	<0.39	<0.40	
Fluoranthene				(mg/kg)	(0.36)	<0.38	<0.39	<0.40	

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() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB06		PDO-SB07		PDO-SB08	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Duplicate
Fluorene	(mg/kg)	(0.019)						
Hexachlorobenzene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Hexachlorobutadiene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Hexachlorocyclopentadiene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Hexachloroethane	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Isophorone	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
2-Methylnaphthalene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
2-Methylphenol	(mg/kg)	(0.23)			<0.38	<0.38	<0.38	<0.38
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Naphthalene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
2-Nitroaniline	(mg/kg)	(0.13)			<0.38	<0.38	<0.38	<0.38
3-Nitroaniline	(mg/kg)	<1.9			<2.0	<2.0	<2.0	<2.0
4-Nitroaniline	(mg/kg)	<1.9			<2.0	<2.0	<2.0	<2.0
Nitrobenzene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
2-Nitrophenol	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
4-Nitrophenol	(mg/kg)	<1.9			<2.0	<2.0	<2.0	<2.0
N-Nitrosodimethylamine	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
N-Nitrosodi-n-propylamine	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Phenanthrene	(mg/kg)	(0.33)			<0.39	<0.39	<0.39	<0.39
Pentachlorophenol	(mg/kg)	<1.9			<2.0	<2.0	<2.0	<2.0
Phenol	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Pyrene	(mg/kg)	0.46			<0.39	<0.39	<0.39	<0.39
1,2,4-Trichlorobenzene	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
2,4,5-Trichlorophenol	(mg/kg)	<0.38			<0.39	<0.39	<0.39	<0.39
Values represent total concentrations unless noted		< = Not detected at indicated reporting limit						
() = Less than Reporting Limit								

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB06		PDO-SB06		PDO-SB07		PDO-SB07		PDO-SB08		PDO-SB08	
	SAMPLE ID		PDO-SB0601		PDO-SB0602		PDO-SB0701		PDO-SB0702		PDO-SB0801		PDO-SB0802	
	DATE	DEPTH (ft)	08/16/96	2.00	08/16/96	4.00	08/16/96	2.00	08/16/96	4.00	08/16/96	4.00	08/16/96	4.00
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate
2,4,6-Trichlorophenol	(mg/kg)	<0.38	<0.38	<0.39	<0.39	<0.38	<0.38	<0.39	<0.39	<0.40	<0.39	<0.39	<0.39	<0.39
GRO	(mg/kg)	<0.2 J	<0.21 J	<0.21 J	<0.21 J	<0.2 J	<0.2 J	<0.21 J	<0.21 J	<0.21 J	<0.21 J	<0.21 J	<0.21 J	<0.21 J
DRO	(mg/kg)	240 J	<12 R	<12 R	<12 R	18 J	<12 R	<12 R	<12 R	<12 R	<12 R	<12 R	<12 R	<12 R
Gross Alpha	(pCi/g)	<14	14 +/- 8.9 J	<14	<14	<12	<12	<14	<14	<14	<14	<14	<14	<14
Gross Beta	(pCi/g)	<14	(11 +/- 6.0)	<14	<14	<12	<12	18 +/- 6.7	<11	<11	<11	<11	<11	<11
Antimony	(mg/kg)	<5.6 J	<5.6 J	<6 J	<6 J	<5.6 J	<5.6 J	<6 J	<6 J	<6 J	<6 J	<6 J	<6 J	<6 J
Arsenic	(mg/kg)	4.3	<1.1	<1.1	<1.1	1.4	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Beryllium	(mg/kg)	<0.56	<0.56	<0.6	<0.6	<0.56	<0.56	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Cadmium	(mg/kg)	<0.56	<0.56	<0.6	<0.6	<0.56	<0.56	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Chromium	(mg/kg)	4.1	1.4	1.4	1.4	1.6	1.6	5.0	8.1	8.1	8.1	8.1	8.1	8.1
Copper	(mg/kg)	9.5	5.8	5.8	5.8	5.5	5.5	<3	<3	<3	<3	<3	<3	<3
Lead	(mg/kg)	17 J	<0.6 J	<0.6 J	<0.6 J	2.8 J	2.8 J	2.6 J	2.4 J	2.4 J	2.4 J	2.4 J	2.4 J	2.4 J
Mercury	(mg/kg)	0.024	<0.011	<0.011	<0.011	0.024	0.024	0.028	0.035	0.035	0.035	0.035	0.035	0.035
Nickel	(mg/kg)	<4.6	<4.6	<4.8	<4.8	<4.6	<4.6	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8	<4.8
Selenium	(mg/kg)	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J
Silver	(mg/kg)	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Thallium	(mg/kg)	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1
Zinc	(mg/kg)	22	<2.3	<2.3	<2.3	2.5	2.5	4.4	5.4	5.4	5.4	5.4	5.4	5.4

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J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

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J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

SITE		PDO-SB09	PDO-SB09	PDO-SB09	PDO-SB10	PDO-SB10	PDO-SB10	PDO-SB11	PDO-SB11
SAMPLE ID		PDO-SB0901	PDO-SB0902	PDO-SB0902	PDO-SB1001	PDO-SB1002	PDO-SB1101	PDO-SB1102	PDO-SB1102
DATE		08/16/96	08/16/96	08/16/96	08/17/96	08/17/96	08/17/96	08/17/96	08/17/96
DEPTH (ft)		2.00	4.00	4.00	2.00	4.00	2.00	4.00	4.00
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
CONSTITUENT									
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.029	<3.8	<0.028	<0.030	<0.030	<3.5	<0.030	<0.030
Methylene chloride	(mg/kg)	(0.0015)	<0.75	(0.0019)	(0.0018)	(0.0018)	<0.70	(0.0016)	(0.0016)
Styrene	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
Tetrachloroethene	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
Toluene	(mg/kg)	<0.0058	<0.75	(0.0018)	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
1,1,1-Trichloroethane	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
1,1,2-Trichloroethane	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
Trichloroethene	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
Vinyl Acetate	(mg/kg)	<0.012	<1.5	<0.011	<0.012	<0.012	<1.4	<0.012	<0.012
Vinyl Chloride	(mg/kg)	<0.012	<1.5	<0.011	<0.012	<0.012	<1.4	<0.012	<0.012
m&p-Xylene	(mg/kg)	<0.0058	<0.75	<0.0056	<0.0060	<0.0060	<0.70	<0.0060	<0.0060
Acenaphthylene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Anthracene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Benidine	(mg/kg)	<3.1	<3.2	<3.0	<3.2	<3.2	<3.0	<3.2	<3.2
Benzo(a)anthracene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Benzo(a)pyrene	(mg/kg)	<0.38	<0.40	(0.024)	<0.39	<0.39	<0.37	<0.39	<0.39
Benzo(g,h,i)perylene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Benzo(k)fluoranthene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Bis(2-chloroethoxy) methane	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Bis(2-chloroethyl) ether	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
4-Bromophenyl phenylether	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39
Benzo(b)fluoranthene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.39	<0.37	<0.39	<0.39

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB09		PDO-SB10		PDO-SB11	
	SAMPLE ID		PDO-SB0901	PDO-SB0902	PDO-SB1001	PDO-SB1002	PDO-SB1101	PDO-SB1102
	DATE		08/16/96	08/16/96	08/17/96	08/17/96	08/17/96	08/17/96
	DEPTH (ft)		2.00	4.00	2.00	4.00	2.00	4.00
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary
Benzoic acid	(mg/kg)	<2.0	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0
Benzyl alcohol	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Butylbenzylphthalate	(mg/kg)	<0.38	<0.40	(0.058)	(0.058)	(0.066)	(0.053)	(0.061)
4-Chloroaniline	(mg/kg)	<0.76	<0.80	<0.75	<0.75	<0.78	<0.74	<0.78
4-Chloro-3-methylphenol	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2-Chlorophenol	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2-Chloronaphthalene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
4-Chlorophenyl phenyl ether	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Chrysene	(mg/kg)	<0.38	<0.40	(0.036)	(0.036)	<0.39	<0.37	<0.39
Dibenzo(a,h)anthracene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Dibenzofuran	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Di-n-butyl phthalate	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
1,2-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2,4-Dichlorophenol	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
1,3-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
1,4-Dichlorobenzene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
3,3'-Dichlorobenzidine	(mg/kg)	<0.76	<0.80	<0.75	<0.75	<0.78	<0.74	<0.78
Diethyl phthalate	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Dimethylphthalate	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<2.0
2,4-Dinitrotoluene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2,6-Dinitrotoluene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2,4-Dinitrophenol	(mg/kg)	<2.0	<2.0	<1.9	<1.9	<2.0	<1.9	<2.0
Di-n-octylphthalate	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
2,4-Dimethylphenol	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39
Fluoranthene	(mg/kg)	<0.38	<0.40	<0.38	<0.38	<0.39	<0.37	<0.39

Values represent total concentrations unless noted < = Not detected at indicated reporting limit -- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-SB09	PDO-SB09	PDO-SB09	PDO-SB10	PDO-SB10	PDO-SB10	PDO-SB11	PDO-SB11
SAMPLE ID		PDO-SB0901	PDO-SB0902	PDO-SB1001	PDO-SB1002	PDO-SB1101	PDO-SB1102		
DATE		08/16/96	08/16/96	08/17/96	08/17/96	08/17/96	08/17/96		
DEPTH (ft)		2.00	4.00	2.00	4.00	2.00	4.00		
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary		
Fluorene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Hexachlorobenzene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Hexachlorobutadiene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Hexachlorocyclopentadiene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Hexachloroethane	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Isophorone	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
2-Methylnaphthalene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
2-Methylphenol	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Naphthalene	(mg/kg)	<0.38	<0.40	(0.017)	<0.39	<0.37	<0.39		
2-Nitroaniline	(mg/kg)	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0		
3-Nitroaniline	(mg/kg)	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0		
4-Nitroaniline	(mg/kg)	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0		
Nitrobenzene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
2-Nitrophenol	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
4-Nitrophenol	(mg/kg)	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0		
N-Nitrosodimethylamine	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
N-Nitrosodi-n-propylamine	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Phenanthrene	(mg/kg)	<0.38	<0.40	(0.037)	<0.39	<0.37	<0.39		
Pentachlorophenol	(mg/kg)	<2.0	<2.0	<1.9	<2.0	<1.9	<2.0		
Phenol	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
Pyrene	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		
1,2,4-Trichlorobenzene	(mg/kg)	<0.38	<0.40	(0.048)	<0.39	<0.37	<0.39		
2,4,5-Trichlorophenol	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39		

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260.8100.8015M.8100M.PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB09		PDO-SB10		PDO-SB11	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Primary
2,4,6-Trichlorophenol	(mg/kg)	<0.38	<0.40	<0.38	<0.39	<0.37	<0.39	<0.39
GRO	(mg/kg)	<0.2 J	<0.21 J	<0.2 J	<0.21 J	<0.2 J	<0.21 J	<0.21 J
DRO	(mg/kg)	<12 R	<12 R	13	<12	<11	<12	<12
Gross Alpha	(pCi/g)	<14	<12	<14	<12	<13	<14	<14
Gross Beta	(pCi/g)	(12 +/- 7.0)	<13	<11	<13	<11	<11	<11
Antimony	(mg/kg)	<5.8 J	<6 J	<5.6 R	<6 R	<5.6 R	<6 R	<6 R
Arsenic	(mg/kg)	<1.1	<1.2	1.5	2.9	14	4.0	4.0
Beryllium	(mg/kg)	<0.58	<0.6	<0.56	<0.6	<0.56	<0.6	<0.6
Cadmium	(mg/kg)	<0.58	<0.6	<0.56	<0.6	<0.56	<0.6	<0.6
Chromium	(mg/kg)	7.3	7.4	1.8	2.6	1.1	3.4	3.4
Copper	(mg/kg)	<3	3.3	<2.8 J	<3 J	<2.8 J	<3 J	<3 J
Lead	(mg/kg)	3.5 J	3.2 J	5.1	2.7	3.3	2.2	2.2
Mercury	(mg/kg)	0.019	0.044	<0.011	<0.011	0.012	<0.011	<0.011
Nickel	(mg/kg)	<4.6	<4.8	<4.6	<4.8	<4.4	<4.8	<4.8
Selenium	(mg/kg)	<1.1 J	<1.2 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J
Silver	(mg/kg)	<1.1	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1
Thallium	(mg/kg)	<1.1	<1.2	<1.1	<1.1	<1.1	<1.1	<1.1
Zinc	(mg/kg)	4.3	3.0	2.3	<2.3	<2.2	<2.3	<2.3

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB12		PDO-SB12		PDO-SB13		PDO-SB13		PDO-SB14	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary
Starting Depth Range			0.000	(feet)	2.000	0.000	0.000	---	2.000	0.000	0.000	
Ending Depth Range			2.000	(feet)	4.000	2.000	2.000	---	4.000	2.000	2.000	
Acetone			1.0 J	(mg/kg)	<0.058	1.6 J	0.18	0.17	<0.056	<0.056	<0.056	
Benzene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Bromodichloromethane			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Bromoform			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Bromomethane			<0.057	(mg/kg)	<0.012	<1.4	<0.011	<0.022	<0.011	<0.011	<0.011	
2-Butanone (MEK)			<0.14	(mg/kg)	<0.029	<3.4	<0.028	<0.057	<0.028	<0.028	<0.028	
Carbon disulfide			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Carbon tetrachloride			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Chlorobenzene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Chloroethane			<0.057	(mg/kg)	<0.012	<1.4	<0.022	<0.011	<0.022	<0.011	<0.011	
2-Chloroethylvinyl ether			<0.28	(mg/kg)	<0.058	<6.8	<0.11	<0.056	<0.11	<0.056	<0.056	
Chloroform			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Chloromethane			<0.057	(mg/kg)	<0.012	<1.4	<0.022	<0.011	<0.022	<0.011	<0.011	
Dibromochloromethane			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
1,1-Dichloroethane			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
1,2-Dichloroethane			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
1,1-Dichloroethene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
cis-1,2-Dichloroethene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
trans-1,2-Dichloroethene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
1,2-Dichloropropane			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
cis-1,3-Dichloropropene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
trans-1,3-Dichloropropene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
Ethyl benzene			<0.028	(mg/kg)	<0.0058	<0.68	<0.011	<0.0056	<0.011	<0.0056	<0.0056	
2-Hexanone			<0.14	(mg/kg)	<0.029	<3.4	<0.028	<0.057	<0.028	<0.057	<0.028	

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EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB12		PDO-SB13		PDO-SB13		PDO-SB13		PDO-SB14	
	SAMPLE ID		PDO-SB1201		PDO-SB1202		PDO-SB1301		PDO-SB1302		PDO-SB1401	
	DATE	DEPTH (ft)	08/17/96	2.00	08/17/96	4.00	08/17/96	2.00	08/17/96	4.00	08/17/96	2.00
RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.14	<0.029	<0.029	<0.029	<0.029	<0.029	<0.028	<0.057	<0.057	<0.028	<0.028
Methylene chloride	(mg/kg)	<0.028	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0013)	(0.0010)	<0.011	<0.011	(0.0013)	(0.0013)
Styrene	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
Tetrachloroethene	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
Toluene	(mg/kg)	0.0030 J	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
1,1,1-Trichloroethane	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
1,1,2-Trichloroethane	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
Trichloroethene	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
Vinyl Acetate	(mg/kg)	<0.057	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.022	<0.022	<0.011	<0.011
Vinyl Chloride	(mg/kg)	<0.057	<0.012	<0.012	<0.012	<0.012	<0.012	<0.011	<0.022	<0.022	<0.011	<0.011
m&p-Xylene	(mg/kg)	<0.028	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0056	<0.011	<0.011	<0.0056	<0.0056
Acenaphthylene	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Anthracene	(mg/kg)	(0.050)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Benzidine	(mg/kg)	<3.1	<3.2	<3.2	<3.2	<3.2	<3.2	<3.0	<3.1	<3.1	<3.0	<3.0
Benzo(a)anthracene	(mg/kg)	(0.24)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Benzo(a)pyrene	(mg/kg)	(0.20)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Benzo(g,h,i)perylene	(mg/kg)	(0.10)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Benzo(k)fluoranthene	(mg/kg)	(0.26)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Bis(2-chloroethoxy) methane	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Bis(2-chloroethyl)ether	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
4-Bromophenyl phenylether	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Benzo(b)fluoranthene	(mg/kg)	<0.38	<0.38	<0.38	<0.38	<0.38	<0.38	<0.36	<0.38	<0.38	<0.37	<0.37
Values represent total concentrations unless noted	< = Not detected at indicated reporting limit	---	---	---	---	---	---	---	---	---	---	---
() = Less than Reporting Limit												

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

SITE	PDO-SB12	PDO-SB12	PDO-SB13	PDO-SB13	PDO-SB13	PDO-SB14
SAMPLE ID	PDO-SB1201	PDO-SB1202	PDO-SB1301	PDO-SB13	PDO-SB1302	PDO-SB1401
DATE	08/17/96	08/17/96	08/17/96	08/17/96	08/17/96	08/17/96
DEPTH (ft)	2.00	4.00	2.00	2.00	4.00	2.00
RESULT TYPE	Primary	Primary	Primary	Duplicate	Primary	Primary
Benzoic acid	(mg/kg)	<2.0	<2.0	<1.8	<2.0	<1.9
Benzyl alcohol	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
Butylbenzylphthalate	(mg/kg)	(0.054)	(0.061)	(0.10)	(0.073)	(0.096)
4-Chloroaniline	(mg/kg)	<0.76	<0.78	<0.73	<0.76	<0.74
4-Chloro-3-methylphenol	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2-Chlorophenol	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2-Chloronaphthalene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
4-Chlorophenyl phenyl ether	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
Chrysene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
Dibenzo(a,h)anthracene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
Dibenzofuran	(mg/kg)	(0.37)	<0.38	<0.36	<0.38	<0.37
Di-n-butyl phthalate	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
1,2-Dichlorobenzene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2,4-Dichlorophenol	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
1,3-Dichlorobenzene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
1,4-Dichlorobenzene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
3,3'-Dichlorobenzidine	(mg/kg)	<0.76	<0.78	<0.72	<0.76	<0.74
Diethyl phthalate	(mg/kg)	<0.38	<0.38	<0.35	<0.38	<0.37
Dimethylphthalate	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
4,6-Dinitro,2-methylphenol	(mg/kg)	<2.0	<2.0	<1.8	<2.0	<1.9
2,4-Dinitrotoluene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2,6-Dinitrotoluene	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2,4-Dinitrophenol	(mg/kg)	<2.0	<2.0	<1.8	<2.0	<1.9
Di-n-octylphthalate	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
2,4-Dimethylphenol	(mg/kg)	<0.38	<0.38	<0.36	<0.38	<0.37
Fluoranthene	(mg/kg)	(0.30)	<0.38	<0.36	<0.38	<0.37

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 () = Less than Reporting Limit

EPA METHODS: 8260.8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB12		PDO-SB12		PDO-SB13		PDO-SB13		PDO-SB13		PDO-SB14	
	SAMPLE ID	DATE	DEPTH (ft)	RESULT TYPE	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary
2,4,6-Trichlorophenol				(mg/kg)	<0.38	<0.38	<0.36	<0.36	<0.36	<0.36	<0.38	<0.37		
GRO				(mg/kg)	<0.2 J	<0.21 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J	<0.2 J		
DRO				(mg/kg)	260	<12	<10	<11	<11	<11	<11	39		
Gross Alpha				(pCi/g)	13 +/-9.3 J	<12	<13	<13	<13	<13	12 +/-9.0 J	<13		
Gross Beta				(pCi/g)	(12 +/-7.2)	<12	(12 +/-10)	<11	<11	<11	<11	<11		
Antimony				(mg/kg)	<5.8 R	<5.8 R	<5.4 R	<5.4 R	<5.6 J	<5.6 J	<5.8 R	<5.6 R		
Arsenic				(mg/kg)	13	<1.1	11	11	7.0	7.0	<1.1	26		
Beryllium				(mg/kg)	<0.58	<0.58	<0.54	<0.54	<0.56	<0.56	<0.58	<0.56		
Cadmium				(mg/kg)	<0.58	<0.58	<0.54	<0.54	<0.56	<0.56	<0.58	<0.56		
Chromium				(mg/kg)	5.3	6.4	3.8	3.8	4.4	4.4	2.7	3.0		
Copper				(mg/kg)	7.1 J	11 J	<2.8 J	<2.8 J	7.8 J	7.8 J	<2.8 J	<2.8 J		
Lead				(mg/kg)	18	2.2	12	12	6.7	6.7	1.6	6.6		
Mercury				(mg/kg)	0.082	0.032	<0.01	<0.01	0.016	0.016	<0.011	<0.011		
Nickel				(mg/kg)	<4.6	<4.8	<4.3	<4.3	<4.4	<4.4	<4.6	<4.4		
Selenium				(mg/kg)	<1.1 J	<1.1 J	<1 J	<1 J	<1.1 J	<1.1 J	<1.1 J	<1.1 J		
Silver				(mg/kg)	<1.1	<1.1	<1	<1	<1.1	<1.1	<1.1	<1.1		
Thallium				(mg/kg)	<1.1	<1.1	<1	<1	<1.1	<1.1	<1.1	<1.1		
Zinc				(mg/kg)	10	10	<2.1	<2.1	2.6	2.6	<2.2	<2.2		

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
 () = Less than Reporting Limit

EPA METHODS: 8260.8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB14		PDO-SB15		PDO-SB15		PDO-SB15		PDO-SE01		PDO-SE03		PDO-SE03	
	SAMPLE ID		PDO-SB1402		PDO-SB1501		PDO-SB1502		PDO-SB1502		PDO-SE01		PDO-SE03		PDO-SE03	
	DATE		08/17/96		08/17/96		08/17/96		08/17/96		09/18/96		09/18/96		09/18/96	
	DEPTH (ft)		4.00		2.00		4.00		4.00		0.00		0.00		0.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary		Duplicate	
Starting Depth Range	(feet)		2.000		0.000		2.000		0.000		0.000		0.000		---	
Ending Depth Range	(feet)		4.000		2.000		4.000		0.000		0.000		0.000		---	
Acetone	(mg/kg)		0.096		<0.056		<0.060		<0.071		<0.071		0.096 J		0.085 J	
Benzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Bromodichloromethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Bromoform	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Bromomethane	(mg/kg)		<0.012		<0.011		<0.012		<0.014		<0.014		<0.014		<0.014	
2-Butanone (MEK)	(mg/kg)		<0.030		<0.028		<0.030		<0.036		<0.036		<0.037		<0.034	
Carbon disulfide	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Carbon tetrachloride	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Chlorobenzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Chloroethane	(mg/kg)		<0.012		<0.011		<0.012		<0.014		<0.014		<0.014		<0.014	
2-Chloroethylvinyl ether	(mg/kg)		<0.060		<0.056		<0.060		<0.071		<0.071		<0.074		<0.068	
Chloroform	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Chloromethane	(mg/kg)		<0.012		<0.011		<0.012		<0.014		<0.014		<0.014		<0.014	
Dibromochloromethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
1,1-Dichloroethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
1,2-Dichloroethane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
1,1-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
cis-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
trans-1,2-Dichloroethene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
1,2-Dichloropropane	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
cis-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
trans-1,3-Dichloropropene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
Ethyl benzene	(mg/kg)		<0.0060		<0.0056		<0.0060		<0.0071		<0.0071		<0.0074		<0.0068	
2-Hexanone	(mg/kg)		<0.030		<0.028		<0.030		<0.036		<0.036		<0.037		<0.034	

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-SB14	PDO-SB15	PDO-SB1501	PDO-SB1502	PDO-SE01	PDO-SE03	PDO-SE03	PDO-SE04
SAMPLE ID		PDO-SB1402		PDO-SB1501	PDO-SB1502	PDO-SE01	PDO-SE03	PDO-SE03	PDO-SE04
DATE		08/17/96	08/17/96	08/17/96	08/17/96	09/18/96	09/18/96	09/18/96	09/18/96
DEPTH (ft)		4.00	2.00	4.00	4.00	0.00	0.00	0.00	0.00
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	
Methyl isobutyl ketone (MIBK)	(mg/kg)	<0.030	<0.028	<0.030	<0.030	<0.036	<0.037	<0.034	
Methylene chloride	(mg/kg)	<0.0060	(0.0013)	(0.0013)	(0.0013)	<0.0071	<0.0074	<0.0068	
Styrene	(mg/kg)	<0.0060	<0.0056	<0.0056	<0.0060	<0.0071	<0.0074	<0.0068	
1,1,2,2-Tetrachloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	<0.0074	<0.0068	
Tetrachloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	<0.0074	<0.0068	
Toluene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	<0.0074	<0.0068	
1,1,1-Trichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	0.019 J	0.021 J	
1,1,2-Trichloroethane	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	<0.0074	<0.0068	
Trichloroethene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.0071	<0.0074	<0.0068	
Vinyl Acetate	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.014	<0.014	<0.014	
Vinyl Chloride	(mg/kg)	<0.012	<0.011	<0.012	<0.012	<0.014	<0.014	<0.014	
m&p-Xylene	(mg/kg)	<0.0060	<0.0056	<0.0060	<0.0060	<0.014	<0.014	<0.014	
Acenaphthylene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Anthracene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	(0.16)	<0.44	
Benzidine	(mg/kg)	<3.2	<3.0	<3.2	<3.2	<3.8	<4.0	<3.6	
Benzo(a)anthracene	(mg/kg)	<0.39	(0.030)	<0.40	<0.40	(0.12)	(0.42)	(0.20)	
Benzo(a)pyrene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	(0.16)	(0.41)	(0.17)	
Benzo(g,h,i)perylene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Benzo(k)fluoranthene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	(0.13)	(0.33)	(0.11)	
Bis(2-chloroethoxy) methane	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Bis(2-chloroethyl) ether	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Bis(2-chloroisopropyl) ether	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Bis(2-ethylhexyl)phthalate	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
4-Bromophenyl phenylether	(mg/kg)	<0.39	<0.36	<0.40	<0.40	(0.44)	0.94	1.0	
Benzo(b)fluoranthene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	
Values represent total concentrations unless noted		<0.39	<0.36	<0.40	<0.40	(0.28)	0.64	(0.35)	
() = Less than Reporting Limit									

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HUNTER ARMY AIRFIELD PDO YARD

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE	PDO-SB14	PDO-SB15	PDO-SB1501	PDO-SB1502	PDO-SE01	PDO-SE03	PDO-SE03	PDO-SE04
SAMPLE ID		PDO-SB1402	PDO-SB1501						
DATE		08/17/96	08/17/96	08/17/96	08/17/96	09/18/96	09/18/96	09/18/96	09/18/96
DEPTH (ft)		4.00	2.00	4.00	4.00	0.00	0.00	0.00	0.00
RESULT TYPE		Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate
Benzoic acid	(mg/kg)	<2.0	<1.8	<2.0	<2.0	<2.4	<2.5	<2.2	<2.2
Benzyl alcohol	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
Butylbenzylphthalate	(mg/kg)	(0.084)	(0.093)	(0.096)	(0.096)	<0.47	<0.49	<0.44	<0.44
4-Chloroaniline	(mg/kg)	<0.78	<0.73	<0.80	<0.80	<0.94	<0.98	<0.89	<0.89
4-Chloro-3-methylphenol	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2-Chlorophenol	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2-Chloronaphthalene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
4-Chlorophenyl phenyl ether	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
Chrysene	(mg/kg)	<0.39	(0.045)	<0.40	<0.40	(0.17)	<0.49	(0.23)	(0.23)
Dibenz(a,h)anthracene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
Dibenzofuran	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	(0.10)	<0.44	<0.44
Di-n-butyl phthalate	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
1,2-Dichlorobenzene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2,4-Dichlorophenol	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
1,3-Dichlorobenzene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
1,4-Dichlorobenzene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
3,3'-Dichlorobenzidine	(mg/kg)	<0.78	<0.73	<0.80	<0.80	<0.94	<0.98	<0.89	<0.89
Diethyl phthalate	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
Dimethylphthalate	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
4,6-Dinitro-2-methylphenol	(mg/kg)	<2.0	<1.8	<2.0	<2.0	<2.4	<2.5	<2.2	<2.2
2,4-Dinitrotoluene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2,6-Dinitrotoluene	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2,4-Dinitrophenol	(mg/kg)	<2.0	<1.8	<2.0	<2.0	<2.4	<2.5	<2.2	<2.2
Di-n-octylphthalate	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
2,4-Dimethylphenol	(mg/kg)	<0.39	<0.36	<0.40	<0.40	<0.47	<0.49	<0.44	<0.44
Fluoranthene	(mg/kg)	<0.39	(0.041)	<0.40	<0.40	(0.29)	0.98	(0.37)	(0.37)

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
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EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

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PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB14		PDO-SB15		PDO-SB1501		PDO-SB1502		PDO-SE01		PDO-SE03		PDO-SE03		PDO-SE04	
	SAMPLE ID		PDO-SB1402		PDO-SB1501		PDO-SB1502		PDO-SE01		PDO-SE03		PDO-SE03		PDO-SE03		PDO-SE04	
	DATE		08/17/96		08/17/96		08/17/96		09/18/96		09/18/96		09/18/96		09/18/96		09/18/96	
	DEPTH (ft)		4.00		2.00		4.00		0.00		0.00		0.00		0.00		0.00	
RESULT TYPE	Primary		Primary		Primary		Primary		Primary		Primary		Primary		Primary		Duplicate	
Fluorene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Hexachlorobenzene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Hexachlorobutadiene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Hexachlorocyclopentadiene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Hexachloroethane	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Indeno(1,2,3-cd)pyrene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Isophorone	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
2-Methylnaphthalene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
2-Methylphenol	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
3-Methylphenol/4-Methylphenol (m&p-Creso	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Naphthalene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
2-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.4	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2
3-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.4	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2
4-Nitroaniline	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.4	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2
Nitrobenzene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
2-Nitrophenol	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
4-Nitrophenol	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.4	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2
N-Nitrosodimethylamine	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
N-Nitrosodi-n-propylamine	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
N-Nitrosodiphenylamine/Diphenylamine	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Phenanthrene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Pentachlorophenol	(mg/kg)	<2.0	(mg/kg)	<1.8	(mg/kg)	<2.0	(mg/kg)	<2.4	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2	(mg/kg)	<2.2
Phenol	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
Pyrene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
1,2,4-Trichlorobenzene	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44
2,4,5-Trichlorophenol	(mg/kg)	<0.39	(mg/kg)	<0.36	(mg/kg)	<0.40	(mg/kg)	<0.47	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44	(mg/kg)	<0.44

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed
 () = Less than Reporting Limit

EPA METHODS: 8260.8100, 8015M, 8100M, PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.

PRIMARY ANALYTICAL RESULTS FOR SOILS AND SEDIMENTS

CONSTITUENT	SITE		PDO-SB14		PDO-SB15		PDO-SB1501		PDO-SB1502		PDO-SE01		PDO-SE03		PDO-SE04	
	SAMPLE ID	DATE	PDO-SB1402	PDO-SB1501	PDO-SB1501	PDO-SB1502	PDO-SB1502	PDO-SE01	PDO-SE01	PDO-SE01	PDO-SE03	PDO-SE03	PDO-SE04	PDO-SE04	PDO-SE04	
	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	
	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	DEPTH (ft)	
RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	RESULT TYPE	
2,4,6-Trichlorophenol	(mg/kg)	<0.39	<0.36	<0.40	<0.47	<0.49	<0.44									
GRO	(mg/kg)	<0.21 J	<0.2 J	<0.21 J	<0.36 J	0.53 J	0.76 J									
DRO	(mg/kg)	<12	20	<12	25	130	61									
Gross Alpha	(pCi/g)	<14	<13	<14	15 +/-9.5 J	<18	13 +/-8.6 J									
Gross Beta	(pCi/g)	(12 +/-6.7)	<11	<11	(12 +/-8.4)	21 +/-9.1	<14									
Antimony	(mg/kg)	<6 R	<5.6 R	<6 R	<7.1	<7.4	<6.8									
Arsenic	(mg/kg)	2.1	5.0	<1.2	<1.4	<1.4	<1.3									
Beryllium	(mg/kg)	<0.6	<0.56	<0.6	<0.58	(0.44)	<0.54									
Cadmium	(mg/kg)	<0.6	<0.56	<0.6	<0.71	1.4	1.2									
Chromium	(mg/kg)	4.0	3.7	8.0	3.6	13	15									
Copper	(mg/kg)	<3 J	4.2 J	<3 J	(3.5)	8.8	7.5									
Lead	(mg/kg)	3.2	7.8	1.8	16	32	25									
Mercury	(mg/kg)	<0.011	0.018	0.035	0.079	0.13	0.081									
Nickel	(mg/kg)	<4.8	<4.4	<4.8	<5.8	<6	<5.4									
Selenium	(mg/kg)	<1.1 J	<1.1 J	<1.2 J	<1.4	<1.4	<1.3									
Silver	(mg/kg)	<1.1	<1.1	<1.2	<1.4	2.0	1.5									
Thallium	(mg/kg)	<1.1	<1.1	<1.2	<1.4	<1.4	<1.3									
Zinc	(mg/kg)	3.4	6.8	3.1	24	59	51									

Values represent total concentrations unless noted < = Not detected at indicated reporting limit --- = Not analyzed

() = Less than Reporting Limit

EPA METHODS: 8260,8100,8015M,8100M,PPMET-T.

J = RESULT IS ESTIMATED. R = RESULT IS REJECTED.



STORED/SHIPPED IN ICE Y/N



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Heetenger

FAX # 404/872-3161

SUBCONTRACTOR L. Bonds 56-85014

PROJECT # _____

SAMPLE CUSTODIAN L. Bonds 56-85014

TODAY'S DATE 8-29-96

DATE/TIME SAMPLES RECEIVED 8-29-96 / 12:30pm

AIRBILL NUMBER _____

NO. OF COOLERS
IN SHIPMENT 1

COOLER OPENED: DATE 8-29-96 TIME 1:45pm

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED wet ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED / FROZEN _____

FROZEN _____

COOLER NUMBER # 1

TEMP INSIDE COOLER 0.1

RECORD TEMPERATURE BLANK (1) 0.1 (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#S AND BOTTLE TYPES AFFECTED

PDO - HA0101, HA0102, HA0201, HA0202, HA0301, HA0302

LIST SAMPLE ID'S IN EACH SHIPMENT:



CHAIN - OF - CUSTODY - RECORD

SAMPLER(S) SIGNATURE:

[illegible]

Method No.

ANALYTICAL PARAMETERS/METHODS

[illegible]

Relinquished by:
(Signature)

Date/Time:

Received by:

Date/Time:

Cooler Temperature:

Remarks:

Note cooler temp in Coc

use PDD-NAP602 for MS/MSD
per C. Lettingier 9/18/96 Lm

Send Results to:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

AIRBILL CO.

TRACKING NO:

STANDARD PRESERVATION (Y):

(H) HCl/VOC,
(N) HNO₃/METALS
(S) H₂SO₄/
(O) OTHER _____

STORED/SHIPPED IN ICE Y/N

[illegible]

AIRBILL CO.
 TRACKING NO: _____
 Send Results to: _____
 Christine Hettinger c/o METCALF & EDDY, INC.
 1201 Peachtree St., N.E., 400 Colony Square, Suite 1101-
 Atlanta, Georgia 30361
 (404) 881-8010, FAX (404) 872-3161

Send Results to:

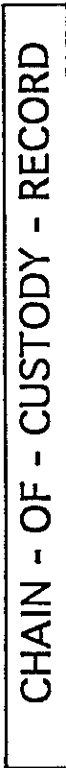
Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STANDARD PRESERVATION (Y):	(H) HCl/VOC,
	(N) HNO ₃ /METALS
	(S) H ₂ SO ₄ /
	(O) OTHER _____
STORED/SHIPPED IN ICE Y/N _____	

04) 881-8010, FAX (404) 872-3161

ANALYTICAL PARAMETERS/METHODS

[illegible]



TASK ORDER NO.

SAMPLE EVENT: MW Sampling

PROGRAM TYPE: _____

SAMPLER(S) SIGNATURE: *A. Powell*

[illegible]

Relinquished by: *[Signature]* Date/Time: 0.00.00
Received by: *[Signature]* Date/Time: 01.01.00

Remarks: PDO-SWOL in log # T612706
 (3) SE's in log # T612712

TRACKING NO:

Send Results to: 76-12713-Exd

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010 FAX (404) 872-3161

Cooler Tempera

01/11/2011

STANDARD PRESERVATION (Y):

(H) HCl/VOC,
(N) HNO₃/METALS
(S) H₂SO₄/
(O) OTHER

STORED/SHIPPED IN ICE Y/N

ANALYTICAL PARAMETERS/METHODS

[illegible]

Method No.



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 1052 0900

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 10

COOLER OPENED: DATE 9-20-96 TIME 1050

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # _____ TEMP INSIDE COOLER _____

10 _____ 2°

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SE01, PDO-SE03, PDO-SE04,
PDO-SW01

103712



TASK ORDER NO.

TASK ORDER NO.

SAMPLE EVENT: Mw Sampling

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: *H. Powell*

SAMPLER(S) NAME: G. Rowell

[illegible]

Relinquished by:
(Signature)

Received by:

Date/Time:

Cooler #2 Cooler Temperature:

Remarks:

AIRBILL CO.

TRACKING NO:

Send Results to: 76-12706

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, S.
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STANDARD PRESERVATION (Y):

(H) HCl/VOC
(N) HNO₃/METALS
(S) H₂SO₄/
(O) OTHER _____

STORED/SHIPPED IN ICE YN

ANALYTICAL PARAMETERS/METHODS



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1250CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

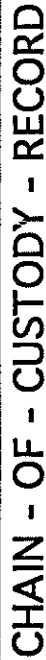
COOLER NUMBER # 2 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SW02, PDO-SW03, PDO-SW04



SAMPLER(S) NAME: G. Powell

SAMPLER(S) SIGNATURE: A. Powell

Method No.Method No.

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STORÉD/SHIPPED IN ICE ~~Y/N~~



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 10

COOLER OPENED: DATE 9-20-96 TIME 1250

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # 1 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-GW2001, PDO-GW2201, PDO-GW04

T610706



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT.

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9

COOLER OPENED: DATE 9-20-96 TIME 1250

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # 2 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SW02, PDO-SW03, PDO-SW04

TG10/106



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9
COOLER OPENED: DATE 9-20-96 TIME 1250
CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐
TYPE OF COLLANT USED Wet Ice
COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒
FROZEN _____
COOLER NUMBER # 3 TEMP INSIDE COOLER 40C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: 1310-TB03, 1310-ER02, 1310-GW0101, 1310-GW0201, 1310-GW0301, 1310-GW0801, PDD-ER02, PDD-GW1901, PDD-GW2301, PDD-GW0501, PDD-GW2401, PDD-GW2501, PDD-GW2101, PDD-GW2001, PDD-GW2201, PDD-GW0401, PDD-GW0101, PDD-GW0201, PDD-GW0301, PDD-SW01, PDD-SW02, PDD-SW03, PDD-SW04

T610706



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.

UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT.

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN A. Campbell 86-84846 TODAY'S DATE 8/17/96
DATE/TIME SAMPLES RECEIVED 8/16/96 5:35

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 1

COOLER OPENED: DATE 8/17/96 TIME 9:50

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # 1 TEMP INSIDE COOLER 1.1°C

RECORD TEMPERATURE BLANK (1) 1.1°C (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SB0601, PDO-SB0602, PDO-SB0701,
PDO-SB0702, PDO-SB0801, PDO-SB17, PDO-SB0901, PDO-SB0902,
PDO-TP01, PDO-HPW01, PDO-HPW02, 1310-HPW01, 1310-HPW02,
1310-HPW03, 1310-HPW04, 1310-HPW07.



Winter 3

TASK ORDER NO.

017830 - 4104

SAMPLE EVENT:

SAK LABS

PROGRAM TYPE:

Humphreys

SAMPLER(S) SIGNATURE:

DATE	TIME MILITARY	MATRIX (SW)	FIELD SAMPLE ID	SITE ID	RES. CODE	DEPTH (FT.)	NO. OF CONTS.	STANDARD PRESERV. (Y/N)*	FILTERED (L) LAB (F) FIELD
8/18/96	0745	W	1310-HPW05	1310-HP05	PPO	/	3	Y	N
8/18/96	0820	W	1310-HPW06	1310-HP06	PPO	/	3	Y	N
8/18/96	0820	W	1310-TB02	1310-HP06	BT11	/	3	Y	N
8/18/96	1010	W	PDO-HPW03	PDO-HP03	PPO	/	3	Y	N
8/18/96	0930	W	PDO-HPW04	PDO-HP04	PPO	/	3	Y	N
8/18/96	1035	W	PDO-HPW05	PDO-HP05	PPO	/	3	Y	N
8/18/96	1115	W	PDO-HPW06	PDO-HP06	PPO	/	3	Y	N
8/18/96	1350	W	PDO-HPW07	PDO-HP07	PPO	/	3	Y	N
8/18/96	1415	W	PDO-HPW08	PDO-HP08	PPO	/	3	Y	N
8/18/96	1450	W	PDO-HPW09	PDO-HP09	PPO	/	3	Y	N
8/18/96	1450	W	PDO-HPW11	PDO-HP09	PD11	/	3	Y	N
8/18/96	1540	W	PDO-HPW10	PDO-HP10	PPO	/	3	Y	N

Date/Time:

Received by:

Data/Time:

Cooler Temperature:

24-hr Turnaround

Note Coder Temp on C-O-C

Send Results to:

Christine Hettinger c/o METCALF & EDDY, INC.
11201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

AIRBILL CO.

TRACKING NO:

STANDARD PRESERVATION (Y):

(H) HCl/NO₂
(N) HNO₃/METALS
(S) H₂SO₄/
(O) OTHER

STORED/SHIPPED IN ICE Y/N

DISC

Received by: St-84862 Date/Time: 8/9/96 10:56 am
Beverly Mcley @



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Beverly Kelly ⁵⁶⁻⁸⁴⁸⁶²⁰ TODAY'S DATE 8-19-96
DATE/TIME SAMPLES RECEIVED 8-19-96 10:56am
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 3
COOLER OPENED: DATE 8-19-96 TIME 11:00am
CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐
TYPE OF COLLANT USED LIQUID COOLANT
COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN _____
FROZEN frozen
COOLER NUMBER # B TEMP INSIDE COOLER 1.0

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____
CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT)
IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: 1310-HPW05, 1310-HPW06, 1310-HPW07, 1310-HPW08, 1310-HPW09, 1310-HPW10, 1310-HPW11, 1310-HPW12, 1310-HPW13, 1310-HPW14, 1310-HPW15, 1310-HPW16, 1310-HPW17, 1310-HPW18, 1310-HPW19, 1310-HPW20, 1310-HPW21, 1310-HPW22, 1310-HPW23, 1310-HPW24, 1310-HPW25, 1310-HPW26, 1310-HPW27, 1310-HPW28, 1310-HPW29, 1310-HPW30, 1310-HPW31, 1310-HPW32, 1310-HPW33, 1310-HPW34, 1310-HPW35, 1310-HPW36, 1310-HPW37, 1310-HPW38, 1310-HPW39, 1310-HPW40, 1310-HPW41, 1310-HPW42, 1310-HPW43, 1310-HPW44, 1310-HPW45, 1310-HPW46, 1310-HPW47, 1310-HPW48, 1310-HPW49, 1310-HPW50, 1310-HPW51, 1310-HPW52, 1310-HPW53, 1310-HPW54, 1310-HPW55, 1310-HPW56, 1310-HPW57, 1310-HPW58, 1310-HPW59, 1310-HPW60, 1310-HPW61, 1310-HPW62, 1310-HPW63, 1310-HPW64, 1310-HPW65, 1310-HPW66, 1310-HPW67, 1310-HPW68, 1310-HPW69, 1310-HPW70, 1310-HPW71, 1310-HPW72, 1310-HPW73, 1310-HPW74, 1310-HPW75, 1310-HPW76, 1310-HPW77, 1310-HPW78, 1310-HPW79, 1310-HPW80, 1310-HPW81, 1310-HPW82, 1310-HPW83, 1310-HPW84, 1310-HPW85, 1310-HPW86, 1310-HPW87, 1310-HPW88, 1310-HPW89, 1310-HPW90, 1310-HPW91, 1310-HPW92, 1310-HPW93, 1310-HPW94, 1310-HPW95, 1310-HPW96, 1310-HPW97, 1310-HPW98, 1310-HPW99, 1310-HPW100



CHAIN - OF - CUSTODY - RECORD

TASK ORDER NO.

SAMPLE EVENT:

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: D. Kersch

DATE	TIME MILITARY	MATRIX (SW)	FIELD SAMPLE ID	SITE ID	RES CODE	DEPTH (FT.)	NO. OF CONTS.	STANDARD PRESERV. (Y/N)*	FILTERED (U) LAB (F) FIELD
8-26-90	0835	S	PDO-MWB0101	PDO-MWB01	PPO	0/2	4	N	
"	0845	S	PDO-MWB0102	"	PPO	2/4	4	N	
"	1015	S	PDO-MWB0201	PDO-MWB02	PPO	2/4	4	N	
"	1025	S	PDO-MWB0202	"	PPO	4/6	4	N	
"	1025	S	PDO-MWB05	"	PD11	4/6	3	N	
"	1330	S	PDO-MWB0301	PDO-MWB03	PPO	0/2	4	N	
"	1340	S	PDO-MWB0302	" "	PPO	2/4	4	N	
8-27-90	0755	S	PDO-MWB0401	PDO-MWB04	PPO	0/2	4	N	
"	0805	S	PDO-MWB0402	"	PPO	2/4	4	N	
		W	Temp Blank			/			
						/			
						/			

Received by:

Date/Time:

Date/Time:

Cooler Temperature:

* Use PDB-mwB0301 Q5 MS/MSD

AIRBILL CO.

TRACKING NO:

Send Results to:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 300
Atlanta, Georgia 30361
(404) 881-8010. FAX (404) 872-3161

STANDARD PRESERVATION (Y):

(H) HCl/VOC:

(N) $\text{HNO}_3/\text{METALS}$

$$\text{H}_2\text{SO}_4 \text{ (s)}$$

(c) OTHER:

STORED/SHIPPED IN ICE Y/N

ANALYTICAL PARAMETERS/METHODS

[illegible]

Method No.



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN A. Campbell 50-85006 TODAY'S DATE 8/27/96
DATE/TIME SAMPLES RECEIVED 8/27/96 11:10
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 1

COOLER OPENED: DATE 8/27/96 TIME 11:10

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # 1 TEMP INSIDE COOLER 1.6°C

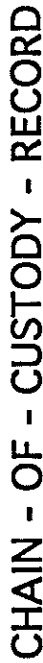
RECORD TEMPERATURE BLANK (1) 1.6°C (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-mwB0101, PDO-mwB0102, PDO-mwB020
PDO-mwB0202, PDO-mwB0205, PDO-mwB0301, PDO-mwB0302, PDO-mwB0401, PDO-mwB0402.

(1)



CHAIN - OF - CUSTODY - RECORD

TASK ORDER NO.

SAMPLE EVENT: MW-Soil borings

PROGRAM TYPE:

SAMPLER(S) SIGNATURE:

DATE	TIME MILITARY	MATRIX (SW)	FIELD SAMPLE ID	SITE ID	RES CODE	DEPTH (FT.)	NO. OF CONTS.	STANDARD PRESERV. (V/V)	FILTERED (L) LAB (P) FIELD
8-14-96	1530	S	PDO-SB0101	PDO-SB01	PPO	0/2	4	N	
"	1540	S	PDO-SB0102	PDO-SB01	PPO	2/4	4	N	
"	1245	W	PDO-GR01	PDO-SB01	BR11	/	108	Y	+
8-15-96	0815	S	PDO-SB0201	PDO-SB02	PPO	0/2	4	N	
"	0830	S	PDO-SB0202	PDO-SB02	PPO	2/4	4	N	
"	1000	S	PDO-SB0301	PDO-SB03	PPO	0/2	4	N	
"	1015	S	PDO-SB0302	PDO-SB03	PPO	2/4	4	N	
		W	Temp Blank			/			
						/			
						/			
						/			
						/			

Relinquished by:
(Signature)

Date/Time:

Received by:

Date/Time:

Cooler Temperature:

Remarks:

Remarks: * Note cooler temp on C.O.C

* use PDO-SB0201 for MS/MSD

* Use PDO-580201 for MS/MSD
~~##~~ Cancel Sample analyses per C. Nottings
 8/28/96 AS
 AIRBILL CO.

Send Results to:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010. FAX (404) 872-3161

TRACKING NO:

(404) 872-3161

STANDARD PRESERVATION (Y):

(H) HCl/acc.

(N) HNO_3 /METALS

(S) H_2SO_4 /

(c) OTHER

STORED/SHIPPED IN 100% N



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT.

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN P. Bonds A 56-84811 TODAY'S DATE 8-16-96
DATE/TIME SAMPLES RECEIVED 8-15-96 6:00 pm
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 1

COOLER OPENED: DATE 8-16-96 TIME 8:00 am

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED FROZEN _____

FROZEN _____

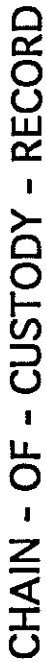
COOLER NUMBER # #1 TEMP INSIDE COOLER 0.1

RECORD TEMPERATURE BLANK (1) 0.1 (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-ER01, PDO-SB0101, SB0102, SB0201
SB0202, SB0301, SB0302



TASK ORDER NO.

SAMPLE EVENT: MW-5B install.

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: *A. Rowell*

Method No.[illegible]

Received by:

Date/Time:

Date/Time:

Cooler Temperature:

Bob-Oley 84811 8/15/76 1800

Remarks: * Note cooler temp on C-0-c

Send Results to:

AIRBILL CO.

TRACKING NO:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STANDARD PRESERVATION (Y):

(H)	HCl/VOC,
(N)	HNO ₃ /METALS
(S)	H ₂ SO ₄ /
(O)	OTHER _____

STORER/SHIPPED IN ICE



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative _____ FAX # _____

SUBCONTRACTOR _____ PROJECT # _____

SAMPLE CUSTODIAN R. Birds B SI-82811 TODAY'S DATE _____

DATE/TIME SAMPLES RECEIVED 8-15-96, 6:00 pm

AIRBILL NUMBER _____

NO. OF COOLERS
IN SHIPMENT

--	--

COOLER OPENED: DATE 8-16-96 TIME 8:00 am

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN _____

FROZEN _____

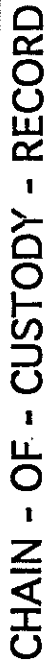
COOLER NUMBER # 2 TEMP INSIDE COOLER 0.1

RECORD TEMPERATURE BLANK (1) 0.1 (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDD-SB0401, SB0402, SB0501, SB0502, SB0503, PDD-SB16



TASK ORDER NO.

SAMPLE EVENT: MW-50:1 Daring S

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: A. Rowell

DATE	TIME MILITARY	MATRIX (SW)	FIELD SAMPLE ID	SITE ID	RES CODE	DEPTH (FT.)	NO. OF CONTS.	STANDARD PRESERV. (Y/N)*	FILTERED (C) LAB (P) FIELD
8-16-96	1300	S	PDO-SB0601	PDO-SB06	PPD	0/2	4	N	
"	1305	S	PDO-SB0602	PDO-SB06	PPD	2/4	4	N	
"	1340	S	PDO-SB0701	PDO-SB07	PPD	0/2	4	N	
"	1350	S	PDO-SB0702	PDO-SB07	PPD	2/4	4	N	
"	1520	S	PDO-SB0801	PDO-SB08	PPD	2/4	4	N	
"	1520	S	PDO-SB08 ^{SE} 17	PDO-SB08	PD11	2/4	3	N	
"	1600	S	PDO-SB0901	PDO-SB09	PPD	0/2	4	N	
"	1610	S	PDO-SB0902	PDO-SB09	PPD	2/4	4	N	
			Temp Blank			/			
						/			
						/			
						/			

Relinquished by:
(Signature)

Date/Time:

Received by:

Date/Time:

Cooler Temperature:

Remarks: * Note color temp on C-O-C O.P. samples! \$174.9 9:50

Send Results to:

AIRBILL CO.

TRACKING NO:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STANDARD PRESERVATION (Y):

(H)	HCl/VOC,
(N)	HNO ₃ /METALS
(S)	H ₂ SO ₄ /
(O)	OTHER _____

STORED/SHIPPED IN ICE Y/N



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN A. Campbell 86-84846 TODAY'S DATE 8/17/96
DATE/TIME SAMPLES RECEIVED 8/16/96 5:35

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 1

COOLER OPENED: DATE 8/17/96 TIME 9:50

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED Wet Ice

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

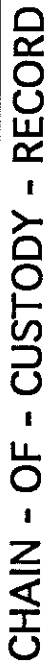
COOLER NUMBER # 1 TEMP INSIDE COOLER 1.1°C

RECORD TEMPERATURE BLANK (1) 1.1°C (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SB0601, PDO-SB0602, PDO-SB0701,
PDO-SB0702, PDO-SB0801, PDO-SB17, PDO-SB0901, PDO-SB0902,
PDO-TB01, PDO-HPW01, PDO-HPW02, 1310-HPW01, 1310-HPW02,
1310-HPW03, 1310-HPW04, 1310-HPW07.



TASK ORDER NO.

SAMPLE EVENT: MW-50:1 boring

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: Y. Rowell

[illegible]

Relinquished by:
(Signature)

Date/Time:

Received by:

Date/Time:

**Relinquish
(Signature)**

Date/Time: 8/19/96 1056

Received by: Beverly Kelly-B (No-874862)

Date/Time: 8/19/96 10:50am

Cooler Temperature:

1.0

Remarks:

Remarks: *Note cooler temp on C-O-C

Send Results to:

AIRBILL CO.

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

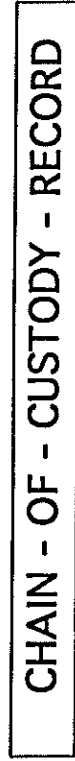
TRACKING NO:

(404) 881-8010, FAX (404) 872-3161

STANDARD PRESERVATION (Y):

(H)	HCl/VOC,
(N)	HNO ₃ /METALS
(S)	H ₂ SO ₄ /
(O)	OTHER _____

STORED/SHIPPED IN ICE Y/N



PROJECT NAME:	Hunter AFF	TASK ORDER NO.	
PROJECT NO:	017830-4103	SAMPLE EVENT:	MW-Soil borings
LABORATORY ID:	SAV. Labs	PROGRAM TYPE:	
SAMPLER(S) NAME:	G. Rowell	SAMPLER(S) SIGNATURE:	G. Rowell

CHAIN - OF - CUSTODY - RECORD

ANALYTICAL PARAMETERS/METHODS

[illegible]

Relinquished by: D. Humphreys Date/Time: 8/19/96 1058
(Signature)
Received by: Beverly M. Lee, C. Date/Time: 8/19/96
Remarks: * Note Corder found on C-0-C

Remarks: * Note Cooler temp on C-0-C

* Use BDO-SB1202 for MS/MSD

Send Results to:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

(H)	HCl/VOC,
(N)	HNO ₃ /METALS
(S)	H ₂ SO ₄ /
(O)	OTHER _____

STANDARD PRESERVATION (Y): _____

STORED/SHIPPED IN ICE Y1/_____



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT.

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Beverly Neely 86-84862 (A) TODAY'S DATE 8-19-96
DATE/TIME SAMPLES RECEIVED 8-19-96 10:56am
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 3
COOLER OPENED: DATE 8-19-96 TIME 11:00am
CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐
TYPE OF COLLANT USED Wet Ice
COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN frozen
FROZEN _____
COOLER NUMBER # A TEMP INSIDE COOLER 1.3

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SB1001, PDO-SB1002, PDO-SB1101, PDO-SB1102, PDO-SB1201, PDO-SB1202, PDO-SB1301, PDO-SB1302, PDO-SB18



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Dee By. Nelly ⁵⁶⁻⁸⁴⁸⁶³⁵ TODAY'S DATE 8-19-96
DATE/TIME SAMPLES RECEIVED 8-19-96 10:56am

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 3

COOLER OPENED: DATE 8-19-96 TIME 11:00am

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED 1120F 600

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN _____

FROZEN frozen

COOLER NUMBER # B TEMP INSIDE COOLER 1.0

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: 1310-HPW05, 1310-HPW06, 1310-HPW07,
PDO-HPW03, PDO-HPW04, PDO-HPW05, PDO-HPW06, PDO-HPW07,
PDO-HPW08, PDO-HPW09, PDO-HPW11, PDO-HPW12



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY

UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Bruce Taylor 56-848602 (C) TODAY'S DATE 8-19-96
DATE/TIME SAMPLES RECEIVED 8-19-96 10:56am

AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 3

COOLER OPENED: DATE 8-19-96 TIME 11:00am

CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐

CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐

SAMPLE LABELS PRESENT? YES ☒ NO ☐

BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐

TYPE OF COLLANT USED 120t. 100e

COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN _____

FROZEN 1 frozen

COOLER NUMBER # C TEMP INSIDE COOLER 1.3

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-SB1001, PDO-SB1002, PDO-SB1101,
PDO-SB1102, PDO-SB1201, PDO-SB1202, PDO-SB-1301, PDO-
SB1302, PDO-SB18





SAMPLER(S) NAME: G. Rowell

SAMPLER(S) SIGNATURE: *D. Powell*

[illegible]

42

TRACKING NO:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

(H)	HCl/VOC ₂
(N)	HNO ₃ /ME
(S)	H ₂ SO ₄ /
(O)	OTHER

STORED/SHIPPED IN ICE CRYN

ANALYTICAL PARAMETERS/METHODS

Method No.

[illegible]



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. HettingerFAX # (404) 872-3161SUBCONTRACTOR SAV. LABSPROJECT # Hunter 3SAMPLE CUSTODIAN Chris SlowikTODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900

AIRBILL NUMBER _____

NO. OF COOLERS
IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1250CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

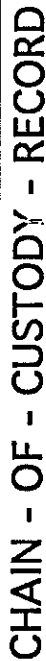
COOLER NUMBER # 6 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-GW0101, PDO-GW0201, PDO-GW0301



SAMPLER(S) NAME: G. Korvell

PROGRAM TYPE:

SAMPLER(S) SIGNATURE:-

[illegible]

Send Results to:

AIRBILL CO.

TRACKING NO:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

ANALYTICAL PARAMETERS/METHODS

[illegible]Cooler # 1 Cooler Temperature:

Cooler Temperature:

405

STANDARD PRESERVATION (Y):

(H) HCl/NaOH

(N) HNO₃/METALS

(S) H_2SO_4 /

(b) OTHER

STORED/SHIPPED IN ICE Y/N



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1250CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

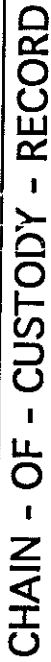
COOLER NUMBER # 1 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-GW2001, PDO-GW2201, PDO-GW04



SAMPLER(S) NAME: G. Howell

SAMPLER(S) SIGNATURE: *A. Howard*

DATE	TIME MILITARY	MATRIX (SW)	FIELD SAMPLE ID	SITE ID	RES CODE	DEPTH (FT.)	NO. OF CONTS.	STANDARD PRESERV. (Y/N)	FILTERED (U) LAB (P) FIELD
9-17-96	1030	W	1310-TB03	1310-mw01	BT11	/	3	Y	
"	1040	W	1310-ER02	1310-mw01	BR11	/	3 3	Y	
"	1050	W	1310-GW0101	1310-mw01	PP0	/	3	Y	
"	1100	W	1310-GW0201	1310-mw02	PP0	/	3	Y	
"	1120	W	1310-GW0301	1310-mw03	PP0	/	3	Y	
"	1120	W	1310-GW08	1310-mw03	PD11	/	3	Y	
"	1550	W	PD0-ER02	PD0-GW19	BR11	/	3	Y	
"	1715	W	PD0-GW1901	PD0-GW19	PP0	/	3	Y	
"	1730	W	PD0-GW2301	PD0-GW23	PP0	/	3	Y	
"	1730	W	PD0-GW05	PD0-GW05 (E)	PD11	/	3	Y	
"	1745	W	PD0-GW2401	PD0-GW24	PP0	/	3	Y	
"	1805	W	PD0-GW2501	PD0-GW25	PP0	/	9	Y	

Over 100

Keinquished by: (Signature)	Date/Time:	Received by:	Date/Time:
A. Rowell	9-18-96/1905	Bob Dohy	9/18/96 1908
Remarks: * USE PDO-GW2501 Q3 MS/MSD			
* Note cooler temp on COC			

TRACKING NO:

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, S
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

STORÉD/SHIPPED IN ICE ☒ Y ☐ N

ANALYTICAL PARAMETERS/METHODS

ANALYTICAL PARAMETERS/METHODS

Cooler Temperature:



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

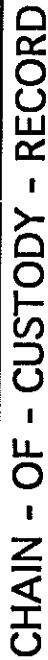
TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (904) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slawick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9
COOLER OPENED: DATE 9-20-96 TIME 1850
CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐
TYPE OF COLLANT USED Wet Ice
COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒
FROZEN _____
COOLER NUMBER # 3 TEMP INSIDE COOLER 40C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____
CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: 1310-TR03, 1310-ER02, 1310-GW0101, 1310-GW0201, 1310-GW0301,
1310-GW08, PDD-ER02, PDD-GW1901, PDD-GW2301, PDD-GW05, PDD-GW2401,
PDD-GW2501, PDD-GW2101, PDD-GW2001, PDD-GW2201, PDD-GW0401, PDD-GW0101,
PDD-GW0201, PDD-GW0301, PDD-SW01, PDD-SW02, PDD-SW03, PDD-SW04.

[illegible]

Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite 1101
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

TRACKING NO:

STORED/SHIPPED IN ICE ☒ Y ☐ N

ANALYTICAL PARAMETERS/METHODS

[illegible]



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (904) 872-3161SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 (2) 0900AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1250CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

COOLER NUMBER # 7 TEMP INSIDE COOLER 40C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN) LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

Received (1) liter from samples: PDD-GW1901, PDD-GW05, broken in shipment.LIST SAMPLE ID'S IN EACH SHIPMENT: PDD-GW1901, PDD-GW2301, PDD-GW05



SAMPLER(S) NAME: G. Rowell

PROGRAM TYPE:

SAMPLER(S) SIGNATURE: J. Howell

Relinquished by:
(Signature)

Date/Time: _____
Received by: _____

Date/Time:

Received by: Bob DeLong Date/Time: 9/18/96 1905

Remarks:

Send Results to:

Send Results to: **76-12706**
Christine Hettinger c/o METCALF & EDDY, INC.
1201 Peachtree St., N.E., 400 Colony Square, Suite
Atlanta, Georgia 30361
(404) 881-8010, FAX (404) 872-3161

AIRBILL CO.

TRACKING NO:

STANDARD PRESERVATION (Y):

(H) HCl/VOC .

(N) HNO_3 /METALS

 H_2SO_4 (s)

(U) OTHER

STORED/SHIPPED IN ICE

ANALYTICAL PARAMETERS/METHODS

[illegible]

Method No.

Cooler Temperature:

27



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1250CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

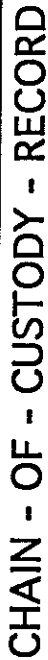
COOLER NUMBER # 8 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN, LEAKING, INTACT?)

IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED

LIST SAMPLE ID'S IN EACH SHIPMENT: PDO-GW2401, PDO-GW2101

[illegible]

TRACKING NO:

[illegible]

Method No.

<i>Robert A 9</i> Cooler Temperature: <i>44°C</i>

STANDARD PRESERVATION (Y):

(H)	HCl/VOC
(N)	HNO ₃ /METALS
(S)	H ₂ SO ₄
(O)	OTHER

STORED / SHIPPED



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY.
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT.

METCALF & EDDY Representative C. Hettinger FAX # (904) 872-3161SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3SAMPLE CUSTODIAN Chris Slowick TODAY'S DATE 9-20-96DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900

AIRBILL NUMBER _____

NO. OF COOLERS
IN SHIPMENT 9COOLER OPENED: DATE 9-20-96 TIME 1256CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐SAMPLE LABELS PRESENT? YES ☒ NO ☐BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐TYPE OF COLLANT USED Wet IceCOOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒

FROZEN _____

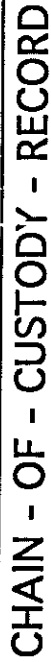
COOLER NUMBER # 9 TEMP INSIDE COOLER 4°C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____

CONDITION OF BOTTLES IN SHIPMENT: (BROKEN) LEAKING, INTACT?

IF BROKEN OR LEAKING LIST SAMPLE ID#S AND BOTTLE TYPES AFFECTED

Received (1) liter from sample PBO-GW2501 broken
in shipmentLIST SAMPLE ID'S IN EACH SHIPMENT: PBO-GW2501



SAMPLER(S) NAME: G. Rowell

SAMPLER(S) SIGNATURE: *L. Howell*

Method No.[illegible]

2002/02/05

TRACKING NO:

STORED / SHIPPED IN ICE



SAMPLE RECEIPT CONFIRMATION SUMMARY REPORT

TO BE COMPLETED BY SUBCONTRACTOR SAMPLE CUSTODIAN FOR EACH SHIPMENT RECEIVED FROM METCALF & EDDY
UPON COMPLETION, FAX TO THE DESIGNATED M&E REPRESENTATIVE LISTED BELOW SAME DAY AS SHIPMENT

METCALF & EDDY Representative C. Hettinger FAX # (404) 872-3161
SUBCONTRACTOR SAV. LABS PROJECT # Hunter 3
SAMPLE CUSTODIAN Chris Slawick TODAY'S DATE 9-20-96
DATE/TIME SAMPLES RECEIVED 9-20-96 @ 0900
AIRBILL NUMBER _____ NO. OF COOLERS IN SHIPMENT 9
COOLER OPENED: DATE 9-20-96 TIME 1850
CHAIN OF CUSTODY SEAL INTACT? YES ☒ NO ☐
CHAIN OF CUSTODY PROVIDED? YES ☒ NO ☐
SAMPLE LABELS PRESENT? YES ☒ NO ☐
BOTTLE LABELS CORRESPOND W/COC? YES ☒ NO ☐
TYPE OF COLLANT USED Wet Ice
COOLANT CONDITION: MELTED _____ PARTIALLY MELTED/FROZEN ☒
FROZEN _____
COOLER NUMBER # 5 TEMP INSIDE COOLER 40C

RECORD TEMPERATURE BLANK (1) _____ (2) _____ (3) _____
CONDITION OF BOTTLES IN SHIPMENT: BROKEN, LEAKING, INTACT?
IF BROKEN OR LEAKING LIST SAMPLE ID#'S AND BOTTLE TYPES AFFECTED
1310-GW08 : Received (1) liter broken in shipment.
LIST SAMPLE ID'S IN EACH SHIPMENT: 1310-GW0301, 1310-GW08, PDD-ERO 2

APPENDIX G
TOPOGRAPHIC SURVEY DATA

MONITOR WELL	N-COORD	E-COORD	TOC	BOC	GROUND
MW01	740077.60	818195.51	20.44	17.7	17.7
MW02	740083.69	818106.43	20.76	17.9	17.8
MW03	740036.02	818060.24	20.25	17.5	17.3
MW04	739656.52	818044.86	29.09	26.2	26.0
MW1-19	739909.68	818245.52	21.03	19.6	19.6
MW1-20	739961.14	818028.96	21.67	19.3	18.1
MW1-21	739874.25	817937.44	17.73	16.2	16.2
MW1-22	740057.60	817925.36	19.20	NA	16.6
MW1-23	739941.87	818155.72	20.06	17.7	17.7
MW1-24	740049.24	818134.68	19.61	17.4	17.4
MW1-25	740156.84	818115.23	20.33	NA	18.1

SOIL BORING	N-COORD	E-COORD	GROUND
SB01	739828.02	817956.16	16.8
SB02	739842.18	818067.52	18.1
SB03	739903.16	818051.54	17.0
SB04	740001.58	818146.58	17.2
SB05	739926.64	818138.74	17.7
SB06	739855.90	817889.05	16.1
SB07	739881.06	817899.41	16.1
SB08	739907.32	817925.75	16.2
SB09	739930.51	817951.03	16.5
SB10	739886.56	817926.24	16.2
SB11	739910.28	817954.10	16.5
SB12	739935.46	817979.70	17.1
SB13	739863.60	817921.71	16.1
SB14	739888.33	817951.24	16.5
SB15	739912.70	817979.33	17.1

HAND AUGER	N-COORD	E-COORD	GROUND
HA01	739822.93	818118.58	20.4
HA02	739892.65	818198.53	20.3
HA03	739966.60	818059.55	17.7
HA04	739951.08	818212.45	18.2
HA05	739939.00	818176.52	18.7
HA06	739923.98	818143.75	18.0
HA07	739913.26	818138.43	18.3
HA08	739877.62	818159.63	19.1
HA09	739891.63	818174.53	19.4
HA10	739917.86	818201.68	19.1

HYDRO PUNCH	N-COORD	E-COORD	GROUND
HP01	739891.01	818104.13	17.9
HP02	739852.79	818017.32	17.3
HP03	739996.56	818214.85	18.8
HP04	740075.63	818200.45	17.7
HP05	740137.18	818182.09	17.9
HP06	740141.83	818072.94	18.1
HP07	740087.65	818130.66	17.8
HP08	740062.64	818053.35	17.9
HP09	740011.18	818084.88	17.9
HP10	739859.55	818176.47	20.9

SURFACE
WATER
SAMPLE

N-COORD

E-COORD

GROUND

SE/SW01
SE/SW02
SE/SW3

740299.94
740090.65
739924.57

818360.76
817910.94
817714.86

8.0
7.6
7.7

NA2/3000 Version 11-93

WILD NA2/3000 data extracted from file C:\95290\NA2\95290B.NA2

Date: 12-12-1996

Time: 19:03

POINT NUMBER	CUMUL. DISTANCE	MEASURED ELEVATION	VERTICAL DIFF.	ADJUSTED ELEVATION	
1005	0.00	21.5100	0.0000	21.5100	5/8 RB
1	383.53	20.4340	0.0002	20.4342	
2	762.36	20.3890	0.0003	20.3893	
401	942.51	19.8270	0.0004	19.8274	RB/CAP
3	1211.86	18.0850	0.0006	18.0856	
4	1590.96	18.8080	0.0007	18.8087	
402	1760.25	19.4000	0.0008	19.4008	RB\CAP
403	2254.87	16.7040	0.0010	16.7050	RB\CAP
5	2447.02	19.1900	0.0011	19.1911	
6	2561.88	25.4470	0.0012	25.4482	
604	2632.61	29.0890	0.0012	29.0902	MW 04
7	2826.54	22.4480	0.0013	22.4493	
6119	2956.00	21.0240	0.0013	21.0253	MW 1-19
8	3259.38	21.6170	0.0015	21.6185	
9	3616.01	26.9930	0.0016	26.9946	
10	3945.01	29.0110	0.0018	29.0128	
11	4212.23	32.9960	0.0019	32.9979	
1004	4384.18	33.7380	0.0020	33.7400	5/8 RB

Date: 12-12-1996

Time: 19:03

POINT NUMBER	BACK SIGHT	FORE SIGHT	INTER. POINT	SETTING OUT	MEASURED DISTANCE	NBR REP	STAND DEV.	HEIGHT OF POINT
1005	*****	BEGINNING	OF LEVELLING RUN	*****				21.5100
1005	4.3150				211.420	3	0.0003	
1		5.3910			172.110	3	0.0005	20.4340
1	4.6910				210.790	3	0.0008	
2		4.7360			168.040	3	0.0003	20.3890
2	5.4000				115.420	3	0.0006	
401		5.9620			64.730	3	0.0001	19.8270
401	3.6700				130.640	3	0.0003	
3		5.4120			138.710	3	0.0002	18.0850
3	5.4700				210.500	3	0.0009	
4		4.7470			168.600	3	0.0003	18.8080
4	4.7290				88.810	3	0.0017	
402		4.1370			80.480	3	0.0002	19.4000
402	3.1510				246.390	3	0.0010	
403		5.8470			248.230	3	0.0008	16.7040
403	4.9320				143.270	3	0.0004	
5		2.4460			48.880	3	0.0002	19.1900
5	7.6580				73.000	3	0.0001	
6		1.4010			41.860	3	0.0000	25.4470
6	6.7490				40.680	3	0.0003	
604		3.1070			30.050	3	0.0001	29.0890
604	0.9340				81.530	3	0.0008	
7		7.5750			112.400	3	0.0002	22.4480
7	3.4820				62.370	3	0.0000	
6119		4.9060			67.090	3	0.0005	21.0240
6119	5.6700				149.050	3	0.0004	
8		5.0770			154.330	3	0.0007	21.6170
8	6.0120				196.160	3	0.0025	
9		0.6360			160.470	3	0.0013	26.9930
9	5.8770				160.430	3	0.0012	
10		3.8590			168.570	3	0.0005	29.0110
10	7.4290				168.830	3	0.0002	
11		3.4440			98.390	3	0.0003	32.9960
11	5.7040				86.810	3	0.0001	
1004		4.9620			85.140	3	0.0000	33.7380
	*****	Cumulative distance: 4384.18 feet				*****		
	*****	Vertical closure: 0.0020 foot				*****		
	*****	Accuracy of leveling: 0.002 foot / Mile				*****		

Path: C:\95290\NA2

File: 95290A .ADJ

627 .a.. 12-12-96 19:04:27

Page 1

NA2/3000 Version 11-93

WILD NA2/3000 data extracted from file C:\95290\NA2\95290A.NA2

Date: 12-12-1996

Time: 19:02

POINT NUMBER	CUMUL. DISTANCE	MEASURED ELEVATION	VERTICAL DIFF.	ADJUSTED ELEVATION	
1004	0.00	33.7400	0.0000	33.7400	5/8 RB
1	236.26	29.8720	0.0108	29.8828	
2	431.76	23.6950	0.0197	23.7147	
1005	503.57	21.4870	0.0230	21.5100	5/8 RB

Date: 12-12-1996

Time: 19:02

POINT NUMBER	BACK SIGHT	FORE SIGHT	INTER. POINT	SETTING OUT	MEASURED DISTANCE	NBR REP	STAND DEV.	HEIGHT OF POINT
1004	*****	BEGINNING	OF	LEVELLING RUN	*****			33.7400
1004	3.3010				122.740	3	0.0001	
1		7.1690			113.520	3	0.0002	29.8720
1	1.0180				117.810	3	0.0002	
2		7.1950			77.690	3	0.0002	23.6950
2	3.8320				36.150	3	0.0001	
1005		6.0400			35.660	3	0.0001	21.4870
	*****	Cumulative distance:	503.57	feet	*****			
	*****	Vertical closure:	0.0230	foot	*****			
	*****	Accuracy of leveling:	0.074	foot /Mile	*****			

NA2/3000 Version 11-93

WILD NA2/3000 data extracted from file C:\95290\NA2\95290C.NA2

Date: 12-13-1996

Time: 14:22

POINT NUMBER	CUMUL. DISTANCE	MEASURED ELEVATION	VERTICAL DIFF.	ADJUSTED ELEVATION	
402	0.00	19.4010	0.0000	19.4010	RB/CAP
601	174.34	20.4430	-0.0020	20.4410	MW01
6125	287.33	20.3350	-0.0033	20.3317	MWI-25
602	376.07	20.7620	-0.0044	20.7576	MW02
6124	420.53	19.6120	-0.0049	19.6071	MW1-24
603	498.32	20.2550	-0.0058	20.2492	MW03
6122	636.48	19.2080	-0.0074	19.2006	MW1-22
6120	796.09	21.6810	-0.0093	21.6717	MW1-20
6121	946.42	17.7400	-0.0110	17.7290	MW1-21
6123	1183.59	20.0770	-0.0138	20.0632	MW1-23
403	1462.47	16.7220	-0.0170	16.7050	RB/CAP

Date: 12-13-1996

Time: 14:22

POINT NUMBER	BACK SIGHT	FORE SIGHT	INTER. POINT	SETTING OUT	MEASURED DISTANCE	NBR REP	STAND DEV.	HEIGHT OF POINT
402	*****	BEGINNING OF LEVELLING RUN	*****					19.4010
402	3.7610				103.280	3	0.0002	
601		2.7190			71.060	3	0.0002	20.4430
601	2.7100				56.430	3	0.0003	
6125		2.8180			56.560	3	0.0001	20.3350
6125	2.8740				48.880	3	0.0000	
602		2.4470			39.860	3	0.0003	20.7620
602	2.0130				18.770	3	0.0000	
6124		3.1630			25.690	3	0.0002	19.6120
6124	3.2340				38.220	3	0.0000	
603		2.5910			39.570	3	0.0002	20.2550
603	2.3110				51.050	3	0.0002	
6122		3.3580			87.110	3	0.0000	19.2080
6122	3.5200				81.200	3	0.0001	
6120		1.0470			78.410	3	0.0006	21.6810
6120	0.6110				29.660	3	0.0001	
6121		4.5520			120.670	3	0.0001	17.7400
6121	4.9050				102.200	3	0.0001	
6123		2.5680			134.970	3	0.0002	20.0770
6123	2.4860				134.880	3	0.0002	
403		5.8410			144.000	3	0.0004	16.7220
	*****	Cumulative distance:	1462.47 feet	*****				
	*****	Vertical closure:	-0.0170 foot	*****				
	*****	Accuracy of leveling:	0.032 foot / Mile	*****				

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1 Hoffman & Company Inc
2 Job No.:95290
3 Client:METCALF & EDDY
4 Date:12-12-96
5 Weather:CLEAR & COOL
6 Party Cheif:P.DEATER
7 Desc:LOCATIONS
8 952901004 TR TP 1004 5/8RB N 739005.420 E 819294.000 Z 33.740
9 952901005 TR TP 1005 5/8RB N 739481.860 E 819451.190 Z 21.510
10 Traverse measurement
11 Trav.: Stat. on occupied pt
12 952901004 TR TP 1004 5/8RB D 501.870 Hz 0.0000 V1 88.3428
13 952901004 TR TP 1004 5/8RB D 501.860 Hz 0.0000 V1 88.3428
14 95290 401 TR TP 401 60D D 941.540 Hz 89.0150 V1 90.0724
15 95290 401 TR TP 401 60D E 941.557 Hz 89.0150 h -2.008
16 95290 401 TR TP 401 60D D 941.540 Hz 89.0150 V1 90.0723
17 95290 401 TR TP 401 60D E 941.557 Hz 89.0150 h -2.004
18 952901004 TR TP 1004 5/8RB dl -0.024 dq 0.000
19 952901004 TR TP 1004 5/8RB dl -0.014 dq 0.000
20 952901005 TR TP 1005 5/8RB N 739481.860 E 819451.190 Z 21.510
21 952901005 TR TP 1005 5/8RB m 1.000020 Om 198.1533 ih 5.510
22 952901005 TR TP 1005 5/8RB hf 5.150 ih 5.510
23 95290 401 TR TP 401 60D N 739761.693 E 818552.175 Z 19.838
24 95290 401 TR TP 401 60D hb 5.220 hf 4.950 ih 5.490
25 Trav.: Measurement on TP 1
26 952901005 TR TP 1005 5/8RB D 941.540 Hz 0.0000 V1 89.5452
27 952901005 TR TP 1005 5/8RB E 941.558 Hz 0.0000 h 1.424
28 952901005 TR TP 1005 5/8RB D 941.550 Hz 359.5958 V1 89.5450
29 952901005 TR TP 1005 5/8RB E 941.568 Hz 359.5958 h 1.433
30 95290 402 TR TP 402 RB/CAP D 547.420 Hz 221.2619 V1 90.0558
31 95290 402 TR TP 402 RB/CAP E 547.430 Hz 221.2619 h -0.944
32 95290 402 TR TP 402 RB/CAP D 547.420 Hz 221.2621 V1 90.0558
33 95290 402 TR TP 402 RB/CAP E 547.430 Hz 221.2621 h -0.944
34 95290 402 TR TP 402 RB/CAP N 740229.597 E 818268.007 Z 19.409
35 95290 402 TR TP 402 RB/CAP hb 5.150 hf 4.960 ih 5.250
36 Trav.: Measurement on TP 2
37 95290 401 TR TP 401 60D D 547.430 Hz 0.0000 V1 89.5749
38 95290 401 TR TP 401 60D E 547.441 Hz 0.0000 h 0.354
39 95290 401 TR TP 401 60D D 547.430 Hz 0.0001 V1 89.5749
40 95290 401 TR TP 401 60D E 547.441 Hz 0.0001 h 0.354
41 95290 403 TR TP 403 RB/CAP D 494.510 Hz 83.2913 V1 90.2044
42 95290 403 TR TP 403 RB/CAP E 494.511 Hz 83.2913 h -2.977
43 95290 403 TR TP 403 RB/CAP D 494.500 Hz 83.2913 V1 90.2046
44 95290 403 TR TP 403 RB/CAP E 494.501 Hz 83.2913 h -2.982
45 95290 403 TR TP 403 RB/CAP N 739926.620 E 817877.191 Z 16.711
46 95290 403 TR TP 403 RB/CAP hb 5.310 hf 5.310 ih 5.250
47 Trav.: Measurement on TP 3
48 95290 402 TR TP 402 RB/CAP D 494.500 Hz 0.0000 V1 89.4319
49 95290 402 TR TP 402 RB/CAP E 494.504 Hz 0.0000 h 2.405
50 95290 402 TR TP 402 RB/CAP D 494.490 Hz 359.5959 V1 89.4318
51 95290 402 TR TP 402 RB/CAP E 494.494 Hz 359.5959 h 2.407
52 95290 404 TR TP 404 60D D 650.250 Hz 85.0511 V1 88.4354
53 95290 404 TR TP 404 60D E 650.103 Hz 85.0511 h 14.402
54 95290 404 TR TP 404 60D D 650.250 Hz 85.0516 V1 88.4352
55 95290 404 TR TP 404 60D E 650.103 Hz 85.0516 h 14.408
56 95290 404 TR TP 404 60D N 739448.823 E 818318.045 Z 31.069
57 95290 404 TR TP 404 60D hb 5.200 hf 5.350 ih 5.620

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58 Trav.: Measurement on TP 4
59 95290 403 TR TP 403 RB/CAP D      650.270 Hz      0.0000 V1  91.1815
60 95290 403 TR TP 403 RB/CAP E      650.115 Hz      0.0000 h   -14.791
61 95290 403 TR TP 403 RB/CAP D      650.270 Hz      0.0000 V1  91.1815
62 95290 403 TR TP 403 RB/CAP E      650.115 Hz      0.0000 h   -14.791
63 952901005 TR TP 1005 5/8RB D      1133.610 Hz     131.0137 V1  90.3004
64 952901005 TR TP 1005 5/8RB E      1133.590 Hz     131.0137 h   -9.888
65 952901005 TR TP 1005 5/8RB D      1133.610 Hz     131.0129 V1  90.3001
66 952901005 TR TP 1005 5/8RB E      1133.590 Hz     131.0129 h   -9.871
67 952901005 TR TP 1005 5/8RB N      739481.886 E     819451.150 Z   21.520
68 952901005 TR TP 1005 5/8RB hb      5.310          ih   5.640
69 Trav.: Stat. on occupied pt
70 95290 404 TR TP 404 60D D      1133.600 Hz      0.0000 V1  89.3219
71 95290 404 TR TP 404 60D E      1133.585 Hz      0.0000 h    9.155
72 95290 404 TR TP 404 60D D      1133.600 Hz     359.5959 V1  89.3214
73 95290 404 TR TP 404 60D E      1133.585 Hz     359.5959 h    9.183
74 95290 404 TR TP 404 60D D      1133.600 Hz     359.5959 V1  89.3216
75 95290 404 TR TP 404 60D E      1133.585 Hz     359.5959 h    9.172
76 95290 404 TR TP 404 60D D      1133.600 Hz     359.5955 V1  89.3221
77 95290 404 TR TP 404 60D E      1133.586 Hz     359.5955 h    9.144
78 952901004 TR TP 1004 5/8RB D      501.840 Hz     289.5531 V1  88.3926
79 952901004 TR TP 1004 5/8RB D      501.840 Hz     289.5530 V1  88.3925
80 952901004 TR TP 1004 5/8RB dl      -0.011 dq      -0.001
81 952901004 TR TP 1004 5/8RB dl      -0.011 dq      0.001
82 952901005 TR TP 1005 5/8RB N      739481.860 E     819451.190 Z   21.510
83 952901005 TR TP 1005 5/8RB m      1.000020 Om     268.2002 ih    5.640
84 E.C. (coordinates) dn      -0.026 de      0.040 dz   -0.010
85 Closing angle (C.A.) da      0.0016
86 Trav.: Balancing
87 Transf line: T.P. 1 - C.P.
88 95290 401 TR TP 401 60D N      739761.693 E     818552.175 Z   19.826
89 95290 402 TR TP 402 RB/CAP N      740229.624 E     818268.000 Z   19.400
90 95290 403 TR TP 403 RB/CAP N      739926.637 E     817877.160 Z   16.703
91 95290 404 TR TP 404 60D N      739448.812 E     818318.029 Z   31.062
92 952901005 TR TP 1005 5/8RB N      739481.860 E     819451.190 Z   21.510
93 Stat. on occupied pt
94 95290 403 TR TP 403 RB/CAP D      494.490 Hz     359.5959 V1  90.2111
95 95290 403 TR TP 403 RB/CAP dl      0.036 dq      0.000
96 95290 402 TR TP 402 RB/CAP N      740229.624 E     818268.000 Z   19.400
97 95290 402 TR TP 402 RB/CAP m      1.000020 Om     232.1300 ih    5.320
98 Sideshots
99 952901000 SS PT.DCL1 50W D      103.260 Hz     173.2312 V1  91.1501
100 952901000 SS PT.DCL1 50W N      740301.851 E     818341.764 Z   17.167
101 952901001 SS PT.DCL1 15W E      182.427 Hz     184.3240 h   -11.220
102 952901001 SS PT.DCL1 15W N      740329.618 E     818420.581 Z    8.200
103 952901002 SS PT.DCL2 25W D      125.040 Hz     170.5142 V1  92.0645
104 952901002 SS PT.DCL2 25W N      740320.896 E     818353.345 Z    8.111
105 952901003 SS PT.DCL2 25W D      141.430 Hz     156.0550 V1  91.3946
106 952901003 SS PT.DCL2 25W N      740354.084 E     818335.053 Z    8.617
107 952901004 SS SW SE/SW01 D      116.490 Hz     180.3710 V1  92.1809
108 952901004 SS SW SE/SW01 N      740299.940 E     818360.759 Z    8.040
109 952901005 SS PT.PP1 D      154.920 Hz     206.0513 V1  90.4051
110 952901005 SS PT.PP1 N      740261.029 E     818419.695 Z   17.580
111 952901006 SS PT.PP1 D      99.010 Hz      105.1902 V1  92.0722
112 952901006 SS PT.PP1 N      740321.059 E     818230.190 Z   15.753
113 952901007 SS PT.ERD1 D      119.370 Hz     139.1940 V1  91.1059
114 952901007 SS PT.ERD1 N      740346.557 E     818291.884 Z   16.956

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115	952901008	SS	PT.-ERD1	D	84.550	Hz	179.0247	V1	91.1845
116	952901008	SS	PT.-ERD1	N	740282.518	E	818333.935	Z	17.483
117	952901009	SS	PT.ERD1	D	123.550	Hz	211.3847	V1	90.4548
118	952901009	SS	PT.ERD1	N	740242.831	E	818390.833	Z	17.774
119	952901010	SS	PT.ERD1	D	163.260	Hz	218.5629	V1	90.3402
120	952901010	SS	PT.ERD1	N	740226.324	E	818431.222	Z	17.804
121	952901011	SS	PT.ERD1	D	167.290	Hz	214.5601	V1	90.3602
122	952901011	SS	PT.ERD1	N	740237.941	E	818435.077	Z	17.667
123	952901012	SS	PT.ERD1	D	130.210	Hz	207.2550	V1	90.4754
124	952901012	SS	PT.ERD1	N	740253.022	E	818396.080	Z	17.606
125	952901013	SS	PT.-ERD1	D	96.060	Hz	179.5344	V1	91.1304
126	952901013	SS	PT.-ERD1	N	740288.604	E	818343.796	Z	17.379
127	952901014	SS	PT.ERD1	D	113.360	Hz	151.1307	V1	91.0901
128	952901014	SS	PT.ERD1	N	740333.614	E	818313.076	Z	17.145
129	952901015	SS	PT.RR	D	73.990	Hz	89.1806	V1	90.3406
130	952901015	SS	PT.RR	N	740287.542	E	818221.960	Z	18.686
131	952901016	SS	PT.-RR	D	46.220	Hz	150.3333	V1	90.5034
132	952901016	SS	PT.-RR	N	740272.236	E	818285.891	Z	18.740
133	952901017	SS	PT.RR	D	95.310	Hz	207.4524	V1	90.1752
134	952901017	SS	PT.RR	N	740246.218	E	818361.855	Z	18.925
135	952901018	SS	PT.RR	D	130.330	Hz	217.1347	V1	90.1039
136	952901018	SS	PT.RR	N	740230.883	E	818398.326	Z	19.017
137	952901019	SS	PT.RR	D	128.210	Hz	219.1444	V1	90.1049
138	952901019	SS	PT.RR	N	740226.352	E	818396.170	Z	19.017
139	952901020	SS	PT.RR	D	91.370	Hz	209.5439	V1	90.1848
140	952901020	SS	PT.RR	N	740242.139	E	818358.509	Z	18.921
141	952901021	SS	PT.-RR	D	41.190	Hz	150.0859	V1	90.5652
142	952901021	SS	PT.-RR	N	740267.711	E	818283.672	Z	18.739
143	952901022	SS	PT.RR	D	72.380	Hz	85.1756	V1	90.3501
144	952901022	SS	PT.RR	N	740283.000	E	818219.117	Z	18.683
145	952901023	SS	PT.DCL3 50W	D	37.310	Hz	83.2445	V1	96.3508
146	952901023	SS	PT.DCL3 50W	N	740256.119	E	818242.080	Z	15.141
147	952901024	SS	MW MW1-25 GC	D	169.230	Hz	12.1830	V1	90.2750
148	952901024	SS	MW MW1-25 GC	N	740156.836	E	818115.225	Z	18.050
149	952901025	SS	HP HP05	D	126.210	Hz	350.4103	V1	90.4103
150	952901025	SS	HP HP05	N	740137.176	E	818182.089	Z	17.913
151	952901026	SS	HP HP04	D	168.160	Hz	331.2803	V1	90.3418
152	952901026	SS	HP HP04	N	740075.632	E	818200.453	Z	17.743
153	Sideshots								
154	Sideshots								
155	952901027	SS	MW MW01 BC	D	168.430	Hz	333.1636	V1	90.3424
156	952901027	SS	MW MW01 BC	N	740077.598	E	818195.509	Z	17.735
157	952901028	SS	MW MW01 GC	D	167.180	Hz	333.3518	V1	90.3621
158	952901028	SS	MW MW01 GC	N	740079.120	E	818195.227	Z	17.653
159	952901029	SS	HP HP03	D	239.040	Hz	320.3746	V1	90.0918
160	952901029	SS	HP HP03	N	739996.563	E	818214.852	Z	18.775
161	952901030	SS	HP HP07	D	197.530	Hz	351.4959	V1	90.2723
162	952901030	SS	HP HP07	N	740087.654	E	818130.662	Z	17.847
163	952901031	SS	HP HP06	D	213.910	Hz	13.3305	V1	90.2156
164	952901031	SS	HP HP06	N	740141.829	E	818072.937	Z	18.056
165	952901032	SS	MW MW02 BC	D	217.720	Hz	355.4133	V1	90.2328
166	952901032	SS	MW MW02 BC	N	740083.685	E	818106.434	Z	17.935
167	952901033	SS	MW MW02 GC	D	216.370	Hz	355.4744	V1	90.2507
168	952901033	SS	MW MW02 GC	N	740084.879	E	818107.176	Z	17.840
169	952901034	SS	MW MW1-24 BC	D	224.310	Hz	344.1502	V1	90.3110
170	952901034	SS	MW MW1-24 BC	N	740049.238	E	818134.681	Z	17.387
171	952901035	SS	MW MW1-24 GC	D	223.940	Hz	344.1836	V1	90.3112

172	952901035	SS	MW	MW1-24	GC	N	740049.674	E	818134.714	Z	17.389
173	952901036	SS	HP	HP09		D	285.040	Hz	347.4521	V1	90.1827
174	952901036	SS	HP	HP09		N	740011.182	E	818084.883	Z	17.892
175	952901037	SS	MW	MW03	BC	D	283.990	Hz	354.4812	V1	90.2313
176	952901037	SS	MW	MW03	BC	N	740036.016	E	818060.235	Z	17.504
177	952901038	SS	MW	MW03	GC	D	282.870	Hz	354.5336	V1	90.2519
178	952901038	SS	MW	MW03	GC	N	740037.106	E	818060.753	Z	17.339
179	952901039	SS	HA	HA03		D	335.610	Hz	346.1052	V1	90.1709
180	952901039	SS	HA	HA03		N	739966.599	E	818059.545	Z	17.748
181	952901040	SS	MW	MW1-20	BC	D	359.470	Hz	349.2748	V1	90.0053
182	952901040	SS	MW	MW1-20	BC	N	739961.141	E	818028.958	Z	19.330
183	952901041	SS	MW	MW1-20	GC	D	359.030	Hz	349.2941	V1	90.1247
184	952901041	SS	MW	MW1-20	GC	N	739961.602	E	818029.106	Z	18.088
185	952901042	SS	SB	SB12		D	411.880	Hz	352.1224	V1	90.1907
186	952901042	SS	SB	SB12		N	739935.463	E	817979.701	Z	17.133
187	952901043	SS	SB	SB09		D	435.820	Hz	354.2638	V1	90.2251
188	952901043	SS	SB	SB09		N	739930.513	E	817951.028	Z	16.527
189	952901044	SS	SB	SB15		D	428.680	Hz	350.0642	V1	90.1841
190	952901044	SS	SB	SB15		N	739912.700	E	817979.334	Z	17.094
191	952901045	SS	SB	SB11		D	447.790	Hz	352.1729	V1	90.2208
192	952901045	SS	SB	SB11		N	739910.282	E	817954.095	Z	16.541
193	952901046	SS	SB	SB14		D	465.640	Hz	350.3851	V1	90.2148
194	952901046	SS	SB	SB14		N	739888.325	E	817951.242	Z	16.472
195	952901047	SS	SB	SB08		D	470.130	Hz	354.3009	V1	90.2324
196	952901047	SS	SB	SB08		N	739907.316	E	817925.745	Z	16.225
197	952901048	SS	SB	SB10		D	484.250	Hz	352.4028	V1	90.2236
198	952901048	SS	SB	SB10		N	739886.558	E	817926.235	Z	16.241
199	952901049	SS	MW	MW1-21	BC	D	485.350	Hz	350.4242	V1	90.2321
200	952901049	SS	MW	MW1-21	BC	N	739874.249	E	817937.437	Z	16.128
201	952901050	SS	MW	MW1-21	GC	D	484.840	Hz	350.4408	V1	90.2313
202	952901050	SS	MW	MW1-21	GC	N	739874.760	E	817937.636	Z	16.151
203	952901051	SS	SB	SB13		D	503.870	Hz	351.1147	V1	90.2239
204	952901051	SS	SB	SB13		N	739863.604	E	817921.714	Z	16.105
205	952901052	SS	SB	SB07		D	507.300	Hz	354.2259	V1	90.2244
206	952901052	SS	SB	SB07		N	739881.063	E	817899.411	Z	16.071
207	952901053	SS	SB	SB06		D	532.230	Hz	353.1053	V1	90.2148
208	952901053	SS	SB	SB06		N	739855.904	E	817889.051	Z	16.051
209	952901054	SS	PT	RR2		D	520.120	Hz	354.5931	V1	90.1428
210	952901054	SS	PT	RR2		N	739876.286	E	817886.315	Z	17.237
211	952901055	SS	PT	RR3		D	517.270	Hz	355.3236	V1	90.1527
212	952901055	SS	PT	RR3		N	739881.892	E	817885.042	Z	17.101
213	952901056	SS	PT	RR3		D	221.660	Hz	358.1829	V1	90.1829
214	952901056	SS	PT	RR3		N	740088.704	E	818096.900	Z	18.229
215	952901057	SS	PT	RR2		D	221.480	Hz	357.0221	V1	90.1823
216	952901057	SS	PT	RR2		N	740085.067	E	818100.198	Z	18.237
217	952901058	SS	HP	HP08		D	271.950	Hz	359.5413	V1	90.1918
218	952901058	SS	HP	HP08		N	740062.644	E	818053.348	Z	17.895
219	952901059	SS	MW	MW1-22	GC	D	383.400	Hz	11.0727	V1	90.2544
220	952901059	SS	MW	MW1-22	GC	N	740057.601	E	817925.361	Z	16.553
221	952901060	SS	SW	SW02		D	383.150	Hz	16.3100	V1	90.1323
222	952901060	SS	SW	SW02		N	740090.650	E	817910.937	Z	7.631
223	952901061	SS	PT	DCL3		E	420.494	Hz	16.1828	h	-1.572
224	952901061	SS	PT	DCL3		N	740075.679	E	817876.699	Z	7.548
225	952901062	SS	PT	DCL3		E	520.106	Hz	13.3129	h	-1.348
226	952901062	SS	PT	DCL3		N	740015.936	E	817793.819	Z	7.772
227	952901063	SS	PT	DCL3.DCL4		E	596.312	Hz	11.0243	h	-1.291
228	952901063	SS	PT	DCL3.DCL4		N	739961.337	E	817735.450	Z	7.829

229	952901064	SS	PT.DCL3	E	642.911	Hz	8.2448	h	-0.225
230	952901064	SS	PT.DCL3	N	739914.310	E	817707.722	Z	8.895
231	952901065	SS	SW SE/SW3	D	631.670	Hz	8.5426	V1	90.0744
232	952901065	SS	SW SE/SW3	N	739924.574	E	817714.858	Z	7.707
233	952901066	SS	PT.DCL4	D	579.590	Hz	18.4307	V1	90.0459
234	952901066	SS	PT.DCL4	N	740040.305	E	817720.190	Z	8.287
235	952901067	SS	PT.PP2	D	130.750	Hz	298.1313	V1	90.0510
236	952901067	SS	PT.PP2	N	740100.689	E	818289.722	Z	19.224
237	952901068	SS	PT.PP2	D	244.900	Hz	258.2931	V1	90.0629
238	952901068	SS	PT.PP2	N	740069.894	E	818453.646	Z	18.959
239	952901069	SS	PT.EPA1	D	245.350	Hz	259.0132	V1	90.0958
240	952901069	SS	PT.EPA1	N	740067.876	E	818452.488	Z	18.710
241	952901070	SS	PT.-EPA1	D	188.990	Hz	268.2327	V1	90.1349
242	952901070	SS	PT.-EPA1	N	740083.568	E	818387.940	Z	18.661
243	952901071	SS	PT.EPA1	D	132.250	Hz	305.0640	V1	90.2419
244	952901071	SS	PT.EPA1	N	740097.518	E	818274.165	Z	18.485
245	952901072	SS	PT.EPA1	D	150.710	Hz	313.3250	V1	90.3708
246	952901072	SS	PT.EPA1	N	740079.682	E	818252.865	Z	17.793
247	952901073	SS	PT.EPA1	D	171.070	Hz	307.4432	V1	90.2948
248	952901073	SS	PT.EPA1	N	740058.557	E	818268.122	Z	17.938
249	952901074	SS	PT.-EPA1	D	179.230	Hz	297.0120	V1	90.2502
250	952901074	SS	PT.-EPA1	N	740053.547	E	818301.464	Z	18.116
251	952901075	SS	PT.EPA1	D	269.730	Hz	267.2400	V1	90.1710
252	952901075	SS	PT.EPA1	N	740024.162	E	818442.759	Z	18.075
253	952901076	SS	PT.BC1 724	D	222.670	Hz	287.4628	V1	89.5951
254	952901076	SS	PT.BC1 724	N	740020.390	E	818344.191	Z	19.431
255	952901077	SS	PT.BC1 724	D	208.930	Hz	292.3647	V1	90.0048
256	952901077	SS	PT.BC1 724	N	740027.971	E	818322.675	Z	19.372
257	952901078	SS	PT.BC1 724	D	222.940	Hz	295.0637	V1	90.2131
258	952901078	SS	PT.BC1 724	N	740012.115	E	818316.910	Z	18.026
259	952901079	SS	PT.FL1	D	243.560	Hz	295.3925	V1	90.1317
260	952901079	SS	PT.FL1	N	739991.496	E	818319.165	Z	18.480
261	952901080	SS	PT.FL1	D	187.530	Hz	307.0055	V1	90.2551
262	952901080	SS	PT.FL1	N	740042.112	E	818270.513	Z	18.011
263	952901081	SS	PT.FL1 GATE	D	264.580	Hz	324.1429	V1	90.2220
264	952901081	SS	PT.FL1 GATE	N	739975.885	E	818193.041	Z	17.703
265	952901082	SS	PT.FL1 GATE	D	254.420	Hz	328.1210	V1	90.2130
266	952901082	SS	PT.FL1 GATE	N	739991.191	E	818179.235	Z	17.830
267	952901083	SS	PT.FL1	D	233.380	Hz	341.5108	V1	90.2524
268	952901083	SS	PT.FL1	N	740036.302	E	818137.264	Z	17.697
269	952901084	SS	PT.FL1	D	528.620	Hz	349.1639	V1	90.2039
270	952901084	SS	PT.FL1	N	739833.675	E	817917.765	Z	16.250
271	952901085	SS	PT.FL1	D	560.080	Hz	335.3423	V1	89.3619
272	952901085	SS	PT.FL1	N	739734.143	E	818006.876	Z	20.085
273	952901086	SS	PT.FL1	D	292.680	Hz	314.5622	V1	89.3131
274	952901086	SS	PT.FL1	N	739939.228	E	818231.540	Z	18.647
275	952901087	SS	PT.FL1	D	322.480	Hz	309.0221	V1	89.2558
276	952901087	SS	PT.FL1	N	739907.231	E	818260.932	Z	19.415
277	952901088	SS	MW MW1-19 BC	D	320.750	Hz	311.4811	V1	89.2337
278	952901088	SS	MW MW1-19 BC	N	739909.675	E	818245.516	Z	19.617
279	952901089	SS	MW MW1-19 GC	D	319.960	Hz	311.5148	V1	89.2324
280	952901089	SS	MW MW1-19 GC	N	739910.487	E	818245.236	Z	19.629
281	952901090	SS	PT.TL1	D	363.610	Hz	305.5827	V1	89.2738
282	952901090	SS	PT.TL1	N	739866.204	E	818279.479	Z	19.646
283	952901091	SS	PT.TL1	D	357.690	Hz	308.2948	V1	89.2401
284	952901091	SS	PT.TL1	N	739871.974	E	818263.547	Z	19.967
285	952901092	SS	PT.TL1	D	408.510	Hz	315.3657	V1	89.1605

286	952901092	SS	PT.TL1	N	739824.950	E	818212.332	Z	21.442
287	952901093	SS	PT.TL1	D	440.550	Hz	314.1717	V1	89.1447
288	952901093	SS	PT.TL1	N	739791.939	E	818218.095	Z	22.018
289	952901094	SS	PT.TL1	D	456.020	Hz	318.5854	V1	89.0634
290	952901094	SS	PT.TL1	N	739782.331	E	818179.447	Z	23.312
291	952901095	SS	PT.TL1	D	465.940	Hz	321.4136	V1	88.4050
292	952901095	SS	PT.TL1	N	739777.459	E	818156.016	Z	23.454
293	952901096	SS	PT.TL1	D	494.410	Hz	321.3238	V1	88.3558
294	952901096	SS	PT.TL1	N	739749.539	E	818150.430	Z	24.809
295	952901097	SS	PT.TL1	D	513.760	Hz	324.3745	V1	88.3649
296	952901097	SS	PT.TL1	N	739738.045	E	818119.154	Z	25.156
297	952901098	SS	PT.TL1	D	560.170	Hz	326.2017	V1	88.4136
298	952901098	SS	PT.TL1	N	739698.699	E	818089.791	Z	25.500
299	952901099	SS	PT.TL1	D	571.870	Hz	325.1220	V1	88.4003
300	952901099	SS	PT.TL1	N	739684.126	E	818096.819	Z	26.025
301	952901100	SS	MW MW04 BC	D	615.150	Hz	329.0325	V1	88.4432
302	952901100	SS	MW MW04 BC	N	739656.518	E	818044.859	Z	26.231
303	952901101	SS	MW MW04 GC	D	614.310	Hz	329.0230	V1	88.4541
304	952901101	SS	MW MW04 GC	N	739657.237	E	818045.315	Z	26.007
305	952901102	SS	PT.PP3	D	664.540	Hz	333.1235	V1	89.0748
306	952901102	SS	PT.PP3	N	739629.510	E	817982.706	Z	22.819
307	952901103	SS	PT.PP3	D	566.100	Hz	329.1250	V1	89.0910
308	952901103	SS	PT.PP3	N	739702.711	E	818061.180	Z	24.697
309	952901104	SS	PT.PP3	D	437.050	Hz	320.5743	V1	88.4725
310	952901104	SS	PT.PP3	N	739804.171	E	818168.378	Z	22.451
311	952901105	SS	PT.PP3	D	333.820	Hz	308.0315	V1	89.5519
312	952901105	SS	PT.PP3	N	739895.801	E	818266.422	Z	19.877
313	952901106	SS	FH	D	358.350	Hz	317.5948	V1	88.4404
314	952901106	SS	FH	N	739877.031	E	818204.474	Z	20.637
315	952901107	SS	HA HA02	D	344.140	Hz	319.2557	V1	88.4444
316	952901107	SS	HA HA02	N	739892.647	E	818198.527	Z	20.257
317	952901108	SS	HP HP10	D	381.310	Hz	321.4031	V1	88.4606
318	952901108	SS	HP HP10	N	739859.545	E	818176.470	Z	20.919
319	952901109	SS	HA HA01	D	433.340	Hz	327.5725	V1	88.5846
320	952901109	SS	HA HA01	N	739822.925	E	818118.576	Z	20.442
321	952901110	SS	PT.PP4	D	562.400	Hz	334.5215	V1	89.2933
322	952901110	SS	PT.PP4	N	739728.922	E	818011.915	Z	20.308
323	952901111	SS	PT.PP4	D	422.850	Hz	327.4335	V1	88.5823
324	952901111	SS	PT.PP4	N	739832.187	E	818123.792	Z	20.302
325	952901112	SS	PT.PP4	D	299.580	Hz	314.2244	V1	88.4958
326	952901112	SS	PT.PP4	N	739932.083	E	818233.596	Z	18.824
327	952901113	SS	PT.BC2 726	D	295.040	Hz	315.2832	V1	88.4859
328	952901113	SS	PT.BC2 726	N	739937.296	E	818228.516	Z	18.816
329	952901114	SS	PT.BC2 726	D	303.760	Hz	316.5100	V1	88.5355
330	952901114	SS	PT.BC2 726	N	739929.709	E	818220.140	Z	18.561
331	952901115	SS	PT.WL1 BLK	D	303.740	Hz	316.5059	V1	88.5401
332	952901115	SS	PT.WL1 BLK	N	739929.728	E	818220.145	Z	18.551
333	952901116	SS	PT.WL1 BLK	D	427.650	Hz	329.0304	V1	89.0758
334	952901116	SS	PT.WL1 BLK	N	739831.137	E	818112.894	Z	19.196
335	952901117	SS	PT.PP4	D	232.280	Hz	343.4507	V1	90.2501
336	952901117	SS	PT.PP4	N	740041.632	E	818131.573	Z	17.731
337	952901118	SS	PT.PP4	D	379.250	Hz	348.0800	V1	90.1251
338	952901118	SS	PT.PP4	N	739940.592	E	818022.449	Z	18.005
339	952901119	SS	PT.PP4	D	527.060	Hz	350.0324	V1	90.2214
340	952901119	SS	PT.PP4	N	739839.629	E	817913.463	Z	16.017
341	952901120	SS	PT.WL2 BLK	D	357.440	Hz	346.3154	V1	90.2337
342	952901120	SS	PT.WL2 BLK	N	739950.857	E	818044.278	Z	16.967

343	952901121	SS	PT.WL2	BLK	D	243.240 Hz	342.2717 V1	90.2449
344	952901121	SS	PT.WL2	BLK	N	740029.578 E	818129.629 Z	17.665
345	952901122	SS	PT WALL		D	248.460 Hz	337.5204 V1	89.5249
346	952901122	SS	PT WALL		N	740014.631 E	818143.450 Z	16.840
347	952901123	SS	PT WALL		D	259.120 Hz	338.3623 V1	89.5351
348	952901123	SS	PT WALL		N	740007.100 E	818135.227 Z	16.785
349	952901124	SS	PT WALL		D	269.220 Hz	339.1436 V1	89.4700
350	952901124	SS	PT WALL		N	739999.975 E	818127.491 Z	17.340
351	952901125	SS	PT WALL		D	279.560 Hz	339.5032 V1	89.4916
352	952901125	SS	PT WALL		N	739992.692 E	818119.610 Z	17.194
353	952901126	SS	PT WALL		D	289.890 Hz	340.2354 V1	89.4854
354	952901126	SS	PT WALL		N	739985.443 E	818111.749 Z	17.258
355	952901127	SS	PT WALL		D	300.340 Hz	340.5542 V1	89.4855
356	952901127	SS	PT WALL		N	739978.149 E	818103.783 Z	17.290
357	952901128	SS	PT WALL		D	310.440 Hz	341.2423 V1	89.4842
358	952901128	SS	PT WALL		N	739971.117 E	818096.098 Z	17.342
359	952901129	SS	PT WALL		D	330.610 Hz	342.1541 V1	89.5234
360	952901129	SS	PT WALL		N	739957.083 E	818080.841 Z	17.037
361	952901130	SS	PT WALL		D	360.460 Hz	343.2009 V1	89.5357
362	952901130	SS	PT WALL		N	739936.354 E	818058.407 Z	16.957
363	952901131	SS	PT WALL	BLK	D	361.440 Hz	327.2900 V1	88.2140
364	952901131	SS	PT WALL	BLK	N	739889.471 E	818146.207 Z	19.460
365	952901132	SS	PT WALL	BLK	D	380.070 Hz	328.5602 V1	88.2758
366	952901132	SS	PT WALL	BLK	N	739875.277 E	818130.909 Z	19.297
367	952901133	SS	PT WALL	CONC	D	389.650 Hz	329.3536 V1	88.3622
368	952901133	SS	PT WALL	CONC	N	739867.965 E	818123.273 Z	18.602
369	952901134	SS	PT WALL	CONC	D	399.420 Hz	330.1532 V1	88.3712
370	952901134	SS	PT WALL	CONC	N	739860.643 E	818115.347 Z	18.743
371	952901135	SS	PT WALL	CONC	D	409.340 Hz	330.5417 V1	88.3905
372	952901135	SS	PT WALL	CONC	N	739853.261 E	818107.301 Z	18.758
373	952901136	SS	PT WALL	CONC	D	418.980 Hz	331.2940 V1	88.4142
374	952901136	SS	PT WALL	CONC	N	739846.104 E	818099.558 Z	18.666
375	952901137	SS	PT.FL2		D	471.650 Hz	331.4151 V1	89.3355
376	952901137	SS	PT.FL2		N	739798.467 E	818076.810 Z	19.903
377	952901138	SS	PT.FL2	GATE	D	464.810 Hz	333.4334 V1	89.3839
378	952901138	SS	PT.FL2	GATE	N	739811.652 E	818064.658 Z	19.211
379	952901139	SS	PT.FL2	GATE	D	455.900 Hz	336.4210 V1	89.4312
380	952901139	SS	PT.FL2	GATE	N	739830.571 E	818047.534 Z	18.552
381	952901140	SS	PT.FL2		D	446.950 Hz	340.2759 V1	89.5002
382	952901140	SS	PT.FL2		N	739853.433 E	818026.647 Z	17.620
383	952901141	SS	PT.FL2		D	538.970 Hz	343.0323 V1	89.5153
384	952901141	SS	PT.FL2		N	739789.596 E	817956.753 Z	17.599
385	952901142	SS	SB SB01		D	508.450 Hz	345.3644 V1	89.5650
386	952901142	SS	SB SB01		N	739828.019 E	817956.158 Z	16.794
387	952901143	SS	HP HP02		D	452.590 Hz	341.2457 V1	89.5223
388	952901143	SS	HP HP02		N	739852.788 E	818017.322 Z	17.327
389	952901144	SS	SB SB02		D	436.240 Hz	335.0833 V1	89.4527
390	952901144	SS	SB SB02		N	739842.176 E	818067.516 Z	18.170
391	952901145	SS	SB SB03		D	391.700 Hz	341.1948 V1	89.5343
392	952901145	SS	SB SB03		N	739903.161 E	818051.536 Z	17.039
393	952901146	SS	HP HP01		D	376.180 Hz	333.3629 V1	89.4518
394	952901146	SS	HP HP01		N	739891.009 E	818104.127 Z	17.931
395	952901147	SS	HA HA07		D	341.870 Hz	330.0320 V1	89.4033
396	952901147	SS	HA HA07		N	739913.258 E	818138.428 Z	18.257
397	952901148	SS	SB SB05		D	329.400 Hz	330.5313 V1	89.4510
398	952901148	SS	SB SB05		N	739926.640 E	818138.743 Z	17.744
399	952901149	SS	HA HA06		D	329.930 Hz	329.5421 V1	89.4208

400	952901149	SS	HA	HA06	N	739923.981	E	818143.751	Z	18.037
401	952901150	SS	MW	MW1-23 BC	D	308.880	Hz	329.0554	V1	89.4436
402	952901150	SS	MW	MW1-23 BC	N	739941.870	E	818155.722	Z	17.706
403	952901151	SS	MW	MW1-23 GC	D	307.860	Hz	329.0919	V1	89.4504
404	952901151	SS	MW	MW1-23 GC	N	739942.931	E	818155.808	Z	17.659
405	952901152	SS	SB	SB04	D	258.350	Hz	335.4856	V1	89.3531
406	952901152	SS	SB	SB04	N	740001.584	E	818146.584	Z	17.161
407	952901153	SS	HA	HA04	D	284.040	Hz	319.0346	V1	89.2458
408	952901153	SS	HA	HA04	N	739951.079	E	818212.445	Z	18.216
409	952901154	SS	HA	HA10	D	318.760	Hz	319.4731	V1	89.1929
410	952901154	SS	HA	HA10	N	739917.855	E	818201.682	Z	19.079
411	952901155	SS	HA	HA05	D	304.690	Hz	325.1521	V1	89.2203
412	952901155	SS	HA	HA05	N	739939.004	E	818176.521	Z	18.685
413	952901156	SS	HA	HA09	D	350.740	Hz	323.1429	V1	88.5500
414	952901156	SS	HA	HA09	N	739891.625	E	818174.531	Z	19.354
415	952901157	SS	PT	PIN FLAG?	D	354.020	Hz	323.3549	V1	88.5804
416	952901157	SS	PT	PIN FLAG?	N	739889.051	E	818171.540	Z	19.100
417	952901158	SS	HA	HA08	D	368.440	Hz	324.5340	V1	88.2644
418	952901158	SS	HA	HA08	N	739877.615	E	818159.633	Z	19.117
419	952901159	SS	PT	WALL CONC	D	343.860	Hz	325.5200	V1	88.3521
420	952901159	SS	PT	WALL CONC	N	739902.841	E	818161.296	Z	21.189
421	952901160	SS	PT	WALL CONC	D	325.720	Hz	324.0302	V1	88.5224
422	952901160	SS	PT	WALL CONC	N	739916.998	E	818176.776	Z	19.127
423	952901161	SS	PT	WALL CONC	D	308.080	Hz	322.0451	V1	88.3539
424	952901161	SS	PT	WALL CONC	N	739931.170	E	818191.939	Z	20.280
425	952901162	SS	PT	WALL CONC	D	291.040	Hz	319.5110	V1	88.5307
426	952901162	SS	PT	WALL CONC	N	739945.066	E	818207.154	Z	18.384
427	952901163	SS	PT	BC2	D	297.550	Hz	318.2001	V1	88.5245
428	952901163	SS	PT	BC2	N	739937.154	E	818213.528	Z	18.542
429	952901164	SS	PT	BC2+	D	289.000	Hz	317.0530	V1	89.3704
430	952901164	SS	PT	BC2+	N	739944.430	E	818221.255	Z	18.450
431	952901165	SS	PT	BERM1 6FT W	D	291.650	Hz	320.0321	V1	88.4506
432	952901165	SS	PT	BERM1 6FT W	N	739944.701	E	818206.020	Z	19.076
433	952901166	SS	PT	BERM1 6FT W	D	307.750	Hz	322.0433	V1	88.3153
434	952901166	SS	PT	BERM1 6FT W	N	739931.492	E	818192.048	Z	20.609
435	952901167	SS	PT	BERM1 6FT W	D	298.010	Hz	325.2937	V1	88.2259
436	952901167	SS	PT	BERM1 6FT W	N	739945.845	E	818177.378	Z	21.131
437	952901168	SS	PT	BERM1 6FT W	D	333.840	Hz	328.3641	V1	88.3526
438	952901168	SS	PT	BERM1 6FT W	N	739917.688	E	818149.332	Z	20.934
439	952901169	SS	PT	BERM1 6FT W	D	343.910	Hz	325.4904	V1	88.3452
440	952901169	SS	PT	BERM1 6FT W	N	739902.704	E	818161.560	Z	21.238
441	952901170	SS	PT	BERM2 6FT W	D	335.630	Hz	328.1614	V1	88.2818
442	952901170	SS	PT	BERM2 6FT W	N	739915.328	E	818150.569	Z	21.674
443	952901171	SS	PT	BERM2 6FT W	D	356.520	Hz	329.2132	V1	88.3544
444	952901171	SS	PT	BERM2 6FT W	N	739898.177	E	818136.934	Z	21.461
445	952901172	SS	PT	BERM2 6FT W	D	361.470	Hz	327.2712	V1	88.4458
446	952901172	SS	PT	BERM2 6FT W	N	739889.321	E	818146.355	Z	20.612
447	952901173	SS	PT	BC3	D	506.770	Hz	333.5921	V1	88.4847
448	952901173	SS	PT	BC3	N	739775.032	E	818044.255	Z	19.623
449	952901174	SS	PT	BC3	D	551.090	Hz	335.4610	V1	88.5515
450	952901174	SS	PT	BC3	N	739743.055	E	818009.437	Z	19.505
451	952901175	SS	PT	BC3	D	540.150	Hz	339.1938	V1	88.5753
452	952901175	SS	PT	BC3	N	739769.353	E	817985.460	Z	18.885
453	952901176	SS	PT	BC3+	D	495.270	Hz	337.4910	V1	88.5047
454	952901176	SS	PT	BC3+	N	739800.942	E	818020.140	Z	19.096
455	952901177	SS	PT	CPC1	D	438.060	Hz	339.2416	V1	89.2049
456	952901177	SS	PT	CPC1	N	739856.618	E	818038.335	Z	17.717

457	952901178	SS	PT.CPC1	D	430.630 Hz	343.3102 V1	89.2744
458	952901178	SS	PT.CPC1	N	739880.074 E	818016.509 Z	16.766
459	952901179	SS	PT.CPC1	D	289.840 Hz	337.3105 V1	89.0609
460	952901179	SS	PT.CPC1	N	739977.973 E	818124.258 Z	17.262
461	952901180	SS	PT.CPC1+	D	301.040 Hz	331.4000 V1	89.0454
462	952901180	SS	PT.CPC1+	N	739954.391 E	818146.129 Z	17.547
463	952901181	SS	PT.TANK1	D	309.050 Hz	325.2730 V1	88.1623
464	952901181	SS	PT.TANK1	N	739935.291 E	818174.207 Z	18.436
465	952901182	SS	PT.TANK1	D	327.090 Hz	320.3632 V1	88.1304
466	952901182	SS	PT.TANK1	N	739910.843 E	818195.425 Z	19.295
467	952901183	SS	PT.TANK2	D	325.620 Hz	327.1241 V1	88.2212
468	952901183	SS	PT.TANK2	N	739922.663 E	818159.733 Z	18.384
469	952901184	SS	PT.TANK2	D	343.130 Hz	322.3854 V1	88.1801
470	952901184	SS	PT.TANK2	N	739898.117 E	818180.009 Z	19.300
471	952901185	SS	PT.TANK3	D	347.920 Hz	328.0025 V1	88.1958
472	952901185	SS	PT.TANK3	N	739903.285 E	818147.778 Z	19.245
473	952901186	SS	PT.TANK3	D	360.210 Hz	324.1424 V1	88.2249
474	952901186	SS	PT.TANK3	N	739884.302 E	818165.994 Z	19.304
475	952901187	SS	PT.AB	D	227.950 Hz	327.1738 V1	90.2314
476	952901187	SS	PT.AB	N	740014.763 E	818191.869 Z	17.881
477	952901188	SS	PT.AB	D	217.960 Hz	325.2943 V1	90.2544
478	952901188	SS	PT.AB	N	740021.997 E	818201.690 Z	17.789
479	952901189	SS	PT.AB	D	211.950 Hz	333.3343 V1	90.3058
480	952901189	SS	PT.AB	N	740038.771 E	818175.826 Z	17.512
481	952901190	SS	PT.AB+	D	221.090 Hz	334.0249 V1	90.2629
482	952901190	SS	PT.AB+	N	740031.360 E	818170.168 Z	17.718
483	952901191	SS	PT.ERD2	D	173.650 Hz	302.4354 V1	90.2744
484	952901191	SS	PT.ERD2	N	740056.651 E	818283.290 Z	18.020
485	952901192	SS	PT.ERD2	D	184.120 Hz	307.5306 V1	90.2450
486	952901192	SS	PT.ERD2	N	740045.505 E	818267.673 Z	18.091
487	952901193	SS	PT.ERD2	D	264.170 Hz	324.3426 V1	90.2250
488	952901193	SS	PT.ERD2	N	739976.717 E	818191.688 Z	17.667
489	952901194	SS	PT.ERD2	D	256.600 Hz	327.0539 V1	90.2119
490	952901194	SS	PT.ERD2	N	739987.460 E	818183.144 Z	17.830
491	952901195	SS	PT.ERD2	D	204.300 Hz	320.3809 V1	90.2311
492	952901195	SS	PT.ERD2	N	740030.443 E	818222.555 Z	18.043
493	952901196	SS	PT.ERD2	D	192.400 Hz	324.2258 V1	90.3148
494	952901196	SS	PT.ERD2	N	740045.246 E	818213.036 Z	17.641
495	952901197	SS	PT.-ERD2	D	211.300 Hz	335.1231 V1	90.3056
496	952901197	SS	PT.-ERD2	N	740042.075 E	818170.679 Z	17.520
497	952901198	SS	PT.-ERD2	D	173.030 Hz	348.0455 V1	90.3114
498	952901198	SS	PT.-ERD2	N	740097.660 E	818156.091 Z	17.849
499	952901199	SS	PT.-ERD2	D	121.880 Hz	341.3613 V1	90.4348
500	952901199	SS	PT.-ERD2	N	740128.374 E	818200.167 Z	17.867
501	952901200	SS	PT.ERD2	D	133.970 Hz	304.5119 V1	90.2408
502	952901200	SS	PT.ERD2	N	740095.829 E	818274.843 Z	18.480
503	952901201	SS	PT.ERD3	D	139.840 Hz	312.3312 V1	90.3847
504	952901201	SS	PT.ERD3	N	740090.274 E	818256.372 Z	17.843
505	952901202	SS	PT.ERD3	D	132.490 Hz	326.5750 V1	90.4809
506	952901202	SS	PT.ERD3	N	740104.499 E	818224.474 Z	17.565
507	952901203	SS	PT.-ERD3	D	159.980 Hz	339.4058 V1	90.3730
508	952901203	SS	PT.-ERD3	N	740093.810 E	818183.465 Z	17.675
509	952901204	SS	PT.-ERD3	D	175.630 Hz	334.0324 V1	90.3506
510	952901204	SS	PT.-ERD3	N	740072.143 E	818190.259 Z	17.627
511	952901205	SS	PT.ERD3	D	165.320 Hz	320.2056 V1	90.3824
512	952901205	SS	PT.ERD3	N	740068.271 E	818232.035 Z	17.574
513	952901206	SS	PT.ERD3+	D	155.750 Hz	313.1457 V1	90.3701

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514	952901206	SS	PT.ERD3+	N	740074.588	E	818253.165	Z	17.743
515	952901207	SS	PT RCP 24IN	D	234.940	Hz	13.3307	V1	89.1302
516	952901207	SS	PT RCP 24IN	N	740133.206	E	818053.775	Z	12.331

517 Hoffman & Company Inc
 518 Job No.:95290
 519 Client:METCALF & EDDY
 520 Date:12-13-96
 521 Weather:CLOUDY & COOL
 522 Party Cheif:P.DEATER
 523 Desc:LOCATIONS

524 Stat. on occupied pt

525	95290	402	TR	TP	402	RB/CAP D	494.490	Hz	359.5959	V1	89.4441
526	95290	402	TR	TP	402	RB/CAP dl	0.031	dq	0.000		
527	95290	403	TR	TP	403	RB/CAP N	739926.637	E	817877.160	Z	16.703
528	95290	403	TR	TP	403	RB/CAP m	1.000020	Om	52.1300	ih	5.410
529 Sideshots											
530	952901208	SS	PT	TL2		D	294.080	Hz	109.4257	V1	88.2638
531	952901208	SS	PT	TL2		N	739647.155	E	817968.334	Z	24.501
532	952901209	SS	PT	TL2		D	276.400	Hz	102.0014	V1	88.3834
533	952901209	SS	PT	TL2		N	739677.811	E	817997.338	Z	23.061
534	952901210	SS	PT	TL2		D	264.740	Hz	97.2333	V1	88.0845
535	952901210	SS	PT	TL2		N	739698.389	E	818011.024	Z	22.280
536	952901211	SS	PT	TL2		D	237.020	Hz	96.0820	V1	88.2320
537	952901211	SS	PT	TL2		N	739724.933	E	818001.465	Z	20.378
538	952901212	SS	PT	TL2		D	190.480	Hz	99.1329	V1	88.2743
539	952901212	SS	PT	TL2		N	739759.390	E	817968.190	Z	18.826
540	952901213	SS	PT	TL2		D	143.320	Hz	116.3335	V1	88.4556
541	952901213	SS	PT	TL2		N	739786.088	E	817905.050	Z	16.801
542	952901214	SS	PT	TL2		D	150.280	Hz	136.0437	V1	89.0433
543	952901214	SS	PT	TL2		N	739777.945	E	817855.486	Z	16.137
544	952901215	SS	PT	ERD4		D	317.240	Hz	6.5553	V1	89.5046
545	952901215	SS	PT	ERD4		N	740089.327	E	818149.514	Z	17.667
546	952901216	SS	PT	ERD4		D	293.550	Hz	0.5158	V1	89.4646
547	952901216	SS	PT	ERD4		N	740102.963	E	818111.858	Z	17.945
548	952901217	SS	PT	-ERD4		D	252.980	Hz	352.5016	V1	89.5254
549	952901217	SS	PT	-ERD4		N	740105.354	E	818056.217	Z	17.337
550	952901218	SS	PT	-ERD4		D	207.010	Hz	346.4142	V1	89.5954
551	952901218	SS	PT	-ERD4		N	740087.718	E	818007.191	Z	16.820
552	952901219	SS	PT	ERD4		D	181.120	Hz	342.1730	V1	90.0306
553	952901219	SS	PT	ERD4		N	740075.891	E	817979.772	Z	16.650
554	952901220	SS	PT	ERD4		D	102.700	Hz	321.5535	V1	90.0854
555	952901220	SS	PT	ERD4		N	740026.226	E	817902.255	Z	16.547
556	952901221	SS	PT	-ERD4		D	67.550	Hz	304.2609	V1	90.3053
557	952901221	SS	PT	-ERD4		N	739994.070	E	817873.216	Z	16.206
558	952901222	SS	PT	ERD4		D	28.530	Hz	265.2233	V1	91.2645
559	952901222	SS	PT	ERD4		N	739947.696	E	817857.926	Z	16.093
560	952901223	SS	PT	ERD4		D	29.920	Hz	310.0422	V1	91.0044
561	952901223	SS	PT	ERD4		N	739956.529	E	817878.356	Z	16.284
562	952901224	SS	PT	-ERD4		D	59.710	Hz	311.2041	V1	90.3603
563	952901224	SS	PT	-ERD4		N	739986.230	E	817880.869	Z	16.187
564	952901225	SS	PT	-ERD4		D	97.160	Hz	326.2245	V1	90.2104
565	952901225	SS	PT	-ERD4		N	740018.725	E	817908.144	Z	16.218
566	952901226	SS	PT	ERD4		D	197.970	Hz	349.3855	V1	90.0049
567	952901226	SS	PT	ERD4		N	740074.071	E	818009.285	Z	16.767
568	952901227	SS	PT	-ERD4		D	246.030	Hz	356.4438	V1	89.5247
569	952901227	SS	PT	-ERD4		N	740088.178	E	818062.734	Z	17.331
570	952901228	SS	PT	-ERD4		D	282.620	Hz	1.4517	V1	89.4541
571	952901228	SS	PT	-ERD4		N	740092.873	E	818105.724	Z	17.992
572	952901229	SS	PT	ERD4		D	304.260	Hz	9.2201	V1	89.5103
573	952901229	SS	PT	ERD4		N	740071.429	E	818144.765	Z	17.607